NOVA SCOTIA
MUSEUM
The Family of Provincial Museums

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

Updated October 2016

This page has been left blank on purpose as this document has been designed to be printed double-side. Blank pages have been inserted throughout the document to ensure proper spacing between modules and appendices, with odd numbered pages appearing on the right and even numbered page appearing on the left.

How to Use this Toolbox

This toolbox is for you.

It doesn't matter if you are new to interpretation or have an entire career in the field, this toolbox has something in it for you. The toolbox can act as an introduction, a personal development tool, a training tool, a resource, or a point of inspiration. As a product of the Nova Scotia Interpretive Working Group, this toolbox was created to support the 28 Nova Scotia Museum (NSM) sites. Museums outside the NSM and other informal education centres, such as archives and libraries, will however also find it useful and are encouraged personalize the information to suit their needs.

To help guide your experience, each module is addressed to either the program developer or the program presenter, allowing you to focus on modules most relevant to your current situation. For many museums, the developers and presenters are often the same person.

Program Developer: focuses on the "behind-the-scenes" process of developing a school program.
Program Presenter: focuses on the "frontlines" process of delivering a school program.

Use the whole toolbox or any of its parts.

This toolbox has seven modules and nine appendices. Each module and appendix can be used individually or as part of the larger document. Modules act as complete training units. Each module provides a basic understanding of the module's topic, using current research and best practices, practical exercises and resources, as well as self-reflections and training exercises. The appendices provide resources that complement the information presented in the modules.

Watch for these icons.

These five icons, introduced in Module Two, are reminders throughout the toolbox about the five key principles of successful museum school programs.

- Address Specific Curriculum Outcomes
- Learning is Student-Centered
- "Good Questions" are Asked
- Museums work with Partners
- Activities are Object-Based

Make your own toolbox.

Upon completion of each training exercise, earn a badge for your personal toolbox (see Appendix A). Some museums may decide that awarding of badges is a self-monitored activity, while other museums may wish to have badges awarded by a staff person over-seeing the training (example, lead interpreter or site manager).

You are not alone.

Museums are encouraged to work with each other, work with archives and libraries, work with their community, and work with teachers to create experiences that best meet the needs of their local audiences. Additionally, in Nova Scotia, museums can access provincial support through the ICI (Innovation, Collections and Infrastructure) interpretation team, the IWG (Interpretive Working Group), and ANSM (Association of Nova Scotia Museums).

Updated for 2016.

The Toolbox for Museum School Programs was originally released in 2015. It was updated in Fall 2016 to reflect changes to the grades four to six Nova Scotia curriculum. As curriculum is updated in Nova Scotia, the toolbox will be updated. 2016 updates also included an update to Module Seven's list of Special Days.

NOVA SCOTIA
MUSEUM
THE FAMILY *of* PROVINCIAL MUSEUMS

Updated Release - October 2016 by

Nova Scotia Interpretive Working Group (IWG) Education Sub-Committee:

Maggie MacIntyre, *ICI/NSM Interpretation (Project Lead & Sub-Committee Chair)*
Jennifer Burke, *Department of Education and Early Childhood Development*
Graham Caswell, *Museum of Natural History*
Ray Fernandes, *Nova Scotia Provincial Library*
Cali Huczel*, Intern (Mount Saint Vincent University Bachelor of Education)*
Catherine Kelly, *Nova Scotia Provincial Library*
Katherine MacLeod, *Highland Village Museum*
Richard MacMichael, *Maritime Museum of the Atlantic*
Josie MacHattie, *Intern (Mount Saint Vincent University Bachelor of Education)*
Deborah Poole, *Lawrence House Museum*
Andrew Phillips, *Museum of Industry*
Lee Schuette, *Maritime Museum of the Atlantic*
Deborah Skilliter, *Nova Scotia Museum Collections (Geology)*
Barry Smith, *Nova Scotia Archives*
Katherine Stevens*, Fisheries Museum of the Atlantic*
Christine Sykora, *ICI/NSM Interpretation (IWG Chair)*
Victoria Veenstra, *Intern (Sir Sandford Fleming College Museum Management and Curatorship Program)*
Marilyn Webster, *Department of Education and Early Childhood Development*

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TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

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MODULE ONE
Why Focus on School Programs?

Everyone can succeed at offering school programs—this includes all students and all museums. Despite its rural location, le Village historique acadien de la Nouvelle-Écosse is a popular location for schools to visit. Interpreters facilitate learning about the Acadians through hands-on, minds-on activities like planting the garden.

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

MODULE ONE

Why Focus on School Programs?

This module explains the importance of school programs at museums in Nova Scotia today.

Audience: Program Developers.

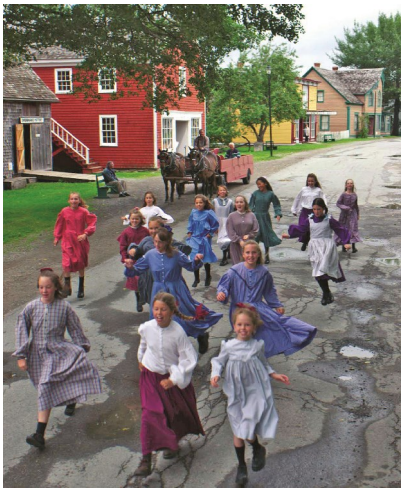
At the end of this module, readers will:

- Better understand why museums needs a school program.
- See how the IMP (Interpretive Master Plan) supports school programs.
- Understand that school programs can help build brand loyalty.

Glossary:

- Chaperone
- Collection
- Engagement
- Facilitation
- First-Hand Experiences
- Formal Learning
- Hands-on, Minds-on
- IMP (Interpretive Master Plan)
- Inclusive
- Informal Learning
- Interpretation
- Interpretive Working Group (IWG)
- Lifelong Learning
- NSM (Nova Scotia Museum)
- School Program
- Student
- Tour
- Website and Online Initiatives

It is a longstanding tradition in Nova Scotia that every spring museums welcome students for a tour, a picnic, and maybe a few organized activities. These fieldtrips formed the base of how museums met their education goals.



The Hands-on History program at Sherbrooke Village provides an experience that can be the highlight of the school year for students and teachers.

Times however are changing, as are the realities for museums and schools. Many museums have seen this change reflected in the demand for their school programs. For some museums this has meant a decrease in attendance for programs that received positive reviews for decades. For other museums this has meant changing what they offer schools and when it is offered. What is certain however is that staying the same, while maintaining the same attendance, is not likely. Change is coming. Change, with a new focus on school programs, is an important step in a museum's interpretive renewal.

School programs allow museums to connect to their community and their youth, while fostering an appreciation of natural and cultural history. Goal 3 of the Nova Scotia Interpretive Master Plan (IMP) states that museums should ensure interpretation is authentic, relevant and inclusive for all audiences. For students, this means presenting strong school programs. This toolbox will help museums achieve this goal.

MODULE ONE

History and Current Status of School Programs

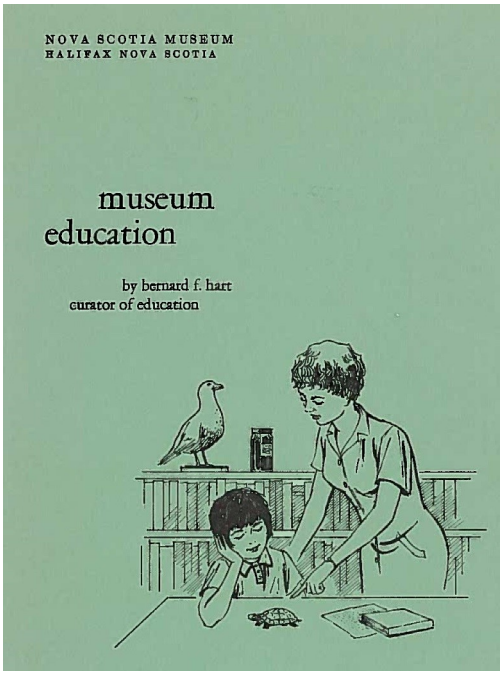
As one of Canada's oldest museums, the Nova Scotia Museum (NSM) has a long history of working with schools and has been considered a leader in successful school programing.

During its early years the NSM did not conduct school programs although it did regularly welcome teachers to conduct their own classes at the museum. In the 1940s Donald K. Crowdis, who had formerly been a teacher, became the curator of the NSM. This began the NSM's practice of offering programs specifically for schools, including on-site programs and the school loans program.

By 1959, the demand for quality museum school programs was so high that the NSM began offering full-day training sessions to prepare staff to develop and present school programs. By the time the NSM celebrated its one hundredth birthday in 1967, the museum had created a full-time position of curator of education. The curator of education was responsible for assisting all NSM sites (branch museums) create quality education programs as well as liaise with school officials. Since this time, the NSM has continued to support its sites with school programs.

In the last ten years, many museums in Nova Scotia have experienced a significant decrease in school visits. There are many reasons for this decline, including programs not changing when curriculum changed, lack of funding available to schools for field trips, challenges with transportation (buses), increased options for field trips, and school board policies regarding chaperones.

Despite these challenges, museums are poised for success. In 2014, the Association of Nova Scotian Museums did a study on how Nova Scotia perceive museums. They found that 82% of Nova Scotians agreed that museums are a valuable learning experience. The public rated museums as more trustworthy than books, schools, websites or family stories. This has exciting implications for museums and their role in providing educational experiences to schools. Already in Nova Scotia, museums that have adapted their programs to the needs of the modern classroom are succeeding, proving that museums still have an important role to play.



In 1967, for the 100th anniversary of the NSM, a report was published on the history on the museum's education programs. As the NSM approaches its 150th anniversary in 2017, this toolbox will continue to help NSM sites with this important work. These images are from the 1967 report.

Poised for Success

Hands-on, minds-on learning can be understood as learning through doing. Learning through doing has a long tradition. Just as the daughters at Cossit House would have learned to make lace from their mother, in school programs, students can learn by doing activities facilitated by interpreters.

Successful school programs combine the classroom's formal learning with a museum's informal learning experiences. Programs are a bridge from classroom curriculum to archives, collections and heritage experiences. Many of the experiences teachers are looking for can be found in a museum setting, such as:

- Providing hands-on, minds-on learning experiences.
- Facilitating an experience in which students further develop the skills learned in the classroom.
- Showing how classroom curriculum applies to "real life."
- Engaging students with the stories of their communities, environment and heritage.
- Inspiring career choices.
- Influencing how students want to spend their free time.
- Encouraging lifelong learning.

The immersive and interactive learning experiences provided by museums allow all students to succeed. Because nobody "fails a field trip", learning becomes more accessible to all students.

A Worthwhile Investment of Time and Resources

Sutherland Steam Mill is able to reuse components of their school programs during the summer. All summer long they offer free visits to children staying at the Tim Horton Children's Camp in Tatamagouche. This allows the museum to give back to their community and for children from across Canada to experience Sutherland Steam Mill.

The success of a good school program can spill into other interpretive products. Many museums find that they can reuse components, and sometimes even the whole school program, to address the needs of other audiences, including day camps and youth organizations (for example, Scouts and Guides), as well as special programs for adults.

Part of Your Community

The impact of school programs goes beyond meeting curriculum outcomes and creating admissions revenue for museums. Successful programs demonstrate that museums are vital to the communities they serve. Just as museums are moving to become gathering places and centers of community celebration in their broader interpretive renewal, school programs should spark dialogue, encourage social engagement, and aim to provide students with the skills they need as modern citizens.

Being part of a community also means that the development, presentation and marketing of programs is not something a museum should do alone. Museums are more successful when they work with schools, libraries, archives and other community groups. (See Module Six for more information on working with partners.)

MODULE ONE

Earn A Badge

Field trips are one of the most memorable experiences students during the school year.

1. Think back to when you were a student and remember the best field trip you went on. It doesn't have to be to a museum. Maybe it was the fire station, the water treatment plant, the town hall, a farm, or a sports facility.
2. What made this field trip "the best"? Was it the presenter? Was it the bus ride with your classmates? Was it having a picnic lunch? Was it doing something you couldn't do in the classroom?
3. How did this field trip change your perspective? Did it inspire a hobby, a family vacation or your career?
4. How could a school program at your museum create this type of lasting memory for students?

Current Status of Education in Schools (2016)

In January 2015, the Minister of Education and Early Childhood Development released the "The 3 Rs: Renew, Refocus and Rebuild, Nova Scotia's Action Plan for Education" to provide the direction of education from primary to grade twelve for Nova Scotian students.

The plan comprises of four pillars, each interconnected and considered essential to student success. The pillars are:

1. A modern education system
2. An innovative curriculum
3. Inclusive school environments
4. Excellence in teaching and leadership

Each of these pillars came with specific goals for the next five years that will change the way education will be addressed in Nova Scotia Schools.

This plan has already been put into action, with the first update being released in June 2015. The primary to grade six curriculum has been refocused on literacy and mathematics, integrating other subject areas into yearly, unit, and daily plans. Social Studies sees an increased focus on Nova Scotia's founding cultures (Mi'kmaq, Acadians, African Nova Scotians, and Gaels). The grade seven to twelve focus will be determined in the 2016-18 school years.

Museums should be aware of the plan, its updates, and its implications on how museums work to reflect the four pillars in their school programs.

The full plan as well as updates can be found online on the Department of Education and Early Childhood Development's website: www.ednet.ns.ca

Nova Scotia's Action Plan for Education 2015 "The 3 Rs: Renew, Refocus and Rebuild" is online: www.ednet.ns.ca/files/2015/Education_Action_Plan_2015_EN.pdf

Nova Scotia's Interpretive Master Plan is online: museum.novascotia.ca/about-nsm/interpretive-master-plan

Earn A Badge

Read the full descriptions of the IMP's Interpretation Policy Guiding Principles (IMP Appendix E).

For each principle consider:

1. How does this principle apply to our current school programs?
2. How could I better apply this principle to our school programs?
3. Choose which guiding principle you would most like to improve in your own interpretation. Write a SMART goal for yourself, which you will work towards incorporating in your school program.

What is a SMART Goal? Specific, Measurable, Attainable, Relevant and Time-Bound.

The Nova Scotia Interpretive Master Plan

All Nova Scotia Museum (NSM) interpretive products, including school programs, are guided by the Nova Scotia Interpretive Master Plan (IMP). This document, available online, provides best practices, audience research and suggested content for interpretation at all NSM sites. The IMP should guide the development of all interpretive first-hand experiences, including school programs. The IMP and interpretive renewal is championed by the Interpretive Working Group (IWG), which any NSM site can be a member of.

Unsure what story your school program should explore? Check out your museum's specific mandate and topic page (IMP Appendix C) to find out what content your museum should maintain, enhance and develop. School programs are a good place to pilot content that might not be included in your current interpretive products.

Encourage best practices by using the interpretation policy. Follow the 11 guiding principles in the IMP's interpretation policy to ensure programs are working toward being examples of best practice (IMP Appendix E).

The interpretation policy provides a full description of each guiding principles, which include:

1. Inclusive Interpretation
2. Diversity of Interpretive Strategies
3. Authority and Engagement
4. Research
5. Best Practice and Innovation
6. Training and Skills Development
7. Multi-Disciplinary Approach
8. Evaluation
9. Use of and Respect for the Collection
10. Support for Collection Development and Management
11. Partnership Opportunities


MODULE ONE

MODULE TWO
Five Key Principles of Successful Museum School Programs

In the First Peoples of Nova Scotia grade 5 school program at the Museum of Natural History students set out on a self-direct adventure to discover how the Mi'kmaq used their environment to meet their needs. This activity exemplifies curriculum-based, student-centered, and object based learning.

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

MODULE TWO

Five Key Principles of Successful Museum School Programs

This module will explain the five key principles of successful museum school programs, provide examples on how to implement them, and demonstrate why it is important for both program developers and presenters to use these principles.

Audience: Program Developers and Presenters.

At the end of this module, readers will:

- Understand the five key principles of successful museum school programs.
- Know how to apply the five key principles of successful museum school programs.

Glossary:

- Accessioned
- Archival Records
- Artifact
- Building
- Chaperone
- Collection
- Critical Thinking
- Engagement
- Exhibit
- Facilitation
- Formal Learning
- Hands-on, Minds-on
- Heritage Skills
- ICI (Innovation, Collections & Infrastructure)
- IMP (Interpretive Master Plan)
- In Situ
- Intangible
- Intangible Heritage Objects
- Intellect
- Interpretation
- Interpretive Working Group
- Landscape
- Object
- Object-Based Learning
- Open-Ended Questions
- Primary Source
- School Program
- Specific Curriculum Outcomes (SCOs)
- Specimen
- Student
- Student-Centered Learning
- Tangible
- Website and Online Initiatives
- Working Collection

Although there are no guaranteed methods to make sure museum school programs are always successful, the following five principles provide a solid foundation.

Programs Address Specific Curriculum Outcomes.

Put curriculum first. Subject matter and activities are chosen based on the provincial curriculum.

Activities are Object-Based.

Use objects when ever possible. Museum programs are different than classroom experiences through interaction with objects.

"Good Questions" are Asked.

Interpreters ask questions that allow students to discover answers for themselves and think critically about what they learn.

Learning is Student-Centered.

Museums provide students with the tools, context and activities but allow the students to take ownership of their learning.

Museums and Program Partners Work Together.

Museums build relationships with teachers and community groups in order to meet specific needs.

Need a reminder? Watch for these icons throughout the toolbox. There is also a "Five Key Principles of Successful Museum School Programs" pull-out poster in Appendix B. Consider putting it somewhere visible before presenting or developing programs.

MODULE TWO

Programs Address Specific Curriculum Outcomes

More than ever before, teachers must justify field trips by proving that the experiences relate directly to the curriculum. Therefore, school programs at museums that clearly demonstrate that they align with specific curriculum outcomes have higher attendance.

Assistance with curriculum is available in Appendix D. Additionally, Nova Scotia Museum sites can contact the ICI Interpretation Team and the Interpretive Working Group's (IWG) Education Sub-Committee. Both are good resources and can access teachers and curriculum consultants.

What is a Curriculum?

What is a Specific Curriculum Outcome?

A curriculum is a set of outcomes for teachers that address out the knowledge, skills, and attitudes, that a student should obtain within their course of study. Specific curriculum outcomes (SCOs) are approved by the Department of Education and Early Childhood Development for student learning. The performance indicators attached to outcomes are "I can" statements that students can know and do. These are attached to the 21st century competencies that the Department of Education and Early Childhood Development have approved. Museums should choose a few (ideally one to three) outcomes to address during their program.

Curriculum documents can be updated annually. Before developing new programs, museums should ensure they are working with the most up-to-date version of curriculum. If unsure, museums should check with the Interpretive Working Group's Education Sub-Committee or Appendix D.

The IMP "encourages stronger connections to the provincial school curriculum, attracting more school groups and building a stronger constituency for the NSM in the future." (IMP p. 35)

Watch for this icon in the toolbox as a reminder to address curriculum outcomes.

Every subject in school has its own curriculum document with specific curriculum outcomes (SCOs). Many museums focus on science and social studies, but there are also ways to incorporate other subjects such as math, languages, art, music, physical education and health. Some activities, like this sleigh ride at Ross Farm Museum, can even address multiple subjects at the same time. Integration of outcomes is helpful for teachers to provide a positive experience for students.

Continued… Address Specific Curriculum Outcomes

How to Read Curriculum Documents

The curriculum documents are organized by grade and subject, and go from general to specific curriculum outcomes (SCOs). When choosing a curriculum outcome to meet, focus on a specific curriculum outcome (SCO) rather than general learning outcome (GCO). Specific outcomes are measurable and address the learning and teaching that teachers are required to follow.

Remember, when recording specific curriculum outcomes (SCOs) to copy them exactly, word for word, from the curriculum documents, including any accompanying numbers. See Module Four, Step One for more information on working with curriculum documents.

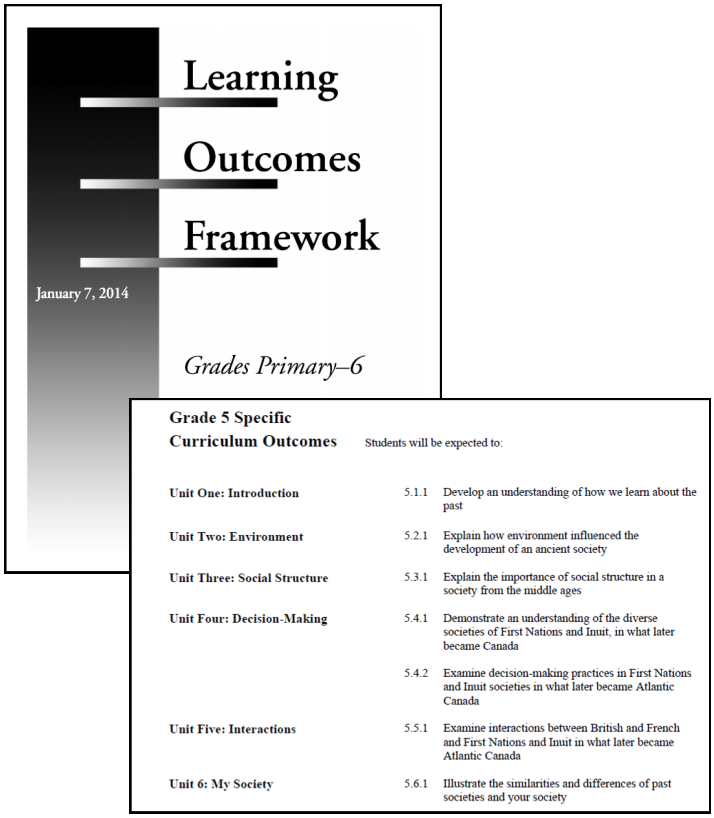
How to Choose Specific Curriculum Outcomes to address in a Program

There are several aspects to consider when choosing curriculum outcomes to address:

- Can this outcome be fully addressed through an activity at the museum?
- Is this an outcome teachers will want help addressing?
- Is this outcome one that is better addressed at a museum or in the classroom?
- Does it relate to the IMP?

For help selecting curriculum outcomes, see Appendix D for a chart that links curriculum outcomes to items in the IMP content distribution matrix.

Rather than addressing many outcomes poorly, a program should address one or two specific curriculum outcomes well.


Learning Outcomes Framework

January 7, 2014

Grades Primary–6

Grade 5 Specific Curriculum Outcomes Students will be expected to:

Unit One: Introduction	5.1.1	Develop an understanding of how we learn about the past
Unit Two: Environment	5.2.1	Explain how environment influenced the development of an ancient society
Unit Three: Social Structure	5.3.1	Explain the importance of social structure in a society from the middle ages
Unit Four: Decision-Making	5.4.1	Demonstrate an understanding of the diverse societies of First Nations and Inuit, in what later became Canada
	5.4.2	Examine decision-making practices in First Nations and Inuit societies in what later became Atlantic Canada
Unit Five: Interactions	5.5.1	Examine interactions between British and French and First Nations and Inuit in what later became Atlantic Canada
Unit 6: My Society	5.6.1	Illustrate the similarities and differences of past societies and your society

Curriculum documents can be found online (sapps.ednet.ns.ca/cart). Be careful to use the most current version, which is often released to teachers before being made publically available online. A full list of outcomes for every subject and grade can be found in the "Learning Outcomes Framework" documents. Museums that want to learn more about a specific outcome can refer to the Curriculum Guides for each subject, which provide information such as identifying skills, elaborating on the outcome, performance indicators, resources for teachers, and sample assessment strategies (activities).

MODULE TWO

Continued… Address Specific Curriculum Outcomes

Earn A Badge

Curriculum

Identify the curriculum outcomes that relate to your museum.

1. Look at the chart in Appendix D that shows links between the IMP and Curriculum Outcomes. Find the ones that relate to your site.
2. Read each curriculum outcome carefully, considering what it means, what grade/age appropriate skill and/or knowledge it is trying to develop, and how this relates to your museum.
3. Brainstorm what museum objects could be used to support each outcome. It might be helpful to first read the "Activities are Object-Based" principle to better understand what an object is.

Example of identifying and addressing a curriculum outcome

Curriculum outcome from Grade 2 Social Studies

"Students will demonstrate an understanding of sustainable development and its importance to communities (local)." (Outcome 4)

Activity

Working in small groups, students are given a modern item that they could purchase at a store. They look around the museum to find how the same need would have been met historically. They compare how they could use methods inspired by what they see in the museum to more sustainably meet the need that they are currently meeting by going to the store.

Although students might not wash their clothes by hand, like the Myers family at Fisherman's Life Museum did, they could hang their clothing on the line to dry. This small decision can lead to more sustainable communities, requiring less electricity.

21st Century Skills & Competencies

Education in Nova Scotia is part of an international movement which advocates teaching 21st century skills. These will be the skills essential to thrive in the 21st century. This shifts the focus from what students know to what students can do with what they know.

Nova Scotia's Action Plan for Education 2015 "The 3 Rs: Renew, Refocus and Rebuild" is in the process of integrating these skills into the curriculum. This is reflected in the curriculum released in 2015 for primary to grade three and will be reflected in the refocused curriculum for grades four to eight to be released in 2016 and grades nine to twelve in 2017. The competencies used in the NS curriculum are:

- Citizenship
- Personal-Career Development
- Communication
- Creativity and Innovation
- Critical Thinking
- Technological Fluency

A description of these competencies can be found in Appendix D.

21st century skills is not a movement limited to formal education. In 2009 the Institute of Museum and Library Services began the Museums, Libraries, and 21st Century Skills project. This project aims to combine the well-positioned strengths of libraries and museums to help students build these skills.

Appendix F has additional resources about 21st Century Skills from C21 Canada and the Institute of Museum and Library Services.

Activities are Object-Based

The core of all museum school programs should be objects. Throughout this toolbox the word object is intentionally used to be inclusive of all "real things" that are part of a museum experience, both the tangible and intangible. Tangible objects include accessioned collection items (artifacts, archival records, specimens, and working collection) as well as props, reproductions, landscapes, and buildings. Intangible heritage objects (what museums often call intangible heritage) also make up a huge part of what museums offer. Intangible heritage objects are often presented through the interpreter and includes language, traditions, stories, music, dance, smells, and heritage skills. Objects can also include virtual objects, such as photographs, video or sound from websites and online initiatives (online exhibits, social media accounts or digital files).

What is Object-Based Learning?

Interacting with the "real thing" is an experience unique to a museum setting. In object-based learning, activities direct students towards the objects. By closely examining objects, students discover evidence and reveal facts that help them better understand the topic.

Students are encouraged to observe, analyze, and interpret objects. Students should be provided with opportunities to ask questions about objects. The answers will be found through careful examination of the artifact and will lead them to more questions. This encourages them to think more deeply about the object and what it represents. This learning strategy engages students more than asking them to listen, read or accept information given to them.

The IMP states that in order to be relevant to visitors experiences we should "use real things to put history in context." (IMP p. 85)

Watch for this icon in the toolbox as a reminder of object-based learning.

For many years the owner of these shoes was an "Unknown Child" who died on the Titanic. The owner has since been identified as 19-month-old Sidney Leslie Goodwin from England. What do these shoes tell us about Sidney? (MMA, M2005,4.1a,b)

Continued… Activities are Object-Based

Examples of "Objects" that Could be Used in Programming

- **Artifacts and Specimens from your Museum Collection:** Working with collections and conservation staff, artifacts and specimens can often be presented without risking damage to the collection. This could include examining objects in situ or in an exhibit case, or moving an artifact to a prepared temporary viewing location.
- **Artifacts from the Working Collection:** Some artifacts have been accessioned as working collection and thus, have different care and handling needs. These often allow for more opportunities for students to touch.
- **Props:** New and antique items can form a props collection. These are often store bought or donated and are considered replaceable as they are not accessioned.
- **Reproductions:** New objects can be made to look like the original artifacts. Museum quality reproductions can be purchased or fabricated.
- **Archival Records:** Working in partnership with archives will allow for items such as original documents, images, and audio-visual recordings to be used as objects in programs. Additionally, archival records, are more digitized and/or reproduced.
- **Intangible Heritage Objects:** Museums are great places to experience culture. Interpreters can present intangible items including songs, music, stories, language, expressions, first-hand accounts, smells, crafts, recipes, etc. Intangible heritage objects can be represented by tangible objects like archival records.
- **Whole Buildings or Architectural Features (Built Heritage):** The building and its features are also artifacts. Incorporate the architecture, both inside and outside.
- **Landscapes:** The grounds of a museum and views from windows are often just as significant as the building and artifacts. These can be enhanced with archival images.
- **Digital Objects:** Using on-site technology or BYOD (Bring Your Own Device), websites and online initiatives from museums, archives, libraries and cultural organizations can supplement what is available on-site.

All museums have different objects they can use in programs. These can include artifacts placed in exhibit cases, as seen here at McCulloch House (top), props and reproductions such as the costumes at Ross Thomson House and Store Museum (middle), or whole buildings and landscapes like at Lawrence House Museum (bottom).

Continued... Activities are Object-Based

What do these objects tell you? Would you guess from these Georgian objects from North Hills Museum that the outside of the building looks like a typical farmhouse? Its owner established one of Nova Scotia's earliest restoration societies in the 1960s and through these objects, students can discover how Nova Scotians have helped preserve the past.

In object-based learning, students are encouraged to closely examine an object and ask critical questions to fully reveal the object's story.

Why use Object-Based Learning?

Objects provide hands-on, engaging, and meaningful experiences, as well as relevant tools for interpreters. Successful museum school programs provide experiences that teachers cannot replicate in a classroom. Object-based learning, with the "real things" found in museums, is what makes a trip to a museum valuable to teachers. Objects make what students learn in the classroom "real."

Objects can speak to people regardless of language, intellect, and age. Because objects can be understood without reading, young students can understand just as well as older ones. This also makes object-based learning accessible to class groups which often contain students with a variety of learning needs. All students can be equal, as it is not the prior knowledge but rather critical thinking that is important.

Object-based learning also makes programming easier for museums. First, it doesn't require new resources as museums are already object-rich environments and second, museums do not need a special space to deliver this style of program as it is most successful when delivered in situ. Program developers should work closely with conservation and collections staff to make object-based learning successful for students while ensuring the needs of the objects are met.

Example of Object-Based Learning in Museum Work

Curators, researchers and conservators as well as many other museum professionals regularly use object based learning, though they might call it careful observation, research or study. Invite members of curatorial, collections and preparation teams to share how they use the skills of observation and inference when they are researching an artifact.

Nova Scotia Museum Senior Conservator and Communication Designer use object-based learning to prepare the historic Starr Trophy for display at the Windsor Hockey Heritage Society and Museum.

Continued… Activities are Object-Based

How does it work?

Start by looking carefully at an object. Objects are a primary source of information. Cultural history (social studies) uses objects to shed light on who people were, and what kind of lives they may have led. Objects can reveal the lives of ordinary people who did not leave a written record of their experiences, including minority groups. Natural history (science) uses objects to immerse students in a natural setting that they otherwise might not be able to experience. Objects can reveal information about the needs and characteristics of living things, the biodiversity of an area, or even complex concepts like climate change.

Objects allow students to play the role of the historian, naturalist, archaeologist or explorer. Students discover facts and evidence through observation and use these to form their understanding. When asked to back up their opinions, they will have their own evidenced reasoning behind it. As students refine their observation and inquiry skills, they are able to direct their own learning, generate their own questions, and determine for themselves appropriate sources for further research.

Interpreters can start the process by offering an object and starting the discussion. Then, rather than tell the students facts, interpreters act as a guide throughout the process. The key to this approach is to take time for observation, inquiry and inference.

This buckle was discovered in an archeological dig at Birchtown. When it was new and complete it would have been very striking, especially in Birchtown where it would have been an exceptional possession. If it could talk, what stories might it tell about Nova Scotia's Black Loyalists?

Equipment for Object-Based Learning

While no specific equipment is needed, a few items can add to the fun.

- Magnifying glass or binoculars to encourage close investigation.
- White gloves for handling objects.
- Pencil and notebook for note taking.

Earn A Badge

Become an expert on an object using object-based learning methods.

1. Choose an object you would like to know more about. Spend at least two full minutes observing it. Look at it from multiple angles. Use a magnifying glass to examine details. If possible, touch your object. Smell your object. Examine it in as much details as possible.
2. Use words to discover your object. Write at least eight descriptive words for your object.
3. Use math to discover your object. Measure it—height, width, length. Weigh it if possible.
4. Use creativity to discover your object. Cover it up. How much can you draw from memory?
5. Use curiosity to discover your object. List at least four sources you could use to learn more about it.
6. Use critical thinking to discover your object. Write a short story about it. How was it made? Where did it live? Who used it? What did its world look like? How has its life changed?

"Good Questions" are Asked

Questions are a great way to start discussions with students and to encourage participation. When used successfully, questions allow students to develop skills, think critically and take ownership of their learning. Asking questions, rather than telling facts, is one of the key skills used in facilitating programs.

What are "Good Questions"?

"Good questions" are questions that are open-ended, relevant, and allow for students to answer based on the information provided to them. Often the questions do not have a right or wrong answer but rather are more about talking through problems and thinking critically.

"Good questions" also progress with the program. Questions at the start of a program will encourage participation, observation and inquiry. As information is presented in the program the questions can become more in-depth, building on what the students have discovered during the program. By the end of a program, the questions the students are asked should examine all of the information the program has presented, formulating ideas about the meaning of the information, and connecting their observations to larger questions such as 'why?' and 'so what?'.

"Good questions" can also be used to guide student inquiry. Rather than simply providing a student with an answer, questioning can be used to help them discover the answer on their own. Questions can be used to direct student to objects, and encourage them to infer, or hypothesize, from what they have observed. Often students learn more if they discover their own answers in their own words. Often an easy "good question" to start with is "what do you notice?".

Try not to answer a question a student could answer—they will learn more by saying it in their own words.

Watch for this icon in the toolbox as a reminder of asking "good questions."

Interpreters are used to having "good answers" and are eager to share information with visitors, as seen here at Perkins House. School programs however are different than guided tours and interpreters must be ready to change how they both ask and answer questions.

MODULE TWO

Continued… "Good Questions" Are Asked

How to Ask "Good" Questions

There are several different kinds of questions. Effective interpreters should attempt to use a variety of each type during programs.

Memory Questions: These are knowledge based and only have one correct answer. Interpreters should limit their use of these questions and only ask them if they are confident students know the answer. These questions are dangerous as students can become discouraged if too many difficult ones are asked, and bored if many are too simple.

Example: In what year did the Halifax Explosion happen?

Convergent Questions: These questions ask students to put facts together to get the correct answer. They can be used to make comparisons or describe relationships.

Example: How are the polar bear and black bear alike?

Divergent Questions: These questions can have many answers. The students can use what knowledge they have to form an opinion and be original with their answer.

Example: How might this farm be different if we didn't have horses?

Evaluative Questions: These questions ask the students to form an opinion and make a judgment based on their knowledge.

Example: How do you think Nova Scotia would be different if the deportation of the Acadians hadn't happened?

Effective interpreters includes a variety of question types. A fictional example of this type of "buffet of questions" is presented here, using an image from a Gaelic tea hosted by the Highland Village. Can you identify the memory, convergent, divergent and evaluative questions?

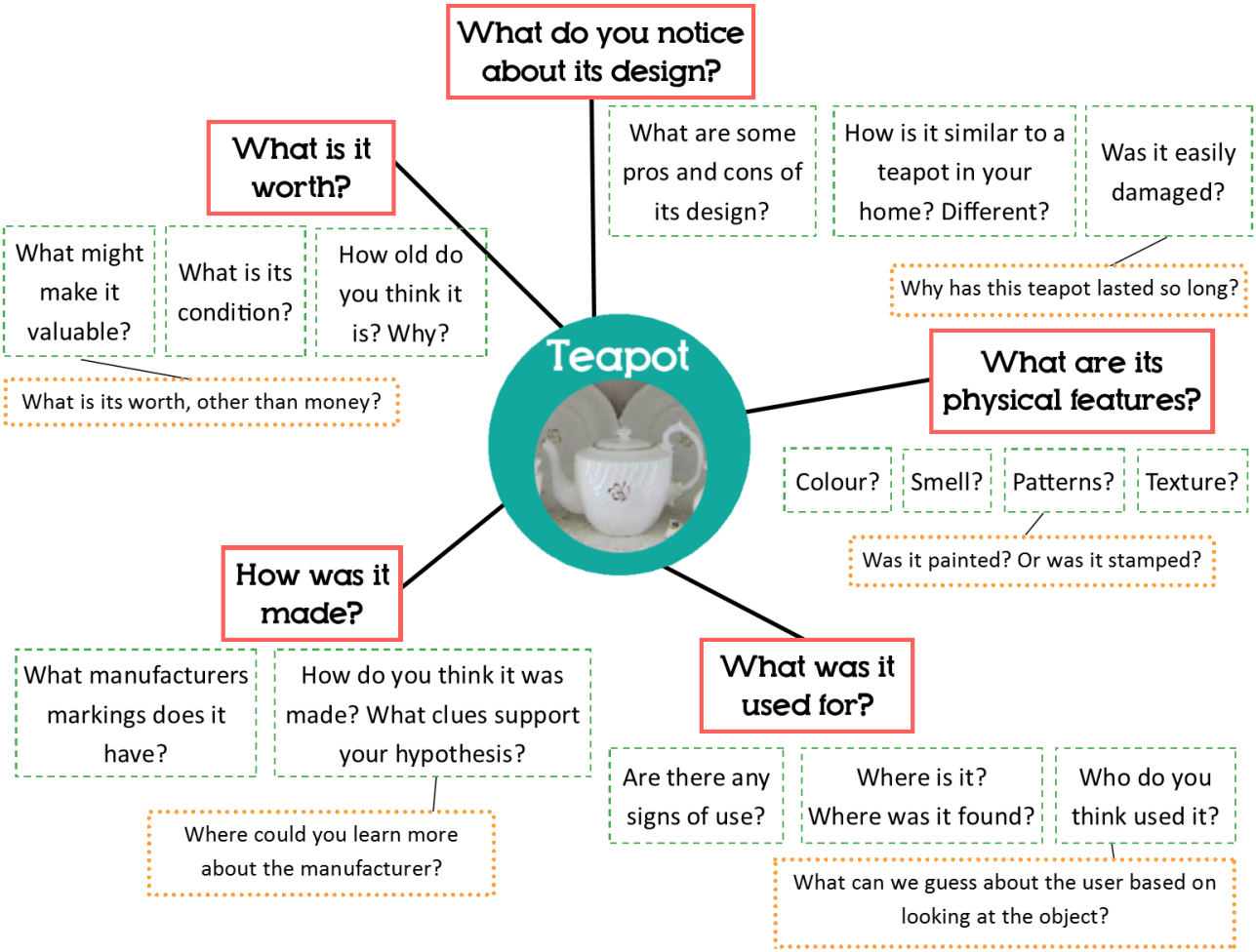
Continued… "Good Questions" are Asked

Earn A Badge

Assemble a list of questions you can ask about an object to engage a student in its story. Choose one of the following two methods to create your questions:

1. Choose an object from your collection. Create a web of questions, as seen in the example below, that you could ask students about the object to help them discover its story. When finished, reflect on what you have learned about object-based learning.
2. Alternatively, look at and try the "How to Read a Shoe" from the Bata Shoe Museum activity in Appendix F. This activity is part of "Learning with Objects: Artifact Exploration Guide" by the Department of Education. Create a similar list of questions for an object in your collection. Reflect on how your list of questions will help you facilitate object-based learning.

What could these Sunday best teacups from Fisherman's Life Museum tell you? This think map demonstrates how students might question an object.



MODULE TWO

Learning is Student-Centered

Student-centered learning shifts the focus of activity from the interpreter to the students. The is interpreter isn't there as "teacher" or "fact teller" and the students aren't there as "learners" or "fact receivers." In student-centered learning is facilitated by the interpreter and the students are active participants who are discovering the information. Museums are there to give students the tools and context and then allow students to explore it. This often results in students speaking more than the interpreter. Activities are designed not to only be hands-on, but more importantly, minds-on. Students are not just touching or doing, they are also thinking. This results in students being engaged, remembering more of what they learned, thinking critically, and often, even having fun.

Watch for this icon in the toolbox as a reminder of student-centered learning.

Student-centered learning incorporates the principles of successful school programs already mentioned in this module, namely, programs address specific curriculum outcomes (SCOs), activities are object-based, and "good questions" are asked.

Example of Student-Centered Learning at a Museum

During the grade one "Characteristics of Living Things" program at the Museum of Natural History, students are introduced to several live animals. Travelling around the museum in small groups, students discuss their observations about the animals. The activity is designed to meet the curriculum outcome that states "students will identify different living things to determine their characteristics."

Eastern painted turtle at the Museum of Natural History

For example, at the eastern painted turtle enclosure, students are asked to look at the turtles and share what they see. The interpreter guides the discussion based on the observations of the students.

Interpreter: "What do you observe about this turtle?"
Student: "I see that the turtle has feet that look like frog feet."
Interpreter: "Those are called webbed feet. What would webbed feet tell us about turtles?"
Student: "Maybe that they like to swim?"
Interpreter: "Do you see any other evidence that turtles like to swim?"
Student: "The turtle's shell is wet. Maybe it just got out of the water."

Continued… Learning is Student-Centered

What is Student-Centered Learning?

Within the confines of a program, learning starts at the students' level. Building on existing knowledge, students are able to follow their interests and curiosities through activities and discussions. This results in students discovering their own understanding of a topic.

There are many methods of student-centered learning. Three of the methods that museums could incorporate into programming include:

Active Learning:
Students solve problems, ask and answer questions, hypothesize, and discuss.

As part of a tour at the Maritime Museum of the Atlantic, students are engaged in discussion. Information is discovered through questions and conversation, rather than the interpreter lecturing.

Cooperative Learning:
Students work in teams under conditions that assure both positive team and personal accountability.

Students work together at Museum of Industry to learn how the efforts of both individuals and groups were important in Nova Scotia's industries.

Inductive Learning:
Students are presented with a challenge and learn the material in the context of solving it.

Students at the Fisheries Museum of the Atlantic are challenged to create and read messages using signal flags. This activity helps them to understand how ships could communicate at sea.

Why use Student-Centered Learning?

Student-centered learning dramatically increases participation and retention of information. Rather than focusing on specific facts that are often forgotten, students develop skills and discover evidence that supports the facts the museum program is teaching. This in turn supports programs that address the curriculum focusing on skills, not just the knowledge. Developing students' skills will allow all students to succeed as it includes using the different ways people learn, 21st century skills, and hands-on, minds-on learning.

Student-centered learning shifts the focus of activity from the interpreter to the student.

Museums are an ideal location to use student-centered learning as many interpretation products, such as exhibits, already exemplify self-directed learning.

Continued… Learning is Student-Centered

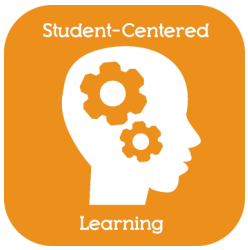
How does it work?

No two school programs are ever the same when using student-centered learning. In student-centered learning, the focus is on the students, not the interpreter. Since a program is presented to many different groups of students, interpreters must be responsive and adaptable to the unique needs of each group.

Despite the flexibility, student-centered learning programs still need a framework. Program developers design specific activities and opportunities for discussions. These are often based around an object. The activities do not follow a script, but rather a series of flexible steps that lead students through the process. The role of the interpreter is to provide clear instructions for the activity, ask "good questions," encourage critical thinking, and create a safe environment for student participation.

These student-centered experiences are fun and may often more resemble play than learning. Play is one of the effective ways to create enthusiasm and help students learn. See "Learning and Play" (Module Three) for more about play.

Earn A Badge



Design a tour in which the students, not the interpreter, is the focus of the tour.

1. Before starting, identify **one** important fact you want students to know. Now here's the hard part—this fact is the one thing you are not going to say while giving your tour.
2. During your tour, facilitate conversation instead of telling information. Ask the students open-ended questions, follow their interests, direct the conversation to artifacts or specimens that provide evidence for your one important fact. Provide a chance for students to do something independent of you.
3. At the end, evaluate how you did using the self-reflection on this page.
4. Try doing this several times, with different groups, until it starts to feel natural.

Self-Reflection: Is Your Activity Student-Centered?

Take a few moments after you present an activity or tour to do this self-reflection exercise. Consider repeating it on a regular basis so that you can monitor your own improvement.

Is it student-centered?	**Never → Always** **1 2 3 4 5**
Interpreter is facilitating (giving instruction and asking questions) more than teaching (telling facts).	1 2 3 4 5
Students are doing and discovering rather than watching and listening.	1 2 3 4 5
Students come to multiple answers based on facts rather than one "correct" answer.	1 2 3 4 5
Activity and results change slightly from group to group rather the same experience for everyone.	1 2 3 4 5
Learning objectives, such as specific curriculum outcomes, are addressed, even if not directly stated.	1 2 3 4 5

Museums and Program Partners Work Together

Every museum school program has partners. Successful programs recognize and work with these partners. Working with partners is important to every step of program development and delivery. Partners can provide support, resources and better experiences for students.

Who are Program Partners?

Working with partners does not need to be complicated. Often by simply moving beyond established units, departments and/or organizations, interpreters will find partners already exist and are just waiting to be invited into the process. A list of suggested partners can be found in Appendix D of the IMP.

Internal Partners: Everyone who works and volunteers in a museum is a potential partner. This includes management, administration, curators, researchers, conservators, preparators, designers, visitor services, and custodial staff. Invite them to participate in the program, not only where it is an obvious fit, but in multiple steps of the program from development to piloting to interacting with the school during their visit. Not only might they have unexpected resources and advice to offer, it is also a good opportunity for them to better understand and champion museum school programs.

Community Partners: Many community organizations have education, outreach, and volunteer goals similar to museums. Consider working with special interest groups and community organizations for resources both in program development and presentation. Museums will find in particular that archives and libraries are ready partners. See Module Six for specific information on working with archives and libraries.

School Partners: Consider schools not just as a client that museums serve, but rather a partner in education. Examine ways to include teachers, parents, and education professionals in program development. During program presentations find ways to involve the teachers and chaperones to make programs successful.

Watch for this icon in the toolbox as a reminder to work with program partners.

As a part of developing the "History Detectives" program found in Appendix I, the program was piloted not just with students but also museum staff. Here staff from collections, interpretation, design, management, and online marketing test the archives activity under the direction of a pre-service teacher doing a placement at the museum. This provided a wide range of advice for the program, moving it towards the final version.

Continued… Museums and Program Partners

Working with Partners to Develop Programs

There are many ways to include partners while a program is being developed. This can include designing activities, completing research, identifying objects to use, designing and fabricating props, testing program components and evaluating programs.

Watch for the working with partners icon in Module Four to see the steps where program partners can be included.

The Fundy Geological Museum invited members of the Interpretive Working Group (IWG) and their community for a daylong education program retreat to start the process of developing new school and public programs.

Working with Partners Before the Program

Programs start long before the students arrive at the museum. The more informed program partners are about the program, the more they can help make the program successful.

Museum staff, volunteers and community partners should be familiar with the program. Although they do not need to know it in detail, provide opportunities for them know what the program is about and what students will experience in the program. This will this allow them to promote the program if an opportunity arises and support the program if resources or information comes their way.

Teachers should be given an opportunity to build a relationship with the museum before they book a program. Consider having an open door policy for teachers, possibly offering free admission. Many teachers may wish to personalize school programs to better meet the needs of their class. This can be arranged when the teacher books a program or by inviting the teacher to come into the museum beforehand to meet with staff. See Module Four for advice on marketing programs to teachers.

Many museums, such as the Maritime Museum of the Atlantic, have an open door policy with teachers. Teachers can come visit the mill before bringing their class in order to better link the field trip with what they are doing at school.

Continued… Museums and Program Partners

Work with the Partners to Create Success Upon Student Arrival

Taking classes to a location outside of the school can be stressful for teachers. Include interpretation and visitor services staff in the process of welcoming groups to the museum by:

- Being prepared/set-up for the group before they arrive.
- Waiting for the group when they arrive.
- Making washroom facilities available, especially if students have had a long bus ride to get the museum.
- Allowing for a short "recess," if possible outside, before the program for students to eat their snack or use-up some energy.

Most importantly, talk to the teacher to find out what will work best for their class.

Students, like many adults, have difficulty going directly from a long bus ride to focus on a program. Providing a short "recess" at the start of a program often will make for more engaged learners and a more successful program. This student is enjoying running on the extensive grounds at Haliburton House Museum.

Working with Partners During Trip

In order to optimize a school program, teachers and chaperones should be included in the program as it is happening. Museums that work closely with teachers and chaperones will have stronger programs, fewer logistical problems, more engaged students, and will more successfully meet curriculum outcomes.

Expectation:

Be sure to welcome teachers and chaperones and explain to them expectations at the start of the program, just like the students. Depending on program set-up, program presenters could talk to them separately, however, it is totally acceptable, and sometimes preferable, to do this in front of the students. This way students will know that their chaperones are doing during the program. Some expectations sites may have for teachers and chaperones are:

- Stay with the group of students assigned to them at all times.
- Be responsible for the safety and/or behaviour of students.
- No food or drink in the museum.
- Be attentive but remember the activities are for the students.

Opportunities to Help Out

Consider asking chaperones to assist with the program by:

- Helping students who are struggling with reading or writing.
- Ensuring all students get a turn.
- Participating in or assisting with a demonstration.

Earn A Badge

Plan how you want to include teachers and chaperones in a program at your museum.

1. Make a list of 5-7 expectations and opportunities for teachers and chaperones.
2. Consider if there is a way they could be of assistance during the program?
3. Get creative. Is there a way you could facilitate chaperones creating special memories with their child?
4. Plan for all scenarios. How will you avoid common problems you have during programs with teachers and chaperones?
5. Write down your plan to share this list with teachers and chaperones. Try it out and adapt as needed.

Continued… Museums and Program Partners

The role teachers and chaperones play will vary with different activities. In some activities, like the wool carding as seen above at the Wile Carding Mill Museum, students can work independently and chaperones need only to help students who need it. In other programs, chaperones are more actively involved in the program.

School programs can be a family's first introduction to the world of museums. By creating a positive experience for chaperones and students, museums are building lifelong family visitors, as seen with this family visiting the Firefighter's Museum.

Legal Requirements:

Teachers must legally have a set number of chaperones to assist with supervision during a school field trip. The number of chaperones will vary depending on the school board and grade.

Teachers and chaperones should not be asked to leave the program area or students for any reason. If they are becoming a distraction find a way to include them in the activity.

Chaperones should have been instructed on legal requirements by their school board in regards to accompanying a student who needs to be separated from the group (for example, to use the washroom). Remember that the chaperones and teachers are primarily responsible for the safety and behaviour of students during the visit.

Some teachers and chaperones, such as EPAs (Educational Program Assistants) might need to stay with a specific student to support them in the areas of personal care, behaviour management and instructional programming. Museums should be aware this is always a possibility and quickly adapt to these situations.

Create Great Memories and Future Museum Visitor:

Getting chaperones for a trip can be a major challenge for teachers. By providing a memorable experience for chaperones, museums are helping the teacher as chaperones may be more eager to volunteer to come to the museum as they know they will have a good time.

Allow some room in program delivery for families to make museum memories together. For students, having their guardian be the chaperone can be an exciting experience. Similarly for guardians, interacting with their children is a major motivation for being a volunteer chaperone.

Remember, families who come to a museum for a school field trip and have a good time are more likely to return for a visit, buy a museum membership, and participate in public programs. Teachers who have a positive experience are more likely to return for another school program. Other partners who have a positive experience are more likely to try future partnerships.

MODULE THREE
Getting to Know Your Audience

Just as this photographer at Sherbrooke Village Museum focuses on the people in the frame, interpreters need to focus their programs on the specific needs of their audience.

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

MODULE THREE

Getting to Know Your Audience

This module introduces several educational theories and characteristics of students in Primary to Grade 12 students

Audience: Program Developers and Program Presenters.

At the end of this module, readers will:

- Understand the needs and abilities of students of different ages.
- Understand the importance of creating an inclusive learning environment.
- See how play can be a part of learning.

Glossary:

- Abstract Concepts
- Critical Thinking
- Critical Thinking Skills
- Engagement
- Facilitation
- Hands-on, Minds-on
- Heritage Skills
- IMP (Interpretive Master Plan)
- Inclusive
- Intellect
- Interpretation
- IPP (Individual Program Plan)
- Object
- Object-Based Learning
- Primary Source
- School Program
- Student
- Specific Curriculum Outcomes (SCOs)
- Student-Centered Learning

It is important to understand who the audience is and what their needs are before developing a school program. Students have different capabilities and characteristics at different ages. Research supports using a variety of learning methods in order to better reach students. Effective programs include hands-on, minds-on activities, presenting information in a variety of formats to address multiple learning styles, and learning through play. Additionally, students learn best when information is related to their lives. This means using technology, using current examples for context, and allowing students to work with their peers.

Self-Reflection: "What is Relevant?

How well do you know what is relevant to "kids today?" It is easy to forget how quickly things are changing and how different things are from generation to generation.

1. Watch this entertaining YouTube video which reminds us how quickly what is relevant changes. ***"Kids react to Walkman" (***youtube.com/watch?v=Uk_vV-JRZ6E***)***
2. What surprised you in this video? How does watching this video change how you understand what is relevant to today's students? How can you apply your new understanding of relevance to your programming?
3. This video is a great example of student-centered learning and object-based learning. Do you better understand these concepts after watching them in practice?

Building on Existing Knowledge

In order to make new information accessible, programs need to go from the known to the new. When presenting new ideas, interpreters have to connect the new concept or idea with an idea that already exists in the student's knowledge base. Interpreters can better understand what students know by becoming familiar with the curriculum and by talking with students during the program.

Museum school programs can use the program introduction to establish what the students already know. Don't assume existing knowledge based on an experience with one group or student. It will differ from group to group and student to student.

Example of Building on Existing Knowledge

The grade four science curriculum asks students to demonstrate and record a variety of methods of weathering and erosion on the landscape. Before discussing this outcome, the program will need to establish what prior knowledge the students have about landscapes.

Interpreter: "What types of things did you see on your bus ride to the museum today?"
Students: "Trees, hills, river, lake, road, buildings, farms, ocean, beach."
Interpreter: "What you've just described is the landscape between your school and the museum. How might this landscape have been different if you had made the same drive during the winter?"

Creating an Inclusive Learning Environment

Museums have the important job of making sure that everyone has a good experience and feels welcome at their museum. Students enjoy learning at museums because they are not being graded.

To create an inclusive environment, museum staff must be aware of the diversity they may encounter when teaching a program. This includes gender, culture, language (ESL), as well as various individual abilities and needs (physical, intellectual and emotional). Just as teachers meet some students' specific needs through the creation of an IPP (Individual Program Plan), museums must be prepared to accommodate specific students when necessary. This is most easily done by communicating with the teacher before and during a program, asking how the program and museum can adapt to meet the learning needs of all their students.

There is no one way to make a program inclusive for everyone. Students, like these children at Haliburton House come with a variety of abilities and needs. If possible, work with the teacher to arrange any accommodations needed. However, being prepared isn't always possible. In that case, remaining flexible, respectful and willing to try something new will go a long way in creating an inclusive learning environment.

Continued… Educational Theory

Use of Personal Technology Devices

A growing challenge for museums is how they integrate personal technology devices that students bring with them. These included smart phones, tablets and wearable technology (for example, Apple Watch).

The most common method to address this concern is to ask students to not use their devices during the program. When clearly explained at the start of a program this is an acceptable strategy.

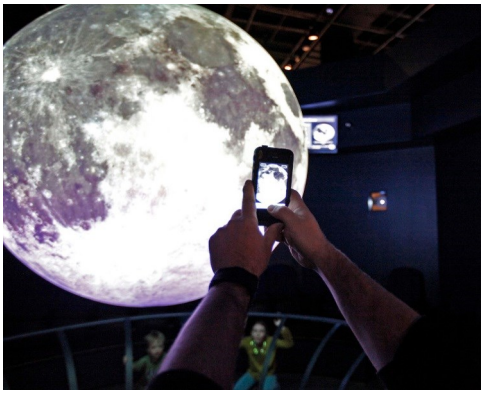
Technology however can also be incorporated into a program with very effective results. This is especially true when using student-centered learning which emphasizes students critical thinking, rather than learning specific facts. Incorporating technology can make for more engaged students as they are accessing the information in a way relevant to them. Technology can also be used to making learning more accessible, including students on IPPs.

Consider some of the following examples of ways to incorporate technology in programs:

- Provide clear expectations on using technology at the start of the program.
- Let students know there will be a photo opportunity at the end of a specific activity. Encourage them to wait until a set event to pull out their cameras.
- Encourage selfie moments that enforce a specific piece of information such as re-creating a historic event or posing as depicted in a piece of art.
- Use cameras to complete a scavenger hunt. Instead of having students collect information or items, have them collect photographs.
- Encourage students to research facts online. Use the opportunity to teach research skills by asking what websites they are using.
- Use apps designed to compliment program information such as a bird identification app during a nature walk.
- Use virtual exhibits to enhanced exhibits and access to museum collections (for example, zoom and rotate a virtual object, or, accessing additional objects virtually, such as archival records).

When incorporating technology remember that although many students have their own device, it is likely that not all students will. Students should be encouraged to work in groups. Be sure to talk to the teacher well before day of delivery if the program has a technology dependent activity. Some schools will policies in regards to technology. Additionally, some schools have class sets of devices which they may be able to bring with them.

Using personal technology devices is increasingly common, even in classrooms. Incorporating it, as seen above at the Maritime Museum of the Atlantic and below at the Museum of Natural History, can sometimes add to a program rather than create a distraction.



The IMP reminds us "The children […] are growing up in the age of technology. […] Experiences need to appeal to these "techno-wizard" children." (IMP p. 63)

Continued… Educational Theory

Learning Styles

Everyone learns in different ways. One theory on learning styles divides learners into three categories: visual, auditory and kinesthetic. In general, using a combination of these three "ways of learning" is the most effective way to ensure that information is retained.

To learn more about learning styles, including activities and exercises, see Unit 4: Communications and Learning in "Creating the Experience: A Workbook for Interpreters" by the Nova Scotia Museum (1995).

The most common learning styles are visual, auditory and kinesthetic. The best activities use all three types.

Visual Learners:
Learns by seeing.

Auditory Learners:
Learns by hearing.

Kinesthetic Learners:
Learns by feeling or doing.

STEM/STEAM Programs

Although museum school programs must address specific curriculum outcomes (SCOs), they do not need to be limited to just one subject or curriculum outcome. STEM programs focus on cross-curricular outcomes and are becoming increasingly popular in the wider education field. STEM programs combine Science, Technology, Engineering, and Math. They focus on using real-world problems to teach students to think critically and encourage creative solutions. In more recent years there has been a push to add Arts to this mix, resulting in STEAM Programs. All museum programs have the potential to become STEM or STEAM programs, which will increase their appeal to teachers and students, especially as increased knowledge about STEAM careers was identified as a priority in Nova Scotia' Action Plan for Education 2015.

Learn more about STEM Programs: www.stemeducationawareness.ca
Learn more about STEAM Programs: www.steamedu.com

Historical Thinking

Just as the teaching of science, math and art in schools has been influenced by STEM/STEAM, the teaching of social studies has greatly been influenced by the Historical Thinking Project. Historical thinking treats the study of history like scientific thinking in science instruction and mathematical thinking in math instruction— it focuses on method and encourages students to think rather than memorize. Using six historical thinking concepts, it provides a way to communicate complex historical ideas and help students relate to them. The six historical thinking concepts are:

1. Establish *historical significance*
2. Use *primary source evidence*
3. Identify *continuity and change*
4. Analyze *cause and consequence*
5. Take *historical perspectives*, and
6. Understand the *ethical dimension* of historical interpretations.

Learn more about the Historical Thinking Project: http://historicalthinking.ca

Continued… Educational Theory

Learning and Play

Play is the first way children learn about the world around them. This natural impulse to explore their world while having fun, makes play a good tool for learning. These experiences allow students to make discoveries, find meaning, and think creatively though an accessible and relevant experience. The desire to play doesn't end. Students of all ages, even adults, are more engaged in their learning as it is fun and student-centered. This results in them developing a deeper and longer lasting understanding of what they are learning.

> **"Experts identify play as a leading source of social, emotional, physical, language and cognitive development. Intentional play-based learning allows children to investigate, ask questions, solve problems, and engage in critical thinking."**
> **NS Department of Education and Early Childhood Development's "Let's talk about Learning Through Play"**

Museums are an ideal location to create intentional play-based learning experiences. Interpretation regularly uses play with visitors of all ages, although often disguised as first-person interpretation, hands-on experiences, workshops and demonstrations. Museum school programs should contain these same elements of fun, discovery and critical thinking while learning.

There is no age limit for play. The augmented reality sandbox in the Sable Island exhibit at the Museum of Natural History provides visitors a play-based learning experience which teaches how 3-dimentianal spaces are depicted on 2-dimentianal maps. It is common for visitors of all ages, preschool to seniors, to be seen playing here.

In Nova Scotia there are several resources that support play as a part of learning. The Department of Education and Early Childhood Development's pamphlet entitled "Let's talk about Learning through Play" demonstrates that learning through play is supported by science, experts as well as children and families. It explains how play can successfully be used to achieved specific curriculum outcomes (SCOs). The High Five Program is supported in Nova Scotia by Recreation Nova Scotia. This program helps adults create quality sport and recreation experiences for children through resources and training. Their five guiding principles for healthy child development include play, participation, friends, caring adults and mastery of skills. Appendix F contains links to these resources.

> **The IMP endorses play to engage visitors, stating "Games, celebrations and entertainment are all valid methods for [engaging] audiences and should be part of [a museum's] approach." (IMP p. 73)**

MODULE THREE

Continued… Educational Theory

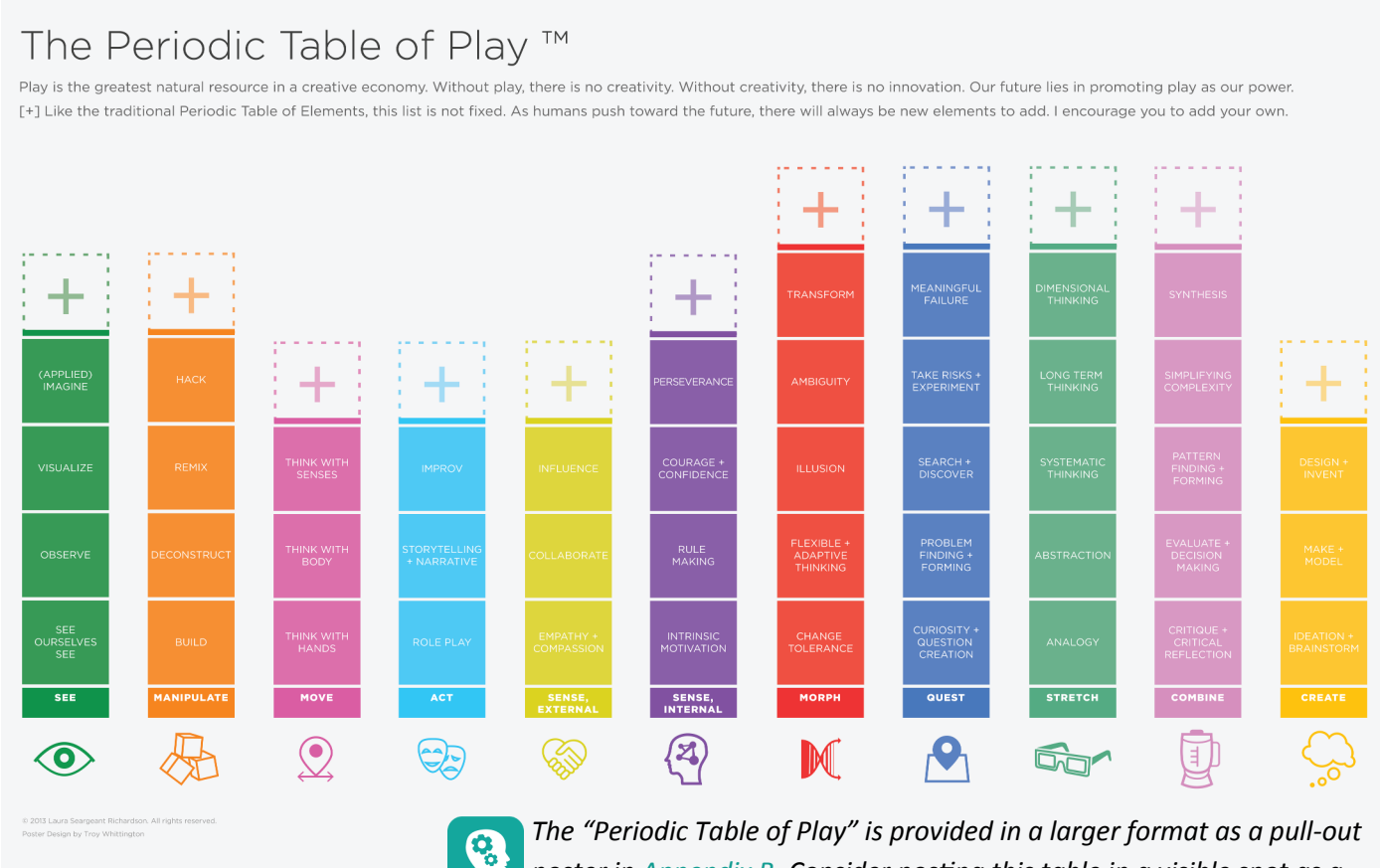
There are many different types of play. The graphic below is the "Periodic Table of Play," developed by Laura Seargeant Richardson. It contains some of the many different types of play. Richardson explains on the chart that "like the traditional periodic table of elements, this list is not fixed. As humans push toward the future, there will always be new elements to add. I encourage you to add your own." The eleven categories of play identified in the "Periodic Table of Play" are:

See	Manipulate	Move
Act	Sense, External	Sense, Internal
Morph	Quest	Stretch
Combine	Create	

Keep these kinds of play in mind when designing a program as they will help reach students in powerful ways.

Tips on Play from High Five

- Encourage imaginative, self-directed play.
- Encourage creativity.
- Encourage humour and fun.
- Design developmentally appropriate activities that are neither too challenging or nor too easy.
- Establish rules and parameters that are fair and just.
- Build flexibility into program design.



The "Periodic Table of Play" is provided in a larger format as a pull-out poster in Appendix B. Consider posting this table in a visible spot as a reminder during program development.

Earn A Badge

Brainstorm ways to include play in your programs.

1. Look at "The Period Table of Play" above (or larger In Appendix B).
2. For each of the 11 categories, think of at least one activity, not mentioned on the table, that you could incorporate into a program (either school or public) at your museum.
3. Share your list with a co-worker.

Learning Through Play

Characteristics of Students

Characteristics of Students at Different Ages

Although some characteristics apply to all students, other characteristics apply to specific age groups. The following section will provide interpreters with some general and age/grade specific characteristics, as well as suggestions for interaction. It will be useful to keep these in mind during program development and presentation.

It is important to have varying levels of complexity so that all learners can be engaged.

When planning program, keep in mind that there may be some students in the class that are at an earlier developmental stage.

The primary program at the Museum of Natural History engages young students through play, make-believe and group activities. This program is successful because it is designed to based on the characteristics of young students.

General Characteristics of Students

Students may	Suggestions for Interaction
...seek approval.	Use moderate praise for students demonstrating expectations. Encourage participation rather than emphasizing completion.
...work best in small to medium sized groups.	Keep groups between 5-10 students, depending on the activity. Provide students with the choice to also do some activities independently.
...be diverse in their strengths, challenges, and interests.	Be flexible when facilitating a program. Be aware that all students do not learn in the same way. Where some will understand easily, others will have more difficulty and require a different pace and amount of support.
...be full of energy and very active.	Create activities that provide peer interaction, active roles, and objects to manipulate and observe.
...work best when play is a part of the experience.	Create a learning space where students can experiment, fail, tinker, explore, and challenge their thinking. Students should be guided by their trial and error.
...be familiar with technology.	Activities can allow for students to use their personal technology, when appropriate (for example, tablets, smartphones, etc.).

Continued… Characteristics of Students

Characteristics of Students in Primary – Grade 2 (Age 4-8)

Students may	Suggestions for Interaction
…not be able to listen attentively for long periods of time.	Presentations and explanations should be interactive, short and simple. No more than 3-5 minutes.
… still be learning to read and write.	Allow opportunity to practice these skills, but give other choices for expression (draw or describe verbally).
...find focusing on one activity for long durations challenging and need a clear task to perform or goal to achieve.	Keep activities relatively short (10 minutes max.) and active. Do not give too many choices, but allow for some decision making.
...learn best using concrete examples (things they can see and interact with). Developmentally, abstract concepts, like time (years) and distance, are very difficult for them to grasp.	Students should be doing and seeing. Allow them to use their senses and interact with their peers. Try to connect information to the student's lives to help them develop understanding.
...enjoy storytelling and play-acting.	Incorporate drama and/or puppets. Stories can gain attention and be a bridge between a student's interest and learning. Have them interact with the story using motions or by providing solutions to a story's dilemmas.

Students run off some energy and have a picnic at Uniacke Estate Museum Park.

Characteristics of Students in Grades 3-4 (Ages 8-10)

Students may	Suggestions for Interaction
… still have short attention spans, although slightly better than students in Primary-Grade 2.	Continue to keep presentations and explanations interactive, short and simple, 5-7 minute max. To help with focus, ensure active student participation through questions and discussion.
...still be challenged by reading and writing.	Provide the choice to express observations through writing, drawing, acting, motion or speaking.
… have an increasing desire to demonstrate learning and increased concern with failure.	Create a supportive, non-judgmental learning environment with opportunities to share ideas.
...begin to think logically and understand abstract concepts. They are starting to be introduced to critical thinking skills.	Hands-on activities are still very important. Abstract concepts such as place and distance can be explained using visuals, such as maps, however program should not overly focus on abstract ideas.

Continued… Characteristics of Students

Characteristics of Students in Grades 5-6 (Ages 11-12)

Students may	Suggestions for Interaction
… be able to focus for longer periods.	To maintain engagement, keep presentations to 7-12 minutes, followed by activities.
… complete longer, more complex activities with less direct instruction.	Activities should be longer and more multifaceted to provide opportunities to make connections and gain deeper understanding. Improved reading skills means written instructions and activities can be included.
… be concerned with what their peers think of them.	Be careful not to single a student out unwillingly. Do not compare students to each other.
… desire to be more responsible and demonstrate more independence in thoughts and opinions.	Students should be encouraged to test ideas and form their own opinions, as well as recognize the ideas of others. Provide them with choice within the confines of the program and permission to draw different conclusions.
… be developing better understanding of abstract concepts and critical thinking skills.	Try to use references students can relate to when describing a challenging concept. Begin with a demonstrable timeframe or distance and then have students relate it to more substantial dimensions.

With only minimal guidance from the interpreter, these students at le Village historique acadien de la Nouvelle-Écosse are discovering heritage skills.

Continued... Characteristics of Students

Characteristics of Students in Grades 7-9 (Ages 12-15)

Students may	Suggestions for Interaction
… have longer attention spans.	As with all ages, lecturing should be kept to a minimum, followed by an activity. Activities can be longer and can have multiple steps to connect different ideas.
...be concerned with what their peers think. Relationships have increased importance.	Do not single out students unwillingly.
… be able to complete tasks with less supervision. They can begin to create goals for themselves.	Provide choices for how to solve a problem. If possible, allow them to set their own goal and create a plan to achieve it.
… have increasing development of abstract and critical thinking.	Abstract concepts are becoming easier for students to comprehend. Continue to use visual and relatable representations to clarify them. Allow them to question statements and respectfully disagree with ideas. Encourage them to back-up their opinion with reasoning.

These teenagers at Highland Village have longer attention spans and are able to sit for longer lengths of time, allowing them to experience stories that make up a part of the Gaelic oral tradition.

Characteristics of Students in Grades 10-12 (Ages 15-18)

Students may	Suggestions for Interaction
… have attention spans comparable to adults.	Provide students with the opportunity to approach problems in different ways and develop their own hypotheses and conclusions. Provide support if needed, but allow for independent inquiry and peer review.
… be familiar with current events.	Link information to recent or ongoing events. Use these examples as an opportunity to have students think critically about real-world problems.
… develop strong opinions and can express their thoughts more clearly.	Encourage learning through discussion and respectful debate.

Continued… Characteristics of Students

Earn A Badge

Characteristics of Different Ages

Consider a major theme of your museum (hint: look at your proposed IMP Content).

1. Think of a thirty minute activity for Grade 5-6 students (ages 11 and 12) to engage them with that theme. For ideas, look at the "Characteristics of Students in Grades 5-6" and the "Periodic Table of Play."
2. Simplify the activity. How would you change this activity for Grades 3-4 students (ages 8 -10)?
3. If adapted, could this activity be suitable for Primary-Grade 2 students (ages 4-8)? If yes, what are the required adaptations? If no, propose a different activity. Remember to look at the "Characteristics of Students in Primary-Grade 2" to check suitability.
4. Return to the activity you designed in step one. Make it more complex for Grade 7-9 students (ages 12-15).
5. If adapted, could this activity be suitable from Grades 10-12 students (ages 15-18)? If yes, what are the required adaptations. If no, propose a different activity. Remember to look at the "Characteristics of Students in Grades 10-12" to check suitability.
6. Reflect on how you have presented the same theme to different age groups.

Even with adaptation, most activities will not be accessible to all ages. Some activities, like learning to string the loom at Barrington Woolen Mill, are best suited to a specialist audience.

I hear . . . I forget.
I see . . . I remember.
I do . . . I understand.
- Confucius


MODULE THREE

MODULE FOUR
Program Development Strategies

School programs development and filling out templates, like riding this penny farthing bicycle at Shand House Museum, might seem like a daunting task. This module breaks the process down step-by-step, which should make it as easy as riding a bike.

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

MODULE FOUR

Program Development Strategies

Summary: This module will guide interpreters through the process of creating a school program by using a development template. The module will cover logistical considerations, and recommended activities and steps for program development .

Audience: Program Developers

At the end of this module, readers will:

- Know how to use the school program development template.
- Understand how logistical decisions can affect the success of a school program.

Glossary:

- Artifact
- Chaperone
- Exhibit
- Facilitation
- Hands-on, Minds-On
- Heritage Skills
- ICI (Innovation, Collections and Infrastructure)
- IMP (Interpretive Master Plan)
- Intangible Heritage Object
- IPP
- Interpretation
- Landscape
- Lifelong Learning
- NSM (Nova Scotia Museum)
- Object
- Primary Source
- School Program
- Specific Curriculum Outcomes (SCOs)
- Specimen
- Student
- Student-Centered Learning
- Tangible
- Tour
- Website

Just as museums have many different forms – big/small, urban/rural, cultural history/natural history, exhibits/historic spaces – school programs take many different forms. Despite these differences, all school programs share important characteristics. This module guides readers through the process of creating a school program, using the school program development template (available in Appendix C), while providing tips and tricks for each section.

Before starting the development process take a moment to remember the five key principles of successful school programs introduced in Module Two.

Programs Address Specific Curriculum Outcomes.

Strong links to curriculum will help teachers justify their museum visit and make the learning experience more relevant for students.

Activities are Object-Based.

Activities that use objects to create an authentic experience are not easily reproduced in a classroom.

"Good Questions" are Asked.

Scripts help interpreters by including a variety of different types of questions rather than providing lots of facts.

Learning is Student-Centered.

Use a variety of active, cooperative and explorative learning experiences for students, beyond watching and listening.

Museums and Program Partners work Together.

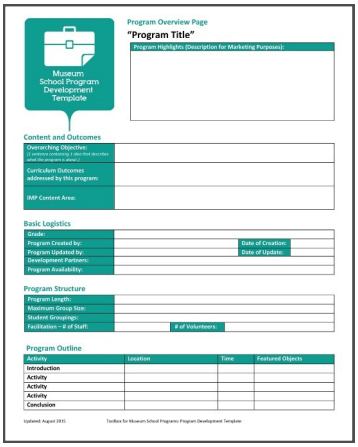
Include teachers, other museum staff, volunteers, community groups and stakeholders throughout the development process.

MODULE FOUR

Why Write Down Program? Why use this Template?

Programs are a creative, dynamic, and personalized experience for interpreters. A good interpreter adjusts a program and improvises their script based on the questions, discussions, interests and needs of a class. This does not mean that a good interpreter does not need a plan. Interpreters, like other professionals, need to take time to plan and write down programs. This can be compared to teachers writing daily lesson plans.

In addition to being professional and providing a better product, writing down a program is important for the museum. Completed templates can be used as training documents for new staff, and as part of succession planning for staff who may change positions or retire. The template in this toolbox was developed in consultation with museums from across the province. Using this template will help standardize how the NSM records school programs, help emphasize best practices, make applying for Support 4 Culture (S4C) interpretive renewal funding easier, and assist in marketing programs to teachers.


Museum School Program Development Template

Program Overview Page

"Program Title"

Program Highlights (Description for Marketing Purposes):

Content and Outcomes

Overarching Objective:

Curriculum Outcomes addressed by this program:

IMP Content Area:

Basic Logistics

Grade:

Program Created by:

Program Updated by:

Development Partners:

Program Availability:

Date of Creation:

Date of Update:

Program Structure

Program Length:

Maximum Group Size:

Student Groupings:

Facilitation – # of Staff:

# of Volunteers:

Program Outline

Activity	Location	Time	Featured Objects
Introduction			
Activity			
Activity			
Activity			
Conclusion			


Museum School Program Development Template

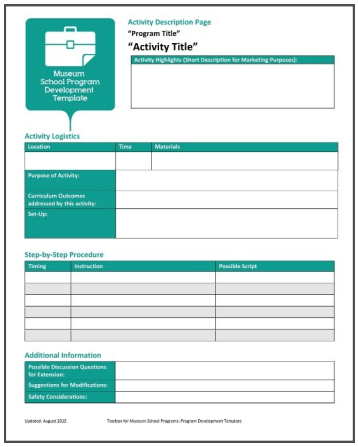
Program Research Page

"Program Title"

Research

Background Information:

Sources and References:


Museum School Program Development Template

Activity Description Page

"Program Title"

"Activity Title"

Activity Highlights (Short Description for Marketing Purposes):

Activity Logistics

Location	Time	Materials

Purpose of Activity:

Curriculum Outcomes addressed by this activity:

Set-Up:

Step-by-Step Procedure

Timing	Instruction	Possible Script

Additional Information

Possible Discussion Questions for Extension:

Suggestions for Modifications:

Safety Considerations:

The Museum School Program Development Template is available in Appendix C. The first page of the template provides a program overview and each activity has its own description page. There is an additional page to record research and additional sources.

How to use the Program Planning Template

This module guides program development step-by-step. Program development is rarely a linear process. The steps can be used as a guide to make sure important information is included but program developers will find themselves moving back and forth between the steps.

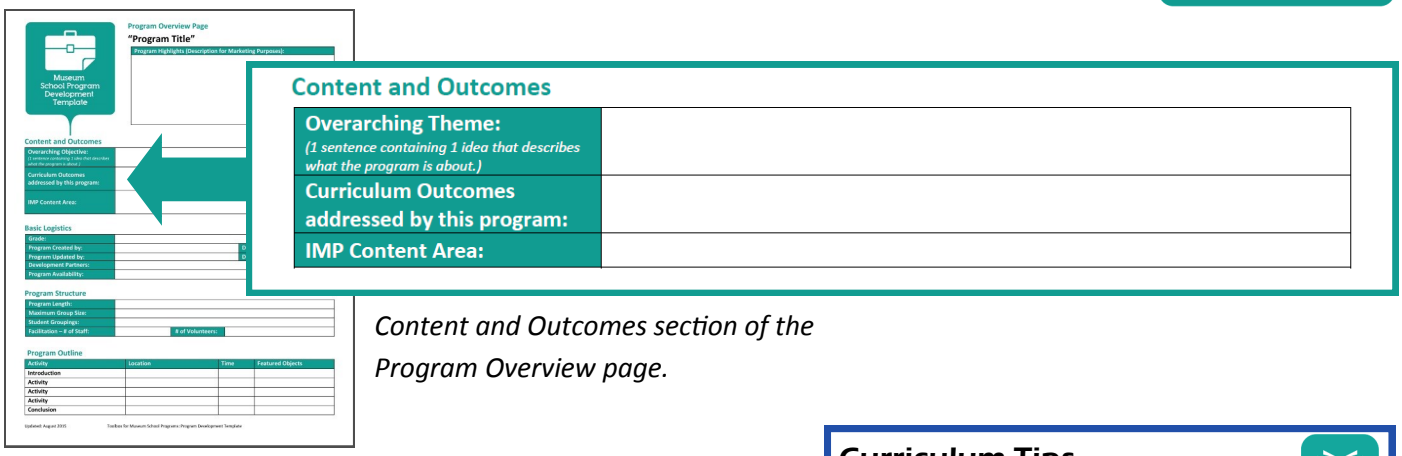
Once a program has been completed, it should not be considered a final product. Developers should regularly update the written template to reflect changes made to the program through experience and evaluation.

Remember, the advice given in this module is by no means the only way of developing school programs. Museums should continue to experiment and try new methods. Module 7 discusses many alternative ways museums can work with teachers.

Does developing a school program from scratch seem overwhelming? Check out the "History Detectives" program in Appendix I. This program, designed with the template, can be presented at any site and addresses the NS Grade Five social studies curriculum. In 2015, this program was adapted and successfully presented at the Museum of Natural History (seen above), the Fisheries Museum of the Atlantic, and a single historic house at the Highland Village Museum.

Step One: Identify Program Content and Outcomes

MODULE FOUR



Content and Outcomes section of the Program Overview page.

The first step in developing a successful school program is identifying outcomes that will be addressed. The template asks museums to identify outcomes from both the Department of Education and Early Childhood Development curriculum documents, and from the IMP. Appendix D has a chart that shows where the IMP content distribution matrix overlaps with curriculum outcomes.

Once these outcomes are identified, museums can create an overarching theme statement to help remind the presenters of the program's purpose.

Overarching Theme: A list of specific curriculum outcomes (SCOs) and IMP content items can be difficult to remember. Write a one sentence overarching theme, that summarizes the identified curriculum and IMP outcomes. An overarching theme should be memorable. It should simply and clearly explain what the program is about.

Curriculum Outcomes addressed by this program: As explained in detail in Module Two, all programs should be designed to address a few specific curriculum outcomes (SCOs) and skills from the most recent curriculum documents, published by the NS Department of Education and Early Childhood Development.

"MP Content Area: School programs are a great opportunity for museums to expand their interpretation. The IMP content matrix, as well as each museum's specific mandate and mission pages, provide an extensive list of topics that museums can address. Many of these topics mirror those addressed in the curriculum outcomes.

Curriculum Tips

- Focus on specific curriculum outcomes (SCOs) rather than unit titles or General Learning Outcomes (GLOs).
- Quote outcomes directly in documents. Don't forget to include the numbers shown with the outcome (for example, 4.3.1).
- Due to logistical reasons, it is often easier for elementary (P-6) classes to go on field trips than it is for junior and senior high classes (7-9). Therefore museums may want to focus on the P-6 outcomes.
- It is better to choose only 2-3 outcomes and address them completely, than choose multiple outcomes that can't be fully addressed.
- Choose outcomes that teachers will find difficult to meet in the classroom. This often means focusing on Social Studies and Science rather than Language Arts or Physical Education.
- Look at outcomes not just from the perspective of museum's content but from a broader skills perspective (for example, using a historical figure to teach the broader issues of social justice, peace making, and citizenship).
- Be sure to be working with the most current version of curriculum documents. There are changes made annually.

Continued… Step One

Access Curriculum Learning Outcome Frameworks Online
https://sapps.ednet.ns.ca/cart/

Example of a Completed Content Section

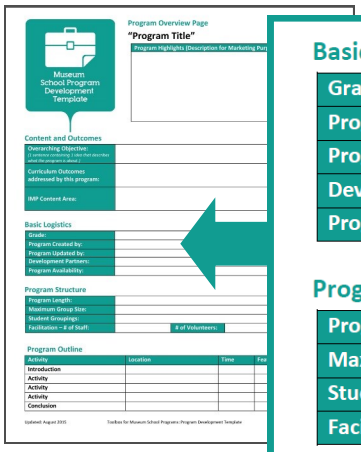
Although the main story at Balmoral Grist Mill is the operation and contributions of a grist mill, the IMP suggests "Geological Formations" and "Making Landscapes" as areas for development. Grade four science has a unit about geological formations and landscapes. A geology school program would meet both IMP and specific curriculum outcomes (SCOs).

Overarching Theme:	Balmoral Grist Mill, both the actual mill and its surrounding landscape, has been influenced by the local geology.
Curriculum Outcomes addressed by this program:	"Grade 4 Science Students will… …explore the characteristics of rocks, minerals, and fossils. (Outcome 7) …explore how the Earth's surface changes over time. (Outcome 8)"
IMP content area:	A.1 Geological Formation A.2 Making Landscapes

A geology program at Balmoral Grist Mill could examine the geological features in the landscape and the characteristics of rocks that make for good mill stones.

Step Two: Decide Basic Logistics and Program Structure

MODULE FOUR



Basic Logistics

Grade:			
Program Created by:		**Date of Creation:**	
Program Updated by:		**Date of Update:**	
Development Partners:			
Program Availability:			

Program Structure

Program Length:			
Maximum Group Size:			
Student Groupings:			
Facilitation – # of Staff:		**# of Volunteers:**	

The Basic Logistics and Program Structure sections of the Program Overview page.

The next step is identifying the constraints in which the program can be designed. Knowing this will help identify what types and how many activities can be included.

Grade: The grade(s) should be based on the curriculum outcomes. Museums might choose to design a program that accommodates more than one grade. This can be particularly beneficial for combined (or split) classes (for example, grades 3 and 4 in the same class with the same teacher).

Program Created/Updated by and Date of Program Creation/Update: It is best practice to include the name of the program creators so that future staff know who created/updated it. It is particularly important for school programs to include dates of creation and update, as curriculum outcomes change. Providing a date helps staff identify programs that might no longer meet curriculum outcomes and require updating.

Partners: Module Six encourages museums to partner with other museums, community groups, archives, libraries, volunteers, teachers, and ICI (including accessing Support 4 Culture funding) in order to develop and present school programs. Be sure to capture these partnerships in the template for future reference.

Things to remember when creating a program for more than one grade:

- Programs designed for more than one grade are easiest when the grades are in sequence. These programs will appeal to combined (or split) classes.
- Make sure the program fully addresses the curriculum outcomes for all grades listed.
- As more curriculum outcomes are being addressed, the program will often require more planning to ensure it is able to accomplish them all.
- Review Module Three, "Getting to Know Your Audience" Remember certain skills, such as reading and writing, might be different between grades.
- Be open to adapting the program for teachers as required. Consider stating in marketing material that programs may be adapted to other grades.

It is more cost effective for teachers to bring a full bus of students. This might mean museums need to create programs that accommodate more than one grade.

Continued… Step Two

Program Availability: Many museums or activities are seasonal. Although this might seem obvious when the program is created, as years pass and things change this is often useful information to have recorded.

Examples of Program Availability

- A program that involves looking for tadpoles can only be done in the spring.
- A program developed for a specific exhibit might no longer be available once the exhibit leaves.

"Program Length": The length of a program is based on many factors that are often beyond the control of the museum. Use the formula below to decide how long the program will be.

When deciding on a program length, remember to make sure that the program uses time wisely and doesn't focus too much on activities that the teacher could have done in the classroom. Also, be adaptive. Programs may need to be shortened or lengthened depending on the needs of the individual school groups.

Programs can also be extended to full-day or sleep-over programs. These programs have more flexibility, although they require significantly more resources from both the museum and teacher.

Many museums, like Prescott House, are open seasonally and therefore, can only offer programs to schools in June and September. Fortunately, June is the busiest month for field trips and the weather is still warm enough in September to do outdoor activities.

Formula for deciding program length:

End Time - Start Time - Recess = Program Length

- **Start time:** Take the time that students start school, add 30 minutes for teacher to take attendance at the school and get them on the bus. Add travel time from school to your museum. Consult with teacher s they might require a different start time.
- **Recess**: Leave 10-20 minutes for a snack break, bathroom lineups and recess. Students will be better able to focus on the program if they have a break after getting off the bus and before the program starts. Talk to the teacher about what works best for their class and your museum.
- **End time:** Time that the students need to be back on the bus to return to school. Add 15-30 minutes if the class can have free time to explore your museum and/or gift shop.
- **Result**: **Museums normally have 90 minutes left to present a program**. Programs may be longer or shorter depending on your location and the teacher you are working with. Remember this program length might include the time for any additional activities you added such as lunch, free exploration, or visit to the gift shop.

Continued… Step Two

Facilitation - # of Staff/Volunteers: It is important to have staff and, if possible volunteers, dedicated to facilitating programs. A good rule of thumb is to have at least one museum staff dedicated to the program for every class coming. Many activities, however, work best when students are divided into small groups. This will require more staff, volunteers or asking chaperones to assist.

Maximum Group Size: This number is most often decided by looking at the space a site has and how many staff will be dedicated to the program. Depending on the grade, classes normally have 25-30 students, however, due to the cost of buses, many teachers will want to bring two classes to fill the bus. Remember, a half-empty bus costs the same as a full one. Most school buses hold an average of 60 students.

Student Groupings: The size of student groups will depend on the number and types of activity the students will be doing. An ideal grouping is 6-10 students.

In addition to the type of activity, student groupings will depend on how many staff are available to assist and if chaperones can help facilitate activities. Remember, chaperones can be asked to help students, however, interpreters should never separate students from their chaperones. For more information about working with chaperones, see Module Two "Working with Program Partners."

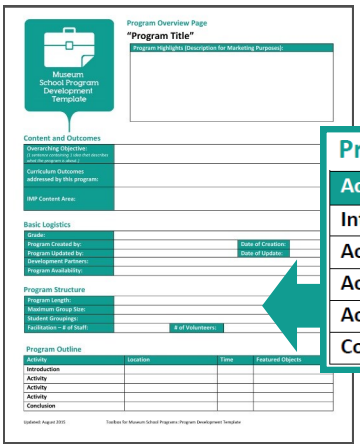
Some ways to offer programs to large groups, even at small museums:

- Use outdoor spaces and "out buildings," such as barns, for activities.
- Install a large, outdoor tent to make an outdoor classroom space.
- Take part of the group on a walk that explores the local area – either landscape or neighborhood. Explain how the museum's story extends beyond four walls.
- Partner with a local library, archives or community museum if they are nearby. Split students' time between your museum and your partner institution.
- Explore activities where students can safely spend time in an exhibit or historic room.

Although the Old Meeting House doesn't have a lot of room for school programs, they have found creative ways to accommodate school groups by offering programs in which part of the class explores the nearby graveyard.

MODULE FOUR

Step Three: Brainstorm and Determine Activities for Program



Program Outline

Activity	Location	Time	Featured Objects
Introduction			
Activity			
Activity			
Activity			
Conclusion			

The Program Outline section of Program Overview page.

The activities included will depend on logistics determined in the previous steps. In addition to determining the activities, consider where each one will happen and how long it will take. Remember to think about how activities might impact each other if students are rotating between multiple activities. Also, consider what object(s) will be featured in each activity.

Activity 1 – Introduction*:* It is good practice to start the program with an introduction activity. This is most easily done before the groups are broken into smaller groups, as it allows museums to make sure that the whole group gets the same introductory messages. Introductions not only set the tone of a program but also are used to assess what students know from their prior studies.

Examples of Introduction Activities:

- ★ Puppet Show
- ★ Short Theatrical Play
- ★ Storytelling
- ★ Demonstration
- ★ Group Brainstorming
- ★ Group Discussion
- ★ Asking questions that students can answer
- ★ Answer Yes/No questions by sitting or standing
- ★ Invite library staff to read a short story
- ★ Invite archives staff to explain what is a primary source and what is an archives

Tips for a Strong Introduction Activity

- **Welcome** students, teachers and chaperones.
- **Introduce** staff and volunteers.
- **Briefly summarize the program**. Explain to students what they will be experiencing, including a quick review of the program framework and overarching theme.
- **Review student expectations,** include museum rules and ways students can participate.
- **Do a quick activity or demonstration** that provides students with information that will help them in other activities. This could include vocabulary, facts or ideas.
- **Set the tone of student-centered learning** by encouraging participation. Ask students what they already know about the topic and what they want to know.

The "History Detectives" school program in Appendix I uses the introduction to assess prior knowledge, introduce the topic and establish expectations.

Continued... Step Three

Tips for Strong Program Activities

- **Focus on facilitation** rather than teaching. Students should talk more than the interpreter.
- **Provide clear instructions** at the beginning of each activity, both verbally with demonstration and written to be referred to during activity.
- **Provide objects** that encourage hands-on, minds-on behaviour.
- **Allow students to respond in multiple ways**: verbally, written, drawing, with technology or kinesthetically (for example, dance, movement or theatre).
- **Encourage students to discover on their own.**
- **Allow all students to work individually, in pairs or in groups.**
- Ask **questions** and encourage **discussion**. Limit use of questions that have a "right answer".
- **Allow for some noise** (organized chaos).
- **Be flexible.** Allow for unexpected questions and discussion but retain enough structure to enforce the program's logistical constraints.
- **Incorporate technology** when appropriate.

Activities 2, 3, and maybe even 4, 5, 6: Museums should select their activities carefully, making sure they focus on experiences that are unique to a museum. These could include interacting with objects, experiencing heritage skills, or engaging with significant landscapes. Remember, many museums find it ideal to break the large group into smaller groups, which rotate through a number of activities/stations.

Activities such as making crafts, watching movies, or listening to somebody speak, which historically made up a large part of museum school programs, aren't a strong draw for field trips. Instead, these activities should be provided to teachers to do in the classroom as a pre- or post- visit experience or instead of a visit (See Module 7).

Fisherman's Life Museum's school program features a variety of activities, including the active "Go Fish" game, a role-playing on the wharf, and a visit inside the house.

Examples of Program Activities:

- ★ Trying heritage skills (for example, rug-hooking, blacksmithing)
- ★ Playing a game that introduces or reinforces program information
- ★ Doing experiments or research
- ★ Exploring with a minds-on scavenger hunt, followed by a group discussion
- ★ Trying simulated experiences (for example, archaeology digs)
- ★ Participating in, and maybe even preparing, a short theatrical experience
- ★ Interacting with an interpreter doing first-person interpretation
- ★ Going on a tour that involves a minds-on, hands-on component
- ★ Using objects to demonstrate facts (for example, create a timeline, exhibit, presentation)
- ★ Using objects to inspire the creation of artistic products
- ★ Reflecting and looking for bias in historical quotes
- ★ Trying 'behind-the-scenes' activities (for example, research, conservation, curation of exhibits)
- ★ Examining objects through discussion and worksheets (see Appendix F for worksheet ideas)
- ★ Need more ideas? Look at the Periodic Table of Play.

Continued… Step Three

Conclusion: It is good to take some time at the end of the program to review with students what they experienced. A final review helps reinforce programs messages, demonstrates to teachers that curriculum outcomes were addressed and acts as an opportunity for museum staff to informally evaluate the program. Most importantly, conclusions provide an opportunity for students to feel a sense of accomplishment and demonstrate what they learned during the program.

Examples of Conclusion Activities:

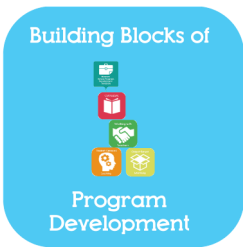
- ★ Discuss with students what they learned during the program as it relates to a larger issue or question (for example, now that they better understand how animals use water, what can they do to help protect water sources?)
- ★ Have students present what they did
- ★ Have a quick round of Jeopardy
- ★ Provide students with a simple follow-up task they could do at home or at school (for example, ask your parents about your family history; look for something specific in nature)
- ★ Provide students with time to freely explore the museum so they can learn more about topics that were of particular interest to them

Tips for Strong Conclusions

- **Keep the conclusion short and engaging.** Students will be tired from the program and are often eager for lunch or a break.
- **Focus on having students share their experiences** with the rest of the group.
- **Re-emphasize curriculum outcomes addressed** by the program.
- **End on an upbeat-tone**. Don't make the conclusion feel like a test.
- **Encourage lifelong learning by inviting students to return** with their friends and family.

Students who feel a sense of accomplishment during a school program are more likely to return to the museum to share their experience with their family, as seen here at the Highland Village Museum.

Earn A Badge



The template's "Program Overview Page" highlights the building blocks of school program development. Completing this page will help ensure a program meets all the principles of successful school programs, as well as the logistical considerations unique to your museum.

1. Return to the work you did to earn your Curriculum Badge (page 22). Select 1-2 curriculum outcomes and corresponding IMP content. Write an overarching theme statement based on these outcomes.
2. Reflect on the logistical realities of your museum. Keeping the needs of teachers in mind, write out your site's logistical and structural realities.
3. Consider what objects you can feature in your museum. How can you make interacting with these objects into a student-centered activity? Write a program framework based on these experiences.

Step Four: Research

MODULE FOUR

Museum School Program Development Template

Program Research Page

"Program Title"

Research

Background Information:	
Sources and References:	

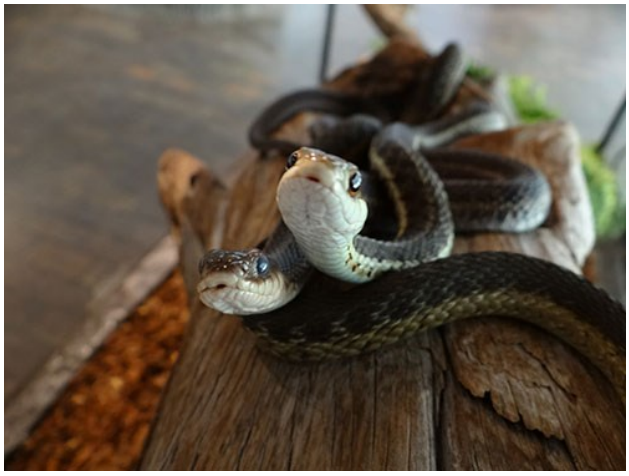
The Program Research Page includes a place to record background information, sources and references. Research is not a single step in program development, but rather an ongoing process that should continually be added to.

Background Information: As activities are developed, research will be an ongoing process. Writing a background information section ensures not only that a program is based on accurate information, but also provides accurate information to future program presenters who might be new to the topic or program. Background information should be audience specific. This might mean reducing or increasing the amount of information included and using appropriate vocabulary.

Sources and References: The sources used to write the background information should be recorded both to authenticate the background information research and to provide interpreters with an opportunity to learn more. As the program is updated, this area should also be updated, especially to reflect new resources or to note when an internet resource is no longer available.

Example of Audience Specific Research:

In a Primary science program that focuses on exploring nature with your senses, the background information would include basic details about the characteristics of the animals being presented in the program. The background information would not need to discuss the Latin names of the animals or technical terms, as these are not relevant to the audience or outcomes.



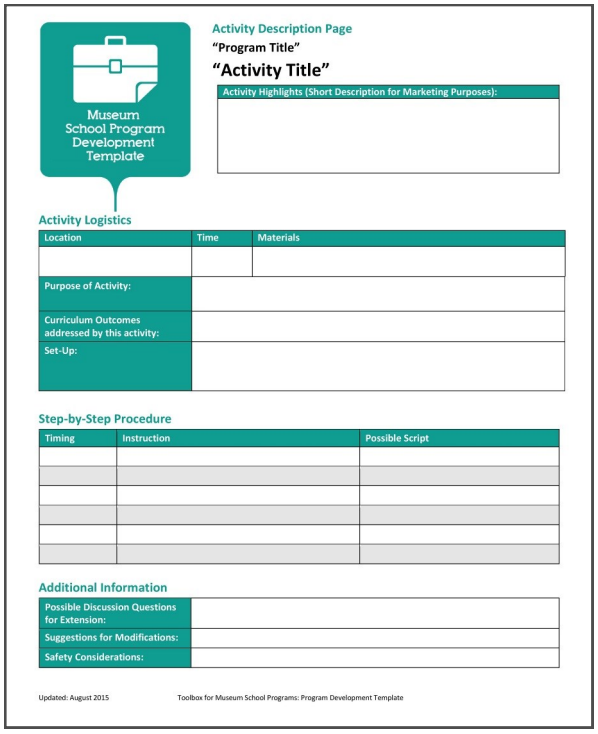
Maritime garter snakes (Latin: Thamhophrs sirtalis pallidula Allen*) at the Museum of Natural History.*

Suggestions for School Program Research Sources

- Grade/Subject specific text books
- Grade/Subject specific curriculum guides
- Websites by reliable sources
- Reference books written for children (age appropriate)
- Virtual museum exhibits or websites designed to introduce students to a topic
- Other museums or partners (libraries, archives, community groups) with similar content

MODULE FOUR

Step Five: Develop Activities



Museum School Program Development Template

Activity Description Page

"Program Title"

"Activity Title"

Activity Highlights (Short Description for Marketing Purposes):

Activity Logistics

Location	Time	Materials
Purpose of Activity:		
Curriculum Outcomes addressed by this activity:		
Set-Up:		

Step-by-Step Procedure

Timing	Instruction	Possible Script

Additional Information

Possible Discussion Questions for Extension:	
Suggestions for Modifications:	
Safety Considerations:	

Updated: August 2015 Toolbox for Museum School Programs: Program Development Template

Complete an "Activity Description" page for each activity in the program, including introduction and conclusion. Activities should be developed in tandem with research in step four.

The Costume Talk is the first activity in Uniacke Estate Museum Park's program, Trip to the Past. This introduction activity acts as a launching pad for discussions about how life has changed for children since Uniacke's time.

Activity Logistics: During the previous steps, decisions about the types of activities, the location, and length (time) will have been made. Transfer this information from page one to each activity.

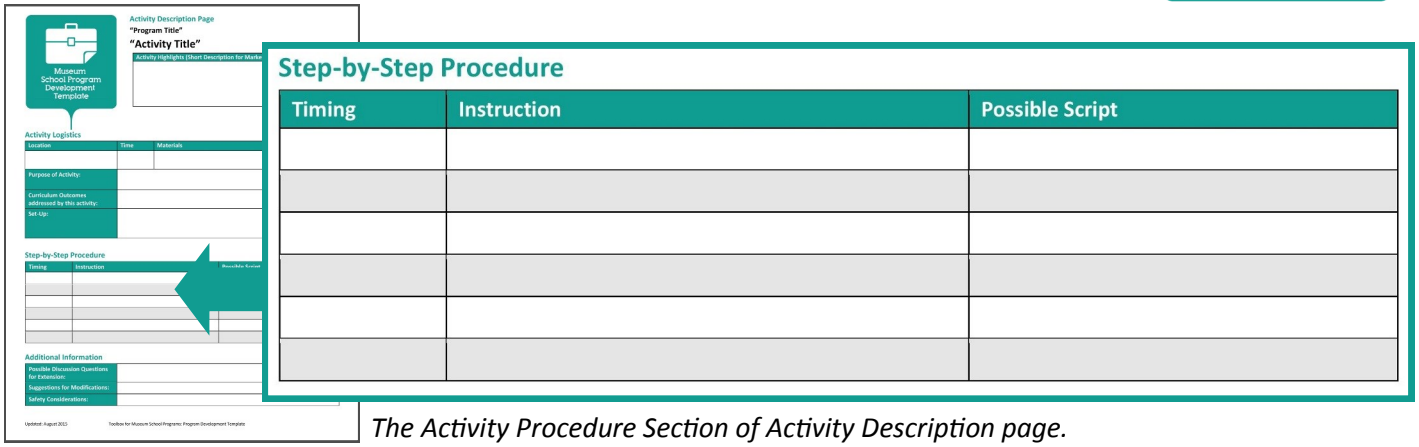
Look at the curriculum outcomes identified on page one. Transfer the relevant curriculum outcomes to the activity page. One way of addressing curriculum is to design one activity for each identified outcome.

The Black Loyalists Heritage Center uses technology to allow students to interact with tangible and intangible heritage objects. One exhibit component invites visitors to react to a real quilt by creating their own virtual quilt square.

Materials/Set-Up: As learning from objects is one of the key principles of successful school programs, it is very important to consider what objects the activities will use and how they will be presented to students. Remember objects can include both tangible and intangible heritage objects. See Module Two - Object-Based Learning for a list of possible objects that could be used.

Working with the "real-thing" is one of the unique experiences museums can offer, but set-up is critical. An environment must be created that not only gives students access to the object, but also does so in a way that protects the object and follows the NSM's Collections Policies.

Continued... Step Five



The Activity Procedure Section of Activity Description page.

Step-by-Step Procedure: Use this section to explain how to do the activity. This includes instructions provided step-by-step, how long each step should take, and a suggested script. The procedures should emphasize flexibility, using "good questions" and student-centered learning while giving program presenters sufficient information to know how to teach the program just by reading the instructions and script.

Timing is included not as a strict instructions but rather as a guideline for how long each step should take.

Scripts are provided not as mandatory words all presenters must say but rather as a useful tool to help understand how to present each step to the program's audience. Scripts remind program presenters of appropriate vocabulary, "good questions," and level of instruction. Program presenters should be encouraged to personalize their script, while keeping in mind the possible script as an example.

Although this activity would have a set procedure, this first-person interpreter at Ross Farm is not following a script. Rather, she is interacting with students, engaging them in the role-play, and is prepared with possible discussion questions if she needs to extend the activity.

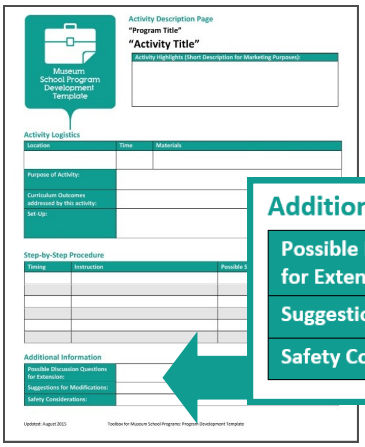
Earn A Badge

Coming up with activities can be lots of fun. Developing activities however, is more than coming up with fun ideas. It involves making sure outcomes are addressed and logistics are considered. Writing down the activity gives other staff (both future and present) all the information they need in order to present the activity as developed.

1. Complete the activity description page for an activity you've developed.
2. Have somebody who is not familiar with the activity read your finished page.
3. Ask them to describe the activity back to you. What information have you missed? What information could be clearer? What else could you include to help your activity description page to stand on its own?

MODULE FOUR

Continued… Step Five



The Additional Information section of the Activity Description page.

Additional Information	
Possible Discussion Questions for Extension:	
Suggestions for Modifications:	
Safety Considerations:	

Possible Discussion Questions for Extension: In addition to the script, it is helpful to include additional questions for interpreters, especially as they become familiar with student-centered learning approaches and asking "good questions."

Suggestions for Modification: There are many reasons a program may need to be modified – change in the number of staff available to facilitate, increase or decrease in the length of the program, presenting it to a grade that it was not originally designed for, presenting it as a public program, or accommodating students on IPPs that need specific learning adaptations. As the program is presented more often occasions will arise that will require adaptations. Keep track of these adaptations in this section of the template so that future interpreters won't need to reinvent them.

Safety Considerations: Keep note of any safety considerations foreseen in a program (for example, keep students at a safe distance from open flames in blacksmith forge). Also note any safety considerations that are discovered while presenting the program based on experienced student interactions.

Examples of Discussion Questions for Extension:

- What other artifacts/specimens in this exhibit do you see that are similar to the one we've been discussing? Why do you think they are similar or related?
- How does this relate to your daily life?
- If you could ask this artifact or specimen one question, what would it be? What do you think it would answer?
- What else would you like to know about this topic? How could you find out?

Examples of Modifications:

- A program developed for grade 5 and 6 students might ask the students to read or write. A modification for presenting this same program to grade 2 and 3 students might be to replace writing with drawing.
- A 90 minute program can be expanded with more hands-on, minds on opportunities to last longer and provide a more in-depth experience for a student workshop or sleepover.
- A program has an outdoors activity but an alternative activity is provided for days with bad weather.

Students visiting the Dory Shop Museum enter an actual workshop, complete with tools. Although this activity has more obvious safety considerations, all activities need to keep safety in mind.

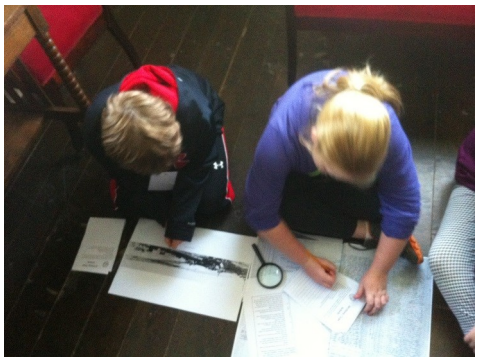
MODULE FOUR

Step Six: Test, Evaluate, and Adapt as Needed

Program development is a never-ending process. Once the program has been delivered, it should be evaluated and adapted as necessary. Be sure to record the adaptations in the school program development template so that the template always reflects the most current version of the program.

Piloting New Programs

The words of Scottish poet Robbie Burns "the best laid plans of mice and men often go awry" apply to school program development. This is why all programs need to be piloted. Piloting a program is when a class is brought in to try the program with the understanding that it is a program new to the site and/or staff. The class will be used to test if the program works and identify ways it can be improved. Classes participating in a pilot program should be offered the program at no cost as an incentive with the understanding that both the teachers and students will be asked to complete an evaluation at the end of the program. Programs may require multiple rounds of piloting before they are ready to be marketed and offered.



The "History Detectives" program in Appendix I was piloted five times. The first and last pilot were with the same class at Highland Village Museum. The teacher and students were amazed at how much the program had changed and improved.

Ongoing Evaluation of Programs

Programs should be evaluated on a regular basis. As museum staff and exhibits change, the effectiveness of a program might as well. Department of Education and Early Childhood Development curriculum also changes. Programs should be evaluated to ensure they are addressing current curriculum outcomes. Evaluation does not have to be complicated. The two lists below suggest ways to both formally and informally evaluate programs.

Suggestions for Formal Evaluation:

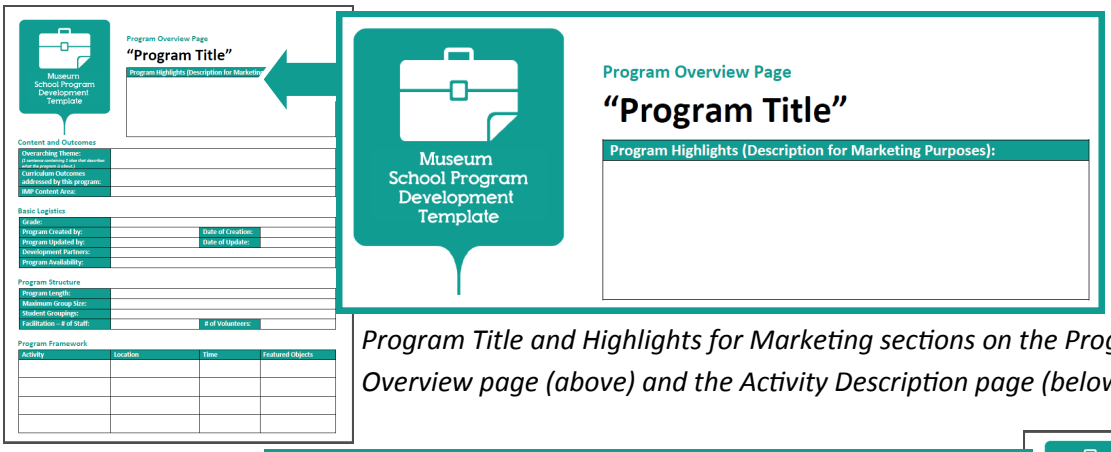
- **Have an evaluation meeting** with program presenters (both staff and volunteers) after the program has been offered several times. Ask how could the program more engaged students and better meet the outcomes.
- **Provide teachers with a formal evaluation form**, either to complete on-site during the program conclusion or digitally once they return to school.
- **Provide students with a formal evaluation form** to be completed at the end of the program or back in the classroom. Remember to keep the evaluation form accessible to the age of the students.
- Examples of a teacher and student evaluation forms are available in Appendix E.

Suggestions for Informal Evaluation:

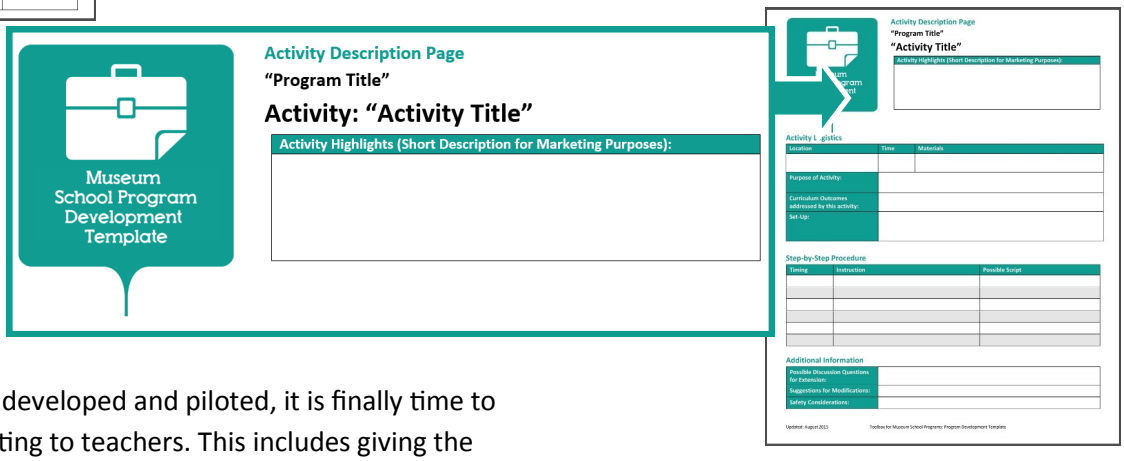
- **Ask program presenters how it went**. What worked? What needs refining?
- **Use program conclusion to talk to students**. Did they better understand the topic? What did they like?
- **Listen informally to students** as they get ready to leave. Ask staff working in the gift shop or other areas of the museum to share what they overheard the students talking about. What was their favourite part? What would they have liked to have done differently?
- **Talk to the teacher after the program**. Ask them what they thought of the program.

MODULE FOUR

Step Seven: Write Titles and Highlights for Marketing



Program Title and Highlights for Marketing sections on the Program Overview page (above) and the Activity Description page (below).



Once the program is developed and piloted, it is finally time to package it for marketing to teachers. This includes giving the program and each activity a name and description. This information will be used on the "For Teachers" section of the museum's website (see Appendix E) as well as on any marketing materials prepared for teachers.

Program Title and Activity Name: The title for a school program should make the program sound fun and show that the program is creative and engaging. Most importantly, it should capture what the program is about. Titles that are too whimsical or "punny" might miss their mark as teachers don't immediately see how the program relates to their curriculum. One suggestion for titling a program is to echo the wording used in the curriculum outcomes.

Program Highlights and Activity Description: These short write-ups are what will be used for marketing the program. They should clearly, but briefly, explain what will happen during the program/ activity and echo wording from the curriculum outcomes. The write-ups should demonstrate that the program is a good use of resources as the students will experience something difficult to replicate in the classroom.

Program titles and descriptions need to emphasize links to the curriculum and experiences unique to a museum setting. Here students at the Maritime Museum of the Atlantic get a use to try objects from the past while learning how technology has changed.

Step Eight: Market the Program

Building Relationships with Teachers

A personal touch will go a long way in successfully marketing programs to teachers. There are many other experiences competing with museums as potential field trips and teachers may be more willing to visit a site that make the effort to engage with them on a personal level. The more teachers see that a museum will work with them to meet their needs, the more likely teachers are to consider that museum for a field trip. This helps explain why teachers return to the same field trips year after year.

Some successful marketing techniques include:

- Keep the "For Teachers" section of the museum's website up -to-date and complete.
- Use social media such as, Twitter and Facebook, to highlight programs.
- Engage teachers in conversations on social media to invite them to, and thank them for, participating in a program. Encourage them to share pictures of their experience.
- Distribute printed program descriptions to teachers at conferences. (for example, Social Studies Teachers Association or Atlantic Science Teachers conference.)
- Get in touch with teachers who have previously visited to let them know what is available.
- Get in touch with teachers in your area who teach grades that the museum has programs for.

The earlier museums can contact a teacher the better, but remember that teachers' schedules and museums' schedules don't always match. Teachers are very busy in September and June and they might not have time to read information sent to them at this time.

Museums should get to know the teachers in their community. This goes beyond sending them marketing material, and includes working with them throughout the year. See Module 7 for other ways museums can work with teachers. Teachers are also regular museum visitors and tourists, like those seen here on a beach walk at Fundy Geological Museum. It is not uncommon for teachers to visit museums during their vacations as unofficial professional development.

A Note About Marketing to Teachers via Email

As of July 1, 2014, the Government of Canada will enforce regulations that will help Canadians avoid spam and other electronic threat. Therefore, museums are no longer able to send unsolicited emails to teachers in regard to the programs they offer. For more information on this law see: fightspam.gc.ca

Continued… Step Eight

Working with Teachers Before the Trip

Teachers are more likely to book a program that they feel confident will meet their needs. Museums can help by ensuring all the necessary information a teacher might need is available on their website, including curriculum outcomes and logistical details. Remember, securing transportation and permission slips takes time, so teachers often need to book their field trips many weeks, and sometimes several months, before they actually plan on coming. Seasonal museums should make arrangements that allow teachers to book their trips before the museum opens.

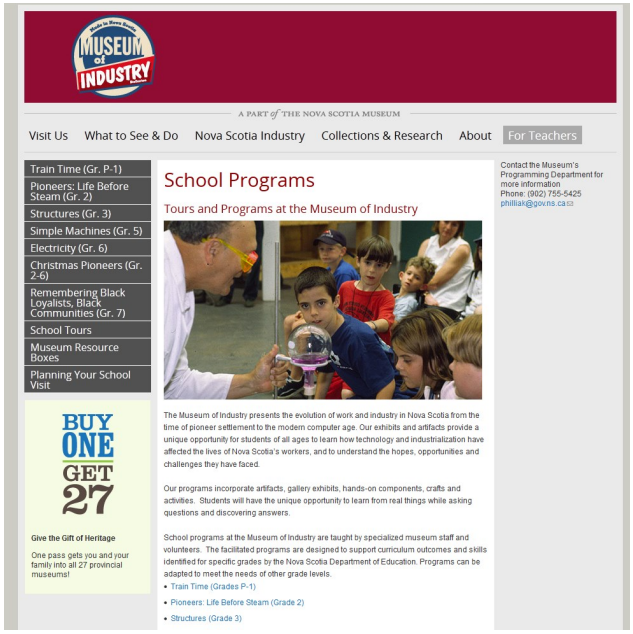
Earn A Badge

Get to know the teachers in your community.

1. Every school in Nova Scotia has a website. Using these websites, create a list of contact information for all of the schools within a 30 minute drive of your museum. You may focus only on the principals or on the teachers who teach the grades you currently offer programs for.
2. Develop a SMART goal to contact these schools— maybe by sending something in the mail, using social media, dropping something off at the school, or by hosting a social event at your museum for teachers.

Remember:

- Personalize what you are offering to teachers.
- Focus on more than "selling" school programs. Establish your museum as a resource for teachers.
- Choose your timing carefully—teachers are less likely to look at your materials at busy times such as the first week of school, holidays, and exam periods.
- What is a SMART Goal? Specific, Measurable, Attainable, Relevant and Time-Bound.



The most efficient way to communicate with teachers is through the "For Teachers" section of the websites. The Education Sub-Committee has established a best practice template of what should be included.

For specific programs, it is important to include a title, the grade, program highlights, curriculum outcome links, duration, capacity, availability, a program outline, additional resources (when available), and contact information for reservations and questions.

Include logistical information in the "Planning Your School Visit" section. This includes information about group sizes, admission costs, lunch facilities, bathroom facilities, and gift shop.

The "For Teachers" webpage template is available in Appendix E.

For examples of program and activity highlights/descriptions, look at the "For Teachers" section of these websites:

- Uniacke Estate Museum Park
- Museum of Industry
- Museum of Natural History

Communicating with Teachers Checklist

MODULE FOUR

During Booking:

☐ **Get contact information for the teacher**

- Name:_____
- School: _____
- Grade:_____
- Phone: _____
- Email: _____
- Fax: _____
- Personal Cell Phone:_____
  (in case of emergency or last minute change)

☐ **Get logistical information**:

- What program do they want?
  _____
- On what date are they coming?
  _____
- What time will they arrive?
  _____
- How are they arriving - bus or walking?
  _____
- How many are coming?
  Students:_____
  Chaperones:_____
- Are they staying for lunch?
  _____

☐ **Offer to adapt program to meet specific needs**:

- Ask about any special concerns or needs.
- Ask what students are covering in class.
- Ask if there are any learning or physical adaptations needed for specific students.

☐ **Other Notes**:

_____
_____
_____
_____

After the Booking – Before Arrival:

☐ **Send booking confirmation, which includes:**

- Their contact information gathered during booking to ensure it is correct.
- Program logistical information gathered during booking to ensure it is correct.
- Program outline with curriculum outcome.
- Museum's expectations for chaperones during the program.
- Pre- and post- visit activities, if available.
- Send booking confirmation to teacher to confirm contact and logistical information.
- Logistical information about museum, including relevant information about washrooms, gift shop, and lunch area.

☐ **Share booking information program presenters and any other museum staff or volunteers who may interact with the group.**

During the Program:

☐ **Follow the program as outlined in the written program development template.**

☐ **Use presentation and engagement strategies from Module Five.**

Post-Trip:

☐ **Follow up with teacher:**

- Send a thank you.
- Ask teacher to complete an evaluation (See a sample in Appendix E).
- Re-send post-visit activity, if available.
- Invite students and chaperones to come back for another visit.
- Invite the teacher back the next year.

The "Communicating with Teachers Checklist" is provided as a resource in Appendix E. Consider using one form for each booking and keeping all of these forms in the same spot, accessible to all staff and volunteers who deliver, develop and book school programs.

MODULE FOUR

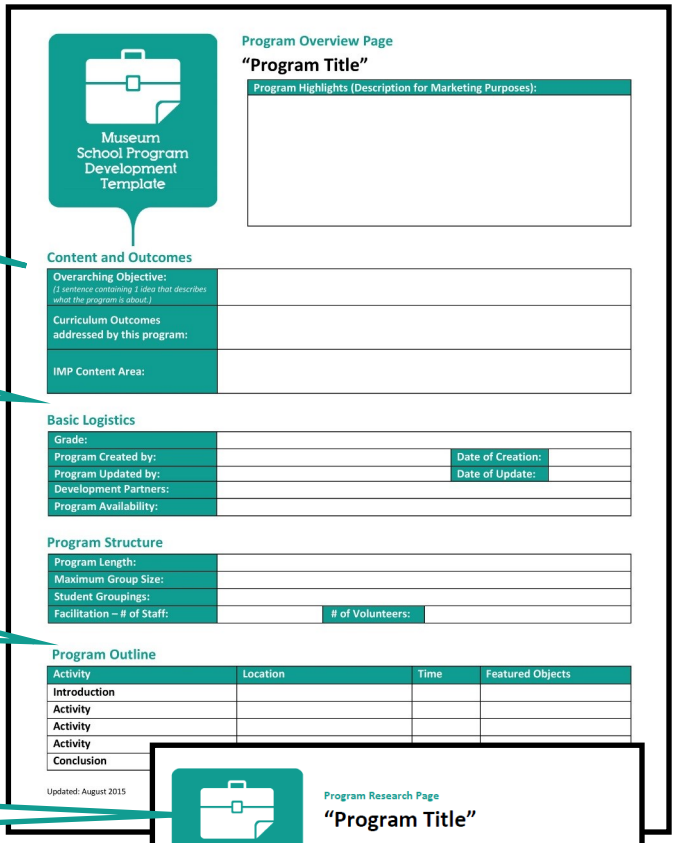
Review of School Program Development Steps

Step One: Identify Program Content and Outcomes

Step Two: Decide Basic Logistics and Program Structure

Step Three: Brainstorm and Determine Activities for Program

Step Four: Research (Ongoing Through All Steps)



Museum School Program Development Template

Program Overview Page

"Program Title"

Program Highlights (Description for Marketing Purposes):

Content and Outcomes

Overarching Objective: *(1 sentence containing 1 idea that describes what the program is about.)*	
Curriculum Outcomes addressed by this program:	
IMP Content Area:	

Basic Logistics

Grade:			
Program Created by:		Date of Creation:	
Program Updated by:		Date of Update:	
Development Partners:			
Program Availability:			

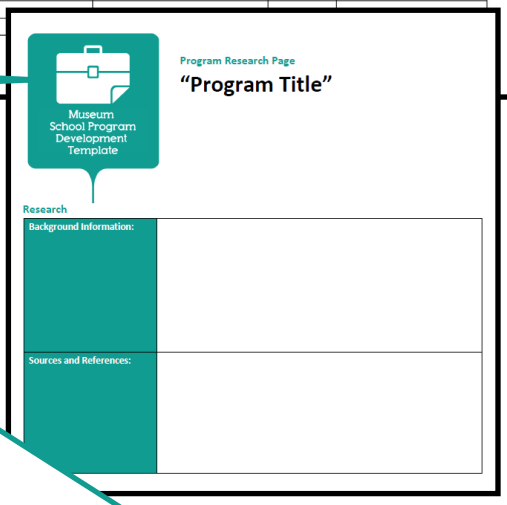
Program Structure

Program Length:			
Maximum Group Size:			
Student Groupings:			
Facilitation – # of Staff:		# of Volunteers:	

Program Outline

Activity	Location	Time	Featured Objects
Introduction			
Activity			
Activity			
Activity			
Conclusion			

Updated: August 2015



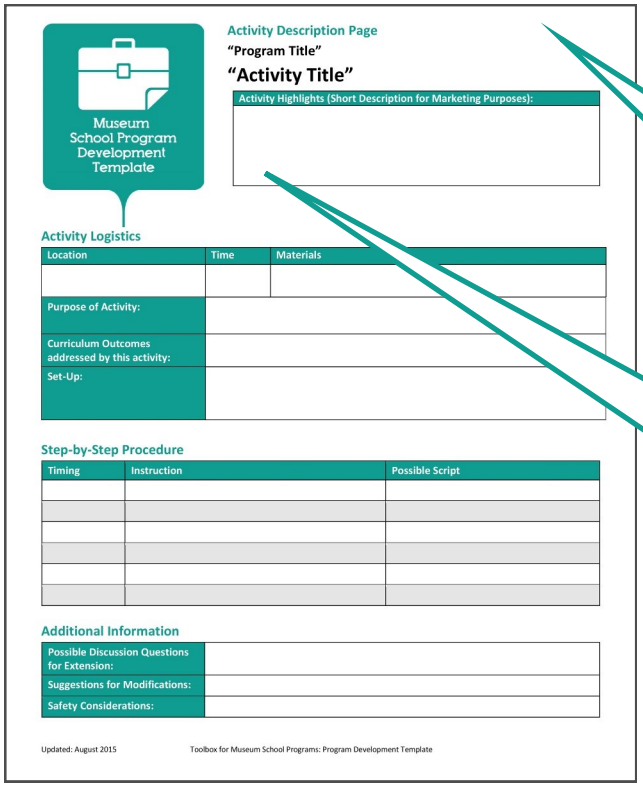
Museum School Program Development Template

Program Research Page

"Program Title"

Research

Background Information:	
Sources and References:	



Museum School Program Development Template

Activity Description Page

"Program Title"

"Activity Title"

Activity Highlights (Short Description for Marketing Purposes):

Activity Logistics

Location	Time	Materials

Purpose of Activity:	
Curriculum Outcomes addressed by this activity:	
Set-Up:	

Step-by-Step Procedure

Timing	Instruction	Possible Script

Additional Information

Possible Discussion Questions for Extension:	
Suggestions for Modifications:	
Safety Considerations:	

Updated: August 2015 Toolbox for Museum School Programs: Program Development Template

Step Five: Develop Activities

Step Six: Test, Evaluate and Adapt as Needed

Step Seven: Write Titles and Highlights for Marketing

Step Eight: Market the Program

MODULE FIVE
Program Presentation Strategies

Programs are most successful when students are fully engaged, as seen here at Museum of Industry. There is no 'one way' way to engage students, rather presenters must use a variety of engagement strategies.

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

MODULE FIVE

Program Presentation Strategies

This module will help interpreters develop skills specific to facilitating and delivering school programs.

Audience: Program Presenters.

At the end of this module, readers will:

- Understand their role as host, facilitator, and knowledge bearer.
- Learn several engagement strategies specific to working with students.
- Learn some tricks for managing student behaviours.
- Have a better understanding of how to include difficult knowledge in school programs.

Glossary:

- Behavioural Engagement
- Chaperone
- Cognitive Engagement
- Critical Thinking
- Emotional Engagement
- Engagement
- Facilitation
- Formal Learning
- IMP (Interpretive Master Plan)
- Informal Learning
- Object
- School Program
- Student
- Student-Centered Learning
- Tour

The interpreter brings the program to life. They are able to fulfill their role by follow the program outline to ensure the program runs smoothly while knowing when to be flexible in order to facilitate student-centered learning.

The interpreter's role as museum educator and program presenter is threefold:

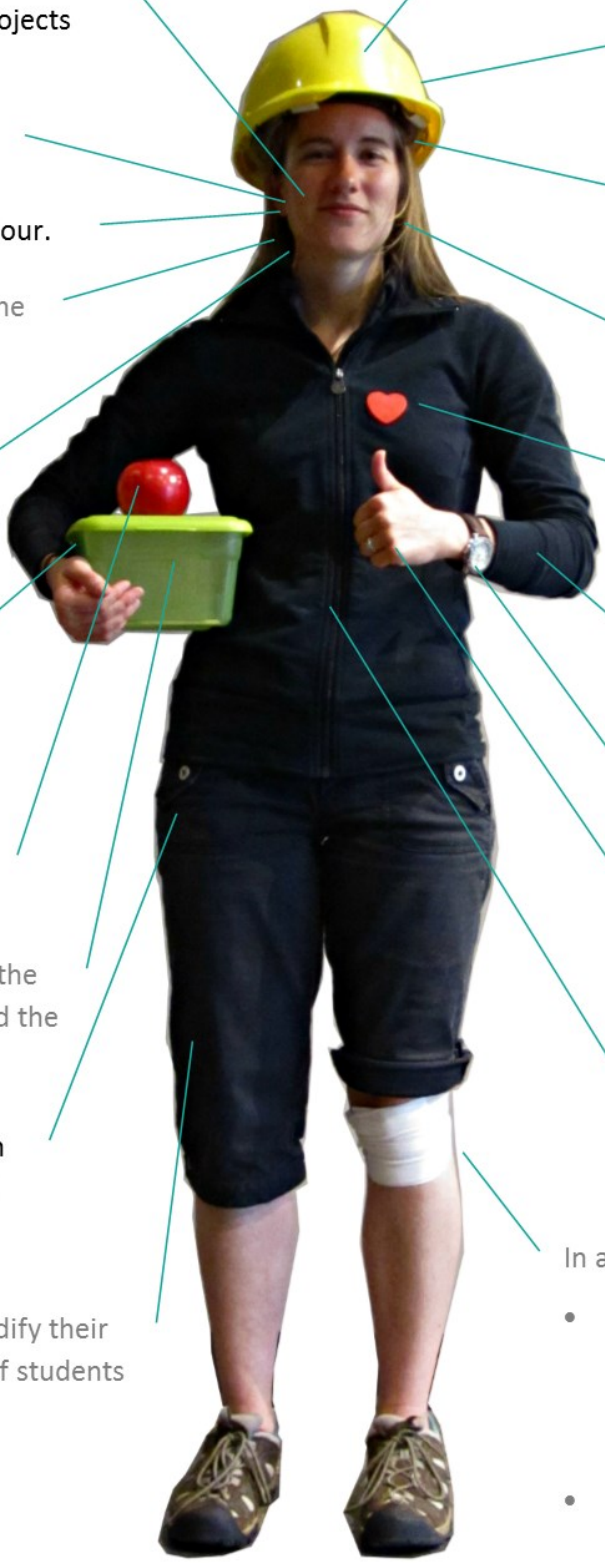
- as a *host*, who creates a welcoming, comfortable and inviting atmosphere which facilitates learning by ensuring the physical, intellectual and emotional needs of the students are met and the logistics of the program are followed.
- as a *facilitator* between viewers and experiences who invites learners of all ages, levels of understanding and experience to interact with and make relevant object and information.
- as a *knowledge sharer* who motivates creative responses through a well-grounded knowledge of the program's subject matter, educational theory, and techniques all while making sure the curriculum outcomes are addressed.

This interpreter at Highland Village Museum is balancing his role as host, facilitator and knowledge sharer. Although the program appears to be improvisational, the interpreter is respecting the written program by keeping in mind logistics and learning outcomes.

MODULE FIVE

Museum Interpreter as Host, Teacher and Knowledge Sharer

The "Museum Interpreter as Host, Teacher and Knowledge Sharer" is provided as a pull-out poster in Appendix B. Consider posting this, in a spot visible to staff and volunteers before presenting programs.



Uses appropriate vocabulary. Doesn't yell but rather projects voice.

Asks "good questions."

Includes appropriate humour.

Gives an orientation to the museum, program, and activities.

Facilitates dialogue by asking students for opinions, reactions, and interpretations.

Provides clear directions and instructions.

Works as a partner with teachers & stakeholders.

Is well prepared: knows the focus of the program and the sequence of activities.

Demonstrates enthusiasm and excitement via verbal and body behaviour.

Is flexible and able to modify their program to be inclusive of students of all abilities and needs.

Builds bridges between objects and information.

Understands how the program supports the IMP and curriculum.

Maintains good eye contact with students.

Provides review and closure at the end of a program which emphasizes the program theme.

Offers a warm greeting and a welcoming learning environment.

Has tricks up their sleeve for positive group management.

Good time management: starts and ends on time, adapting as necessary.

Creates a student-centered supportive learning environment that encourages questioning.

Relates to the student experience when possible.

In an accident or health emergency:

- Notifies and assists teachers. Remembers the teacher is ultimately responsible for the student's safety.
- Follows incident reporting procedures for their site.

MODULE FIVE

Engagement Strategies

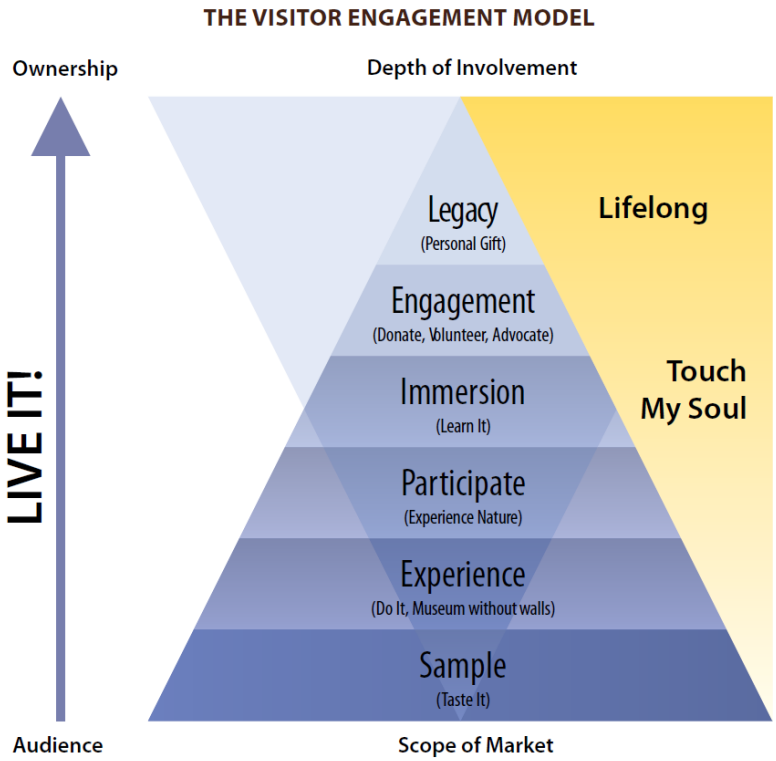
What are They? Why Are They Important ?

Student-centered learning places an increased emphasis on engaging students and encouraging a more active role in learning. Engaged learners are high achieving, critical thinking, and are motivated to pursue a deeper understanding of a subject. There are fewer challenges with behaviour when students are engaged.
There are three main types of engagement: behavioural, emotional and cognitive. During a program, students should have opportunities to demonstrate all three types.

Type	Behavioural Engagement	Emotional Engagement	Cognitive Engagement
What Is It?	A student's overall participation in an activity, including following the instructions and expectations.	A student's feelings about a learning environment or activity.	A student's personal investment in their own learning and desire to increase their understanding.
What Does It Look Like?	• Contributes to discussions. • Participates in activities. • Focuses on specific tasks. • Follows instructions and demonstrates expectations.	• Demonstrates interest or curiousity in the subject. • Students are positive, optimistic or excited about activities. • Discusses how activity makes them feel.	• Uses critical thinking. • Willing to tackle challenging work. • Asks in-depth questions about the material.

Engagement strategies are not limited to working with school programs. As the IMP states, engagement creates a positive experience for participants and encourages them to become more involved in the museum. As with visitors, it is important that teachers and students see the museum not just as a place they can sample once but rather programs should convince them to return. Module 7 examines ways to expand a museum's relationship with schools beyond the school program.

The IMP states that "the Heritage Division must strive to provide experiences that touch the soul of their visitors, capturing their hearts and imaginations for the future." (IMP p. 73)



The Visitor Engagement Model can be found on page 72 of the Nova Scotia Interpretive Master Plan.

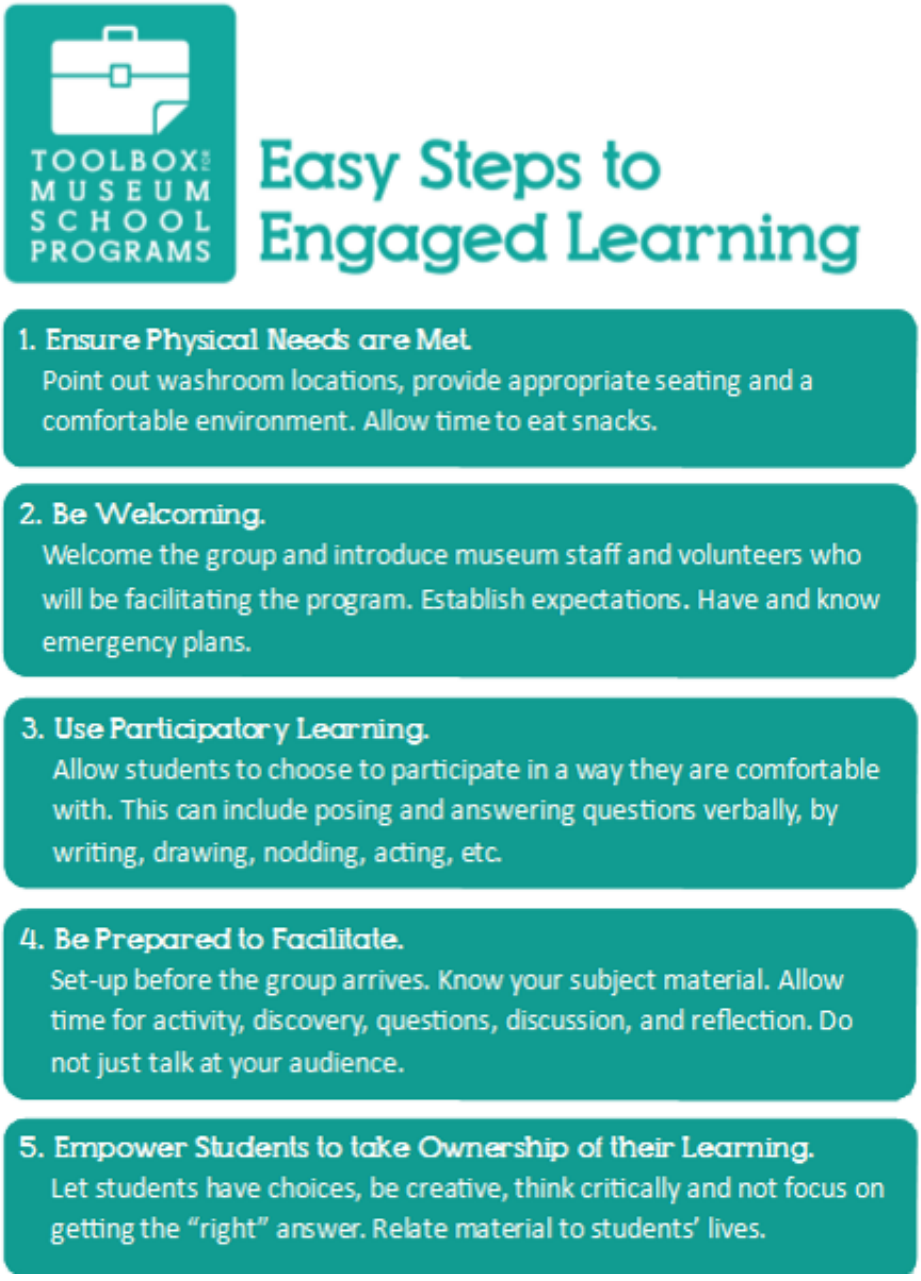
MODULE FIVE

Continued… Engagement Strategies

Engagement Made Easy

Engaged learning isn't something that just happens when a program starts. It is a process that begins before the learner arrives and, if successful, continues once the learner has left. "Easy Steps to Engaged Learning" reminds interpreters how to create an environment conducive to engaged learning.

The five steps reflect of Maslow's Hierarchy of Needs. First, the physiological needs are addressed. Then the interpreter establishes a safe and secure learning environment. Next, students are given the opportunity to belong to and be part of the learning experience. Through facilitation the interpreter addresses student's need for self-esteem by ensuring all students feel respected and have a sense of achievement. Finally, students will be able to self-actualize by taking ownership for what they are learning and how it applies to them beyond the museum school program.



"Easy Steps to Engaged Learning" is provided as a pull-out poster in Appendix B. Consider posting this, in a spot visible to staff and volunteers before presenting programs.

Continued… Engagement Strategies

Strategies for Building Engagement

There are many strategies that can be used to create engagement when delivering a program. Here are some...

Strategy	Tips to Achieve
Make the expectations explicit and clear. 	• Don't assume a student will know what is expected of them. Always give clear instructions. • Give time for any questions that might arise. • Provide instructions verbally. Reinforce them writing where possible.
Provide opportunities for student-centered learning. 	• Give a framework and clear expectations and then allow students to take the subject matter in a direction that interests them. • Avoid lecturing. Instead ask a variety of different types of questions. • Allow students to ask questions. Allow them to discover the answers on their own through experience, observation, inference and building on existing knowledge. • Elaborate on a student's idea/question by asking them, or their classmates, to build on it with their thoughts. • Provide students with choices whenever possible. • Give more than one option for students to choose how to express their thoughts and observations.
Base discussion around objects that relate to the subject matter. 	• Provide objects that students can examine, observe, and, when possible, manipulate. • Have students describe and record the characteristics of the object. • Allow them to infer an object's possible uses, the stories it tells, or why they think it is important.
Encourage and praise critical thinking. 	• Invite students to share their ideas and build on the ideas of others. • Give guidance if a student is having difficulty, but don't provide the "right answer." Assure them that it's alright if they don't all get the same answer. • Have students justify their reasoning regarding an answer, regardless of if it is right or wrong. • Use praise, but don't be over the top. Making other students think that one answer is "right" can discourage them from contributing and building on an idea.
Provide a supportive, collaborative learning environment 	• Demonstrate enthusiasm for the subject matter and the ideas that students share. • Use names if possible. • Allow students to work both in groups and independently. • Use questioning strategies that encourage all students to participate in a supportive manner (voting cards, thumbs up-thumbs down, small group consensus, etc.)

MODULE FIVE

Strategies for Managing Behaviour

There are some simple strategies that interpreters can use to reinforce positive behaviours while discouraging negative ones. Ultimately, the responsibility of dealing with student behaviour is that of the teachers and chaperones. It is not the interpreter's responsibility to enforce consequences regarding student behaviour and at no point should they threaten students with disciplinary actions.

Gaining Attention: To make expectations clear you will need to gain a group's attention.

- **The 'Can you Hear Me" game**. Like a game of 'Simon Says', the interpreter asks the group if they can hear you, followed by an action to perform. (for example, "If you can hear me, touch your nose.")
- **Clap a rhythm** to get the groups attention. Have them clap the rhythm back as a response. This often requires 2-3 rounds.
- **Begin speaking very softly** to the whole group. As students are seeing you speak, but are unable to hear you, they may focus attention on you.
- **Use a hand signal** that indicates when attention is needed (for example, a peace sign, index finger in the air, spread fingers, etc.). Have students perform the same action when they see it.
- **Have a sound maker** that indicates attention is needed (bell, percussion sticks, tambourine, etc.)
- **Say, "give me five".** With hands in the air, have students count down. Start at five and speak softer at each number until one is a whisper.
- **Ask the teacher what technique they use** to gain attention in the classroom. Find out the teacher's preferred technique and use it when necessary.

Prevention: It's easier to stop a problem from occurring, rather than addressing it when it does.

- **Clearly state rules and expectations**. Ask students to define the expectations of behaviour. (for example, raise hands, respect other's ideas, no running, indoor voices, don't tap on animal tanks, etc.).
- **Be a Model**. Practice what you preach. Follow the expectations and rules presented.
- **Be Prepared**. Have all required materials at hand and know the program schedule and activities. Flow from one activity to another quickly and efficiently, maintaining momentum.
- **Be Aware**. Keep an eye on how engaged the students are. If many students are off task the instructions might not have been clear enough or the task might be too challenging. Be prepared to give new instructions or alter the activity to meet the group's needs.
- **Be Flexible**. If you observe that the majority of the group is finished an activity early or are becoming disengaged with the current activity, move to the next aspect of the program early if possible. If this isn't possible, engage them in an alternative/extension activity.

Intervention: Strategies to discourage negative behaviour and encourage positive ones

- **Ignore the Behaviour**. Sometimes simply ignoring a negative behaviour will cause a student to abandon it.
- **Eye Contact**. Make the student aware that you have observed their actions by holding eye contact with them. If they know the expectations, this will often be enough to remind them of the expected behaviour.
- **Proximity.** Position yourself closer to the student exhibiting the misbehaviour. Your presence can sometimes reinforce your expectations.
- **Address the student(s).** Engage them in discussion regarding the current activity or subject matter. If they are talking over you, ask for their input on what you are talking about in a sincere way. Avoid singling a student out in front of their peers. Praise positive behaviour you notice.
- **Consult with teacher or chaperone**. If the other strategies fail to address the issue, ask for help.

Continued… Managing Behaviour

Classroom Behaviours vs. Informal Learning Environment Behaviours

Teaching and learning in a school classroom (formal learning) is very different than teaching and learning in an informal learning environment, like a museum. When designing and presenting museum school programs, sites often resort to models that are used in classrooms. As discussed in Module Four, museum school programs are at their strongest when the activities are ones that cannot be replicated in the classroom. Similarly, behaviours in informal learning environments are often ones that might not be replicated in the classroom.

Sitting quietly, raising hands to answer questions, and filling out worksheets is not always the behaviour museums want in their school programs. Allowing different behavioural expectations will help create more engaged students. Here students at Le Village historique acadien de la Nouvelle-Écosse learn the proper way to interact with farm animals—a very different behaviour than one needed in the classroom.

Although many practices used in classroom management are useful in a museum setting such as raising hands to talk, or walking quietly from one location to another, these behaviours might not be the only behaviours in informal learning environments. Programs are often designed to allow students to be active, creative, and think outside the box. This may involve rethinking the behaviours we expect and encourage from school groups. It adds to the benefit of learning in informal settings, as students are not only taken outside of the classroom, they are also given the chance to perform activities not usually presented in the classroom. Hopefully this will result in a positive experience for the students and an opportunity to approach learning from a different perspective.

Earn A Badge

Using the previous pages as inspiration, develop your own list of what works for you in order to keep students engaged. Write down three "tricks" you have used or would like to try for each of the following scenarios...

1. To get the attention of a class of students who are talking amongst themselves.
2. To maintain the attention of a group of students.
3. To regain the attention of one or two students who have become disruptive to the activity.

MODULE FIVE

Interpreting Difficult Knowledge

What is Difficult Knowledge? How to Present it in School Programs?

Some programs introduce students to sensitive subjects including injustice, discrimination, and death. Additionally, program presenters do not know what experiences students bring with them which could alter how they react to topics. Teachers should be made aware of any such subjects when booking a program so they can assess if the information is appropriate for their class.

When presenting these programs it is very important to approach the subject and students with respect and sensitivity. Some students may find these topics difficult to discuss in an environment that is strange to them, such as a museum. This can result in student behaviour challenges. Here are some simple hints on how to alleviate some of these challenges.

- Talk to teacher before the program.
- Plan the experience based on the characteristics of the ages of the students.
- Prepare students before entering the space or starting the topic.
- Establish behaviour expectations with the students.
- Acknowledge students are out of their comfort zone – both physically and with the information. Assure students that museums are a safe learning environment.
- Ensure activities are ones that demonstrate sensitivity and respect.
- Have an "out" for students who require it.
- Allow a lot of time for questions and discussion.

Every museum has difficult knowledge to interpret. Many stories are obviously challenging, however students might bring prior experiences with them that reveal unexpected difficult knowledge in topics such as family, illness, poverty, or natural disasters. Here are a few examples of interpreting difficult knowledge from the Nova Scotia Museum: examining names from the "Book of Negroes" at the Black Loyalists Heritage Center (above), spending time in the Fishermen's Memorial Room at the Fisheries Museum of the Atlantic (left top), hearing a family story of surviving the Halifax Explosion at the Maritime Museum of the Atlantic (left middle), and using the local beaches at Fundy Geological Museum to learn how coastal communities in Nova Scotia are vulnerable to sea level rise due to climate change (left bottom).

Self-Reflection: How Effective are You as a Program Presenter?

Take a few moments after you present a program or tour to do this self-reflection exercise. Consider repeating it on a regular basis so that you can monitor your own improvement.

1. Give yourself one point each time you ask students what they know about a subject before you start your activity.
2. Measure how many seconds you wait for a response. Give yourself one point if you waited longer than two seconds for a response.
3. Give a point each time you ask a question that doesn't have a single correct answer.
4. Give a point if you developed interaction between the members of your group rather than simply between yourself and one other student.
5. Give a point each time you reinforce an answer without saying that the response is correct.
6. Give a point each time you do not stop discussing a point when the 'right' answer is given, but ask if there are other answers.
7. Give yourself a point each time you ask a question requiring predicting, hypothesizing, inferring, or reconstructing events.
8. Give yourself a point each time you are a good listener.

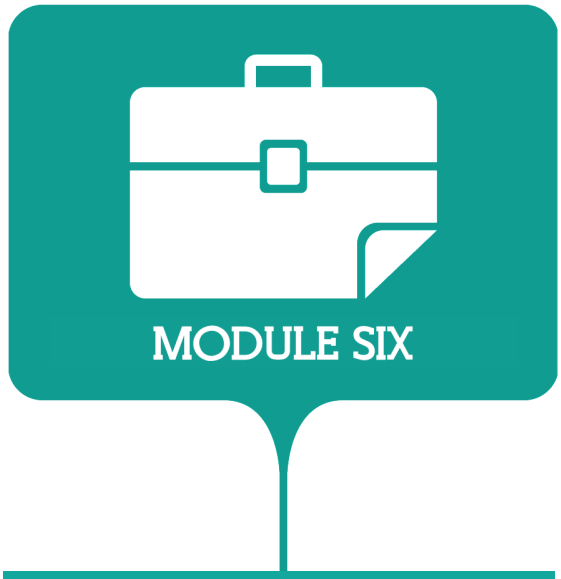
How many points do you get when you use this self-reflection to test your effectiveness as a program presenter? This interpreter at Ross Farm looks like he is giving a very engaging presentation—making eye contact with his audience and interacting with objects.


MODULE FIVE

MODULE SIX
Working with Partners and Where to Get Help

Working together makes everything easier, as seen here at the launch of the Halifax Art Boat at from the Maritime Museum of the Atlantic. There are many resources available to museums to help create and present school programs.

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS



Working with Partners and Where to Get Help

This module will encourage museums to create partnerships to develop and present better school programs. It will also provide suggestions on resources available to NSM sites to help them develop school programs.

Audience: Program Developers.

At the end of this module, readers will:

- Understand how to develop partnerships and the benefits of collaborating with archives and libraries.
- Better understand how to access volunteer/ unpaid staff, including interns
- Know who and what ICI and S4C are and how museums can access them/it.

Glossary:

- Archival Records
- Collection
- Engagement
- Exhibit
- ICI (Innovation, Collections and Infrastructure)
- IMP (Interpretive Master Plan)
- Inclusive
- Lifelong Learning
- NSM (Nova Scotia Museum)
- Object
- Object-Based Learning
- Primary Source
- School Program
- Specific Curriculum Outcomes (SCOs)
- Student
- Website and Online Initiatives
- Working Collection

Partnerships are a necessity. They allow museums to become more innovative in the way they offer programs. They can allow sites to do more than could have been accomplished using only their resources. When teachers see that a program meets multiple outcomes, provides multiple opportunities, and engages multiple perspectives, it will be more attractive to them.

How to Use Partners

Museums are so used to doing programming on their own, that the idea of working with partners can be daunting and the value of such a partnership might not be apparent. Consider some of the following ways to use partners for museum school programs.

During development they can provide help with:

- Research.
- Reproductions, supplies, props, or other objects.
- Activity ideas.
- Better understanding of what teachers need.
- Funding.

During marketing they can provide help with:

- Creating awareness through cross-promotion.
- Increasing “street cred.”
- Distributing promotional materials.

During presentation they can provide help with:

- Staff or volunteers to present the program.
- Providing a venue in which to offer the program.
- Pre- and post-visit supplementary materials.
- Hosting the program during the museum’s off season.
- Providing experiences additional to the museum program.

MODULE SIX

Working with Archives

Archives and museums are natural partners for collaboration and cooperation, as they often serve the same community in similar ways. Archives and museums support and enhance lifelong learning opportunities, preserve community heritage, and protect and provide access to information.
Additionally, the Nova Scotia Museum is part of the Archives, Museums, and Libraries section of the Department of Communities Culture and Heritage. As a result not only is it logical for museums and archives to work together, it is supported and encouraged by the department.

Maritime Museum of the Atlantic: Titanic to Twitter: Using the archival records of wireless transmissions from the RMS *Titanic*, a program was built in which students examine the ways we communicate. The school program was based on the Titanic on Twitter project which won the 2013 Best of the Web—Social Media at the Museums and the Web conference.

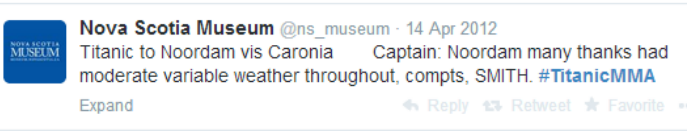
How can museums incorporate archives into school programs?

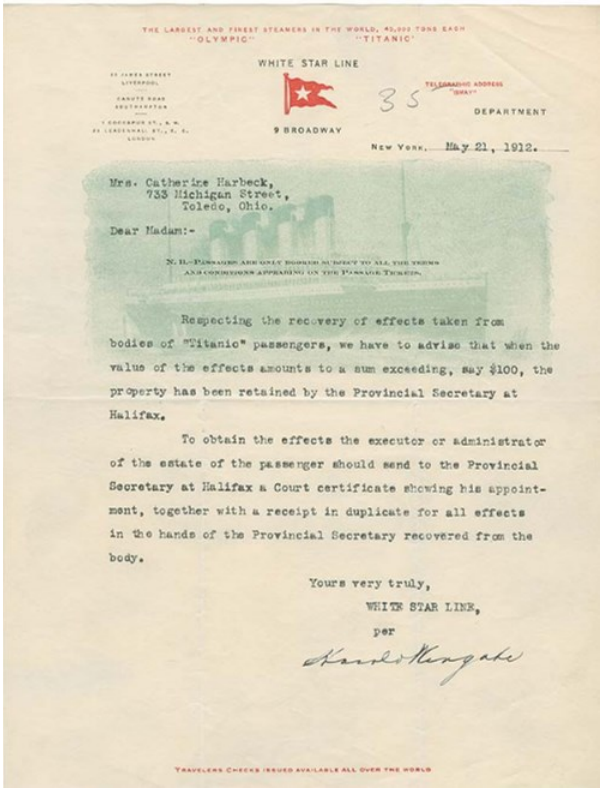
Keeping in mind that museum school programs are focused on object-based learning, archives can often provide primary source documents that relate to the object or act as objects themselves and thus enhance the learning experience of the student.

The Nova Scotia Archives (NSA) holds many resources that may be applicable to various museums. William Ross diaries, Uniacke family papers, Gideon White family papers, photographs and documents related to the recovery of the Titanic victims, and Gaelic newspapers and audio recordings are all examples of the vast resources held at the Nova Scotia Archives that can be tied directly to Nova Scotia Museum sites. Local archives throughout Nova Scotia will have resources in addition to that available at NSA.

Ways to Access

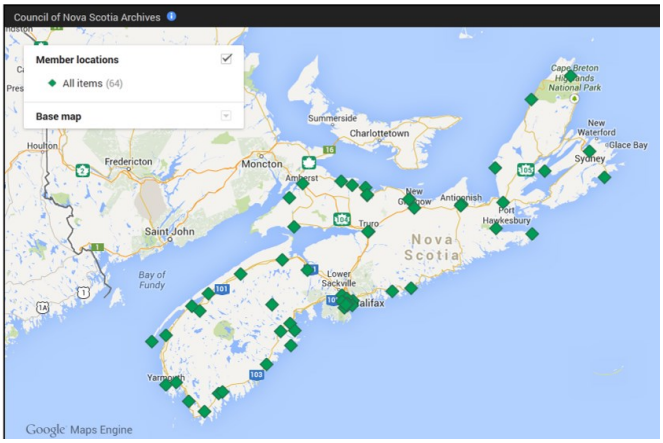
Archives Associated with Museums:
Some museums already have an archives incorporated as part of their institution and thus will have archival records readily available. Checking with the archives staff may open up a number of ways to enhance object-based learning with primary source documents.




"OLYMPIC" "TITANIC"
WHITE STAR LINE
9 BROADWAY
DEPARTMENT
New York, May 21, 1912.
Mrs. Catherine Harbeck,
733 Michigan Street,
Toledo, Ohio.
Dear Madam:-
Respecting the recovery of effects taken from bodies of "Titanic" passengers, we have to advise that when the value of the effects amounts to a sum exceeding, say $100, the property has been retained by the Provincial Secretary at Halifax.
To obtain the effects the executor or administrator of the estate of the passenger should send to the Provincial Secretary at Halifax a Court certificate showing his appointment, together with a receipt in duplicate for all effects in the hands of the Provincial Secretary recovered from the body.
Yours very truly,
WHITE STAR LINE,
per

Learning with archival records can be powerful experiences for students. Consider this letter explaining to a widow how to get the personal effects of her husband who died on the Titanic.
(Nova Scotia Archives RG 41, vol. 75, no. 35)

Continued... Working with Archives



As this Nova Scotia Council of Archives map shows, there are archives all across the province.

Nova Scotia Archives has many archival records available on their website that can be used as 'objects' in museum school programs. For example, this 1745 map shows a very different picture from what we now know this area looks like.
(Nova Scotia Archives Map Collection: 200-1745: loc.3.5.2)

Self-Reflection: Visit the Archives

When was the last time you visited your local archives? Consider stopping by or setting up an informal meeting to introduce yourself and what you do. Find out what they do. Often a conversation over coffee is the first step in building partnerships.

Local Archives

Although not all museums have an archive affiliated with their museum, many may be able to access one of the archival institutions scattered throughout the province. A good place to look for nearby archives is the Council of Nova Scotia Archives website where there are both alphabetical and map based lists of members.

Find these through the Council of Nova Scotia Archives. Use their website (councilofnsarchives.ca/node/24) or call 902-424-7093.

Nova Scotia Archives

The Nova Scotia Archives (NSA) is a resource available to all museums regardless of location. NSA serves as the permanent repository for the archival records of the Government of Nova Scotia and acquires and preserves provincially-significant archival records from the private sector. Most areas of the province are well represented so the odds are good that something can be found that relates to the school program undertaken by the museum. A staff member can advise museums on the various resources. Call 902-424-6055 or email nsarm@gov.ns.ca and provide a description on the program needs.

With a bit more time and deeper digging program developers can also use the website (novascotia.ca/nsarm/) to examine online exhibits or use the Search Archives section of the NSA homepage and use the archival database. When appropriate or interesting documents are found contact NSA regarding the possibility of obtaining a copy.

Check out the NSA social media presence on their twitter page @NS_Archives

Online Archives

Many regional, provincial, national and private archives have resources available online. Museums should contact the archives to attain permission to use the material.

MODULE SIX

Working with Libraries

Public libraries, like museums, are community spaces that offer people access to information, programs, technology and so much more. Libraries and museums share similar goals of encouraging lifelong learning and engaging people across all age-groups and community sectors.

Libraries are continually looking for ways to connect with their communities and better serve the public. Partnerships with schools and museums are key. As mentioned in "Working with Archives," the Nova Scotia Museum is part of the Archives, Museums, and Libraries section of the Department of Communities Culture and Heritage, which encourages museums and libraries to work together.

Libraries and Students: An Existing Relationship

Libraries are often a first place students turn to for homework help and support with school projects. They offer students an array of information resources including: books, online databases, eBooks, library websites with links to "homework help" resources, and research assistance from staff. Library staff an excellent resource for understanding what students are interested in and what skills they have at different ages.

When researching a new or renewed school program, libraries are a great first step. Library staff can help with the research by recommending resources.

Libraries, like museums, have a tradition of offering school programs. Library staff often host school classes for research visits or library programs such as scavenger hunts, story time or puppet shows. Some libraries have staff who go out to visit schools and develop relationships with teachers and students. Working with libraries are another way museums can reach out to schools.

Presenting Programs: Together?

In the challenge to offer successful school programs, there is opportunity for museums and libraries to support each other. While all public libraries across the province have similar resources and services, each will differ in some way. Museums and libraries should meet to discuss what they offer schools, teachers and students, and explore ways they can work together.

Public libraries, such as the Halifax North Memorial Public Library, offer programs for students of all ages year-round.

Museums and libraries might consider "co-programming", where museum and library staff would present a school program together, at either location. Library staff could for example, offer students a story time or puppet show on a

Continued… Working with Libraries

museum theme, or, museum staff could bring an artifact or activity to deliver at a library visit.

Space is often limited at museums, especially during the off season when many seasonal museums are closed. Museums could work with libraries to use the library as an alternative venue. Museums could also leave components of their program at the library when they are closed, allowing the library to both hold and present the program. In exchange, libraries could bring their summer reading programs to the museum during the summer where students on vacation could experience parts of the museum's school program.

Additionally, as discussed in Module Four, bussing is often the largest cost for teachers, combining museum and library visits would provide students an even greater learning experience and offer the field trip more value.

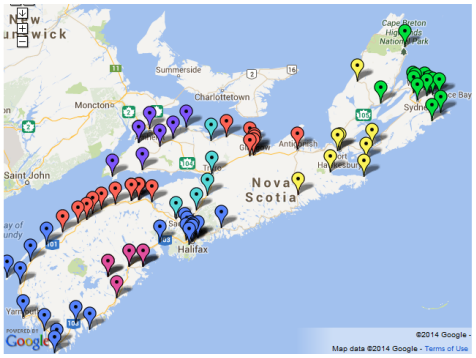
Ways to Access Libraries

To contact local public library or library region, consult the public libraries map at: http://library.novascotia.ca/map

Or contact the Nova Scotia Provincial Library for more information: http://library.novascotia.ca

Ideas for Museums and Libraries Working Together

- **Libraries regularly build book displays (print & online) on a variety of themes**. Consider working together on an display. Museums could contribute a small pop-up exhibit to accompany the book display. Similarly, museums could host a pop-up display from the library.
- **Resource and reading lists** created by libraries (print & online) can highlight certain areas of a museum collection, or supplement a museum school program.
- **Library programs** are offered year round, on a variety of themes. Museums could offer to present museum programs at the library, or help with the development, marketing and presentation of library programs.
- **Commemorating events and holidays** is something both libraries and museums do. Work together on programs or have a joint calendar of programs for events such as : African Heritage Month, March Break, Earth Day, Remembrance Day.
- **Libraries promote services** they offer to the public, as well as reading, literacy, and life-long learning, through print and online/social media. There are ample opportunities for cross-promotion of programs and events with similar mandates.
- **Research for programs** can be done at libraries. Research will be easier with the help of the library staff who are trained to assist people looking for information. Enquire about getting an institutional library card with extended loan privileges.
- **Professional and skills development workshops** can be presented by library staff for museums staff or vice versa. Consider what unique skills each institution has to offer.



There are 78 public library branches across Nova Scotia as well as outreach services available to citizens who are not able to visit one of these branches.

Self-Reflection: Visit a Library

When was the last time you visited your local library? Consider stopping by or setting up an informal meeting to introduce yourself and what you do. Find out what they do. Often a conversation over coffee is the first step in building partnerships.

MODULE SIX

Working with Other Museums

There are many ways museums can work with each other for school programs. This can greatly assist with extending resources for programs and can be done easily as museums are used to working with each other. The Nova Scotia Museum sites already belong to a family of museums and can easily share resources. Museums can also work with community museums, federal museums, heritage properties, and historic sites. The provincial museum organization, Association of Nova Scotia Museums, can help museums find partners in the larger Nova Scotian museum community.

Museums should not focus on being in competition with each other for school programs, but act to support each other. There are museums across the province who have successful programs and are unable to meet the demand for their programs. Partnerships with museums could help share the demand for specific programs, by providing program ideas and topic specific best practices.

The IMP provides maps and lists of complementary operations in Nova Scotia. This includes Provincial Heritage Properties, CMAP Museums, Parks Canada, National Historic Sites, Special Places, Private Museums and Exhibition Centers (IMP p. 37-50)

Partnering with other museums can be a very successful strategy, such as this program presented in partnership between the Maritime Museum of the Atlantic and Parks Canada to introduce students to the War of 1812.

Ideas for Museums Working Together on School Programs

- **Create programs together.** Many museums have similar themes and could find similar ways to address specific curriculum outcomes (SCOs). Museums not in the same community could save development work by offering the same program, personalized for their site. For an example of a successful program that could be offered at any museum in Nova Scotia see "History Detectives" in Appendix I.
- **Share or trade programs.** Often a museum creates a successful program but is unable to use it after a few years. Consider sharing or trading these programs with another museum.
- **Share objects.** Some museums have working collections or props that are not in use. See Module Two for a list of objects that might be shared.
- **Share staff.** Not all museums are able to offer school programs. Not all museums will be in demand for school programs at the same time. Find ways to share staff, either through staff exchange or providing extra staff in exchange for an alternative event.
- **Talk with each other.** Professional development for program development and presentation might not always be available. Allow program developers or presenters from multiple sites to come together to exchange what works, what doesn't work, and brain storm new ideas.

MODULE SIX

Working with Community

Although this module has mainly focused on partners within the archives, museums and library family, partners do not need to be limited to these groups. Individuals, organizations, clubs, and businesses can all be considered partners.

Many organizations have missions, skills and needs that might complement the museum. Look at areas where resources are lacking and find an organization that might be of assistance. Remember that this should be a two-way relationship. Consider the following chart:

Museum Need	Community Need
Volunteers to help teach programs	Work Experience Social Interaction Community Involvement
Props	Craft Guild or Club looking for a project
Consumable Supplies	Local business looking for positive publicity
Research	Organization with an educational mandate but no venue

Working with Ducks Unlimited, the Uniacke Estate Museum Park and Lawrence House Museum both had assistance in developing and getting props to present a wetlands program. This program met the educational needs of Ducks Unlimited to teach children about wetlands and the needs of the museums for a program with supplies provided at no cost.

Earn A Badge

Who are the people in your neighborhood? Working with your community can be beneficial to both your museum and to community organizations. Think of your community as both your museum's town and your wider provincial community.

1. Create a contact list for who is or could be partners for school programs. Don't forget to include:
    - Other Museums in your Community
    - Archives
    - Libraries
    - Community Groups
    - Local Businesses
2. Write a SMART Goal to help you contact at least two of the potential partners you've identified in your contact list. Make plans to meet with them and discuss how you could work together to create and/or present school programs.

What is a SMART Goal? Specific, Measurable, Attainable, Relevant and Time-Bound

MODULE SIX

Working with Volunteers

Volunteers are significant partners for museums. They come in all varieties, from young people trying to gain experience to senior and recently retired looking to fill their time. All volunteers have their own unique intrinsic motivations, which can include feeling valued for the work that they are doing. Volunteers can be used to enhance the existing staff but are not meant to replace paid positions.

Recruiting Volunteers

There are many ways to recruit volunteers. The museum should start with a job description and expectations that they expect the volunteer to complete. Volunteers can be recruited from high schools and universities (some students are required to complete volunteer hours for specific courses), through community events, online job boards (such as Kijiji), and through current volunteers. The museum website and online initiatives is also a good place to attract volunteers by posting the job description and requirements.

The volunteers should go through an application and interview process and have a criminal record and child abuse registry check. For more information on requirements for volunteer screening see the department's Volunteer Policy (see Appendix F).

Who is available to volunteer in your community?

- Junior and Senior High School Students
- College and University Students
- Youth Groups
- Youth involved in Leadership Programs (for example, Duke of Edinburgh Program)
- Recent Immigrants
- Stay-at-Home Parents
- Recently Retired
- Those looking to return to the work force
- Somebody recovering from a long-term illness
- Community Groups
- Board Members
- Teachers who are substitute teaching or only teaching part-time
- Staff from other museums, archives or libraries in your community
- Many workplaces support employees volunteering on work time. Talk to your local companies.

Different volunteers can make different time commitments. Some volunteers might be able to come in for a few hours a week over a year. Others, like the huge group of volunteers at Highland Village who help with Oidhche nam Bocan (Night of the Spooks), are able to give many more hours but over a shorter length of time.

Continued... Working with Volunteers

Although volunteers should never replace the duties of a paid staff person, they are an important part of an organization's human resources. Make them feel a part of the team with name tags, a coffee/break area, and include them on special internal communications, such as invitations to exhibit openings and professional development opportunities.

Retention of Volunteers

Volunteers should be given job and workplace safety training. One easy training method is job shadowing the staff. Job shadowing not only trains the volunteer but also helps them become more familiar with the staff. Another training method is to provide volunteers with a training manual.

Museums with successful volunteer programs make their volunteers feel valued and part of the team. Some ways to do this include:

- Building personal relationships with volunteers.
- Providing official name tags.
- Having volunteers work with staff and other volunteers.
- Giving volunteers responsibility.
- Allowing and valuing volunteer feedback.
- Providing professional development opportunities for volunteers to share and develop their knowledge.

Not all volunteers like to be recognized the same way, but food is a popular treat. Whether it is a cup of coffee and cookie after a school program or a holiday breakfast, as seen here at the Maritime Museum of the Atlantic's volunteer recognition breakfast.

Recognition of Volunteers

There are many ways of recognizing the work of volunteers. Thank you cards and verbal recognition of the job the volunteer is doing can also go a long way. Many museums also do formal recognition such as tokens of the volunteers' service or a reception. Most importantly, ask volunteers how they would like to be recognized.

MODULE SIX

Working with Interns

Interns come from educational institutions for a set amount of time and have set learning goals. Like volunteers, they are a great way to help accomplish projects that museums might not regularly have the resources to achieve while providing training and work experience for a student.

Recruiting Interns

Many different places of study encourage or require students to do internships. Museums wishing to host an intern should directly appeal to the school to invite students to come to their museums. There are many different types of interns available. Bachelor of Education students, also known as pre-service teachers, can sometimes do an "alternative placement" in lieu of, or in addition to, their classroom practicum. In Nova Scotia Mount Saint Vincent University, St. Francis Xavier University, Cape Breton University, and Acadia University all offer Bachelor of Education degrees.

Museums can also appeal to interns from museum studies programs such as Sir Sandford Fleming College's post-graduate Museum Management and Curatorship program, Algonquin College's Applied Museum Studies, or University of Toronto Master of Museum Studies Program.

Museums can also partner with students in programs such as graphic design, event management, tourism, marketing, or art. Many programs from Nova Scotia Community College require their students to do an internship.

Working with Interns

When engaging an intern, it is important to have a clearly laid out work plan that shows what the intern will do during their time at the museum. This work plan will ensure that the intern has a meaningful educational experience and that the museum has enough work to keep the intern busy. Frequently interns will have developed many job-related skills during their course of study but require experience to see how academic practices look in practice. Supervisors should remember that interns are using this time as a learning experience and will need direction.

Building successful internship opportunities can result in interns returning as volunteers or staff, and can lead to others in school program considering an internship at the same location.

Interns are often able to work on larger projects, like program development and delivery, as they come to the museum with skills and need to complete a certain number of work hours. This toolbox provided opportunities to several interns.

(Above) Victoria, a Museum Management and Curatorship intern from Sir Sandford Fleming College, helped present school programs at the Museum of Natural History and work on modules in this toolbox.

(Below) Cali and Josie, pre-service teachers from Mount Saint Vincent University, helped evaluate and pilot the Beta Version of this toolbox and the "History Detectives" School Program in Appendix I.

NSM Sites Working with ICI

Many of the ICI staff, including the Interpretation Team, work out of the Museum of Natural History building.

Who is ICI?

ICI (Innovation, Collections and Infrastructure) is the behind house portion of the Nova Scotia Museum (NSM). It includes the Interpretation Team (Innovation), Collections Unit (both natural and cultural history curators and registrars), and Infrastructure support.

The role of ICI is to provide effective stewardship of the province's natural and cultural heritage and information resources. Archives, museums, and libraries under their respective legislation, ensure heritage and learning resources are accessible to all Nova Scotians through innovative programs and services that meet diverse individual and community needs. These provincial institutions play a key role in helping Nova Scotians and visitors discover, experience, understand and appreciate the past, while making sense of the present, and inspiring us to envision the future.

The ICI Interpretation team is here to help the Nova Scotia Museum sites, Archives, and Libraries with the renewal of their interpretive product. The team is here to help answer any questions about school programming and any other interpretive needs.

For more information on Support for Culture funding see this website

cch.novascotia.ca/support4culture

Support for Culture Funding (S4C)

NSM sites can apply for Support for Culture (S4C)'s Interpretive Renewal Project Fund. This funding is successfully being used by NSM sites for the development of school programs and other projects. In keeping with the Department of Communities, Culture and Heritage's commitment to lifelong learning, this fund supports interpretive renewal activities at the 28 museums that make up the Nova Scotia Museum system. Using the values and strategic directions identified in the Department's Interpretive Master Plan (IMP), museums can use this fund to pursue new and creative ways of embracing the past so that Nova Scotians can have increased access to our province's stories and heritage resources. This funds will allow museums to develop relevant, collaborative, innovative and inclusive interpretive products that appeal to diverse audiences and create better experiences for our visitors of all ages.


MODULE SIX

MODULE SEVEN
Beyond Programs: Other Ways to Work with Schools

Museums have much more to offer schools than just school programs. Here staff from Fisherman's Life Museum and Museum of Natural History promote the Nova Scotia Museum at the Social Studies Teachers Association Conference.

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

Beyond Programs: Other Ways to Work with Schools

This module will encourage museums to explore ways to work with schools beyond the museum school program. A variety of outreach methods will be presented in overview. Although detailed information is not provided, the previous modules of the toolbox can be used as a guide to developing these alternative programs.

Audience: Program Developers.

At the end of this module, readers will:

- Be introduced to a variety of ways they can work with schools.
- See additional ways they can use their on-site school program.
- Understand ways they can better engage their community through partnerships with schools.
- Recognize alternatives to on-site school programs, especially for sites not open to schools year-round.

Glossary:

- Artifact
- Building
- Chaperone
- Collections
- Engagement
- Exhibits
- Heritage Skill
- IMP (Interpretive Master Plan)
- Intangible Heritage
- Interpretation
- NSM (Nova Scotia Museum)
- Object
- Primary Source
- Specific Curriculum Outcomes (SCOs)
- Specimen
- Student
- Tangible
- Tour
- Website and Online Initiatives
- Working Collection

Every museum should have a school program, as defined in this toolbox. Working with schools however is not limited to the traditional school program. In fact, many museums in Nova Scotia have more success working with schools using products other than school programs. This module will explore some of these alternative methods and will share successful examples from the Nova Scotia Museum. Some of these idea will involve using components of a site's existing school program while others will involve creating something new. All of the alternatives to museum school programs presented in this module will not work for every museum. Museums are encouraged to be open to try something new and find options that meet their logistical realities.

Museums + Schools = Community Engagement

In order to remain relevant and sustainable museums must engage their communities. This influences everything a museum does from exhibits to governance. Working with schools is just one component but it is an important one. It is also one of the easiest method to engage a community's youth. Engagement is no longer just a best practice, it is essential to a museum's survival.

Module One stated that museum school programs have faced many challenges over the past decades. Today, museums must do more, and be more… often with less resources. Museums successfully responding to this new reality have created many exciting and inspiring alternatives to traditional school programs.

All of the alternatives to school programs presented in this module will not work for every museum. Museums are encouraged to be open to try something new and find options that meet their logistical realities.

MODULE SEVEN

Alternatives In the Museum: Working with Homeschool Groups

Other educational groups might be interested in taking advantage of the unique spaces and opportunities only a museum can offer. When a school program has been created, it should also be able to be modified to suit the needs of seniors, language learners (for example, English, French, Gaelic), recreational, or homeschool groups, among many others. In particular, home school groups are regularly looking for opportunities that can enrich their children's understanding of science and history.

Although the principles of program development and delivery will be much the same in many ways, there are certain considerations to take into account when offering programming to home school groups.

Networking with Homeschool Groups

Unlike a public school group, homeschool bookings will usually be an amalgamation of many families who coordinate with each other to attend programs and events. This can make it more difficult to contact an organizer and share information about a museum school program. However, there are local support organizations that are good initial contacts when trying to get the word out about the museum's offerings.

Maintaining contact with a homeschool group organizer over time can be a challenge as families may move back to public education, priorities change, or interest may drop off after a group has completed a program once. Maintaining regular correspondence with an organizer can help ensure that any changes in leadership will be relayed to the museum.

Due to the relatively limited numbers and the fact that much of the time students of all ages will participate in a given program, it is likely that homeschool visitation will occur sporadically, compared to the predictable flow of public school groups. However, due to this informal and fluid nature of homeschool networks, homeschool families have much more flexibility regarding the timing of their visit. That means a museum can offer these programs at times that a public school group wouldn't be able to attend, such as evenings, weekends, and during annual school breaks.

Museums might not recognize how often homeschool groups use their site as they might just appear to be family visitors, like this family visiting the Firefighters' Museum. Consider posting information for homeschools on-site or online as to how they can access museum school programs.

Learn more about some of Nova Scotia's the homeschool groups:
http://hems-ns.ca/
http://www.nsfhsa.org/

Many museums, including the Maritime Museum of the Atlantic, offer their existing school programs to homeschool groups. This often means adapting the program to the specific needs of the group. It also requires the program presenter to be flexible as the students may have differing prior knowledge.

Alternatives In the Museum: Continued… Working with Homeschool Groups

Homeschool students can be accustomed to individual attention from their parent-teacher. Their parent in turn is used to being involved in what their student is doing. Museums may accommodate this different learning structure by involving the parent-teacher in what the student is doing, as seen here at the Museum of Industry.

Homeschool Students

When working with homeschool students, there are sometimes differences in their expectations about participation in a lesson as compared to public school students who are accustomed to working in large groups. These characteristics are not meant to be representative of all homeschool students, but can be valuable to keep in mind. Homeschool students may:

- Be accustomed to working in small groups, with an abundance of individual attention from the parent-teacher.
- B accustomed to working independently, may find working in a group challenging.
- Tend to be very enthusiastic learners, eager to share their knowledge.
- Not be used to working in a highly structured classroom environment with large numbers. This might make them less familiar with behavioural expectations like raising hands, following a strict schedule, listening to group instructions, or asking permission.
- Each bring different pervious knowledge to the program.

Homeschool Parent-Teachers

Parent-teachers (chaperones) are usually not "experts" in one or more areas of the curriculum and are appreciative of the support and specialized expertise that museums can offer through educational programs. A parent-teacher may have different expectations about how a program will be developed and offered, compared to a public school teacher.

- Homeschooling parents are very involved with the education of their children. They may focus attention on their own children if they are expected to lead a small group.
- Parents appreciate the opportunity for their children to interact with other homeschooled students, and for the opportunity to get together themselves with other homeschooling parents. Museum programs are a social time for both students and parents.
- Parents generally expect that all of their children will be able to accompany them to a museum program. Home school groups will likely consist of a wide-age range.
- Because homeschool groups rely on parental and public transportation, there may be issues regarding the consistency of arrival times as groups arrive independently. It is also more difficult to account for illness, absences and in rare cases, no-shows.
- The parent's lessons are less constrained by the requirements of the provincial curriculum, giving more freedom when determining the material covered in a program.
- Overall, homeschooling parents recognize the challenges inherent with providing a program to such a diverse age group and are flexible with their expectations.

MODULE SEVEN

Alternatives In the Museum: Turning the Museum over to the Teacher

When museums think of a school coming to a museum for a program the tendency is to envision the formal museum school program. Museums however can offer much more than what students can experience in a two hour program. One way museums can do this is by supporting teachers in their lessons, and providing resources and space to create their own program or lesson. By supporting teachers and turning the museum over to them as their own classroom, museums can act as community spaces and become the catalyst for students to learn more about their own community and become engaged citizens.

Turning a museum over to a teacher can be a scary thing. It involves the museum's building, beyond just the exhibit and public spaces, and requires maintaining a relationship with the teacher, over an extended period of time. The museum and teacher must have mutual respect and understanding of each other's resources.

How this looks in practice will vary from museum to museum, teacher to teacher, and year to year. There is no set of rules on how to ensure success other than ongoing communication and a willingness to try new things.

Examples of Turning the Museum over to the Teacher
A Case Study from the Maritime Museum of the Atlantic

This case study describes a program that was recognized in 2012 by the Canadian Museum Association (CMA) and the Canadian Teachers' Federation with an Outstanding Achievement Award in the category of "Museums and Schools Partnerships" for an innovative, and non-traditional partnership between the staff at the Maritime Museum of the Atlantic and Grade 5 students at École Grosvenor Wentworth Park School. It began as an opportunity for the Maritime Museum to provide a "stage" for a teacher and his students that resulted in a working relationship over several years.

The partnership was initiated by a phone call from a grade 5 teacher at École Grosvenor Wentworth Park School wondering if the museum would be open to allowing students to film at the museum. Each year the teacher has students brainstorm, research, write, storyboard, and film their own projects that explore the heritage of Halifax. This project creatively incorporates filmmaking into daily classroom activities, through support from Panasonic's Kid Witness News Program (www.youtube.com/user/panasonickwnglobal), allowing the teacher to engages his students in meaningful learning opportunities and while creatively meeting multiple curriculum outcomes. Films have included:

- "Look What's in Our Backyard" based on the stay of Prince Edward in Halifax;
- "Titanic Halifax" dealing with the role played by Halifax in the wake of the sinking;
- "Pier 21: Gateway of Hope" dealing with the immigrant experience;
- "Black Snow" about the disastrous Halifax Explosion.

Several of these films won national and international awards. Anyone seeing them cannot but be impressed by their quality as well as their heritage and educational value, given the fact that the cast and crew for these films are comprised of eleven to twelve year olds.

Continued on Next Page.

Alternatives In the Museum:
Continued… Turning the Museum over to the Teacher

The Maritime Museum of the Atlantic worked with students from École Grosvenor Wentworth Park School. Students made films at and with the help of the museum. This program was awarded the 2012 Canadian Museums Association "Museums and School Partnerships" prize. These photos show the students with the prize.

Case Study Continued.

From the beginning museum staff realized that this would be a different relationship. For it to be successful, staff would need to keep an open mind and be flexible. Rather than the museum "choosing" the methodology and content, staff listened to the teacher and his students and gave suggestions and choices when needed. The museum not only provided technical and physical resources critical to the films but also provided access and guidance in the use of primary research such as photographic archives, provision of ongoing access to key staff, other heritage experts, costumes, props, artefacts, and even a vessel, CSS Acadia.

What did this look like?

- Scheduling time for students to complete research and "location scouting" in early fall and filming in the late fall and winter.
- Giving access to the museum during non-public hours, and rescheduling due to nasty weather or unforeseen circumstances.
- Providing free admission to students and parents especially for research and scouting visits during weekends and after school.
- Coordinating with colleagues at other institutions such as Nova Scotia Archives or Canadian Museum of Immigration at Pier 21 for interviews, research, and film locations on behalf of the students.
- Providing a staff expert to be interviewed for a specific theme.
- Recognizing that it involves everyone from security guards, ship keeper, janitors, volunteers, collections staff, librarian, communication staff, interpreters and ensuring good communication between everyone.
- Drafting an abbreviated version of NSM's (long and complicated) film agreements and talk about why they are important to museum work.
- Willingness to adapt.

More than just a one-time visit, this project helped students realize that a museum is a fun place to learn new things. It was challenging at times but it was also fun for staff to be a part of these projects and witness the enthusiasm and focus that that got these kids passionate about learning about their heritage. Students also got a unique look at look at other museum operations. These projects have inspired students to seek career opportunities in the various heritage and communications fields.

MODULE SEVEN

Alternatives In the Museum: Community Service and Work Experience

As students enter the higher grades there is an increased emphasis on preparing them for life beyond school with community service and work experience. Museums can offer a variety of opportunities for these students. By building relationships with teachers and the students, these projects can start small and/or evolve into larger class projects or students becoming regular volunteers.

Community Service Projects

Different courses and grade levels require students to do community service hours. Museums can provide a variety of opportunities for students to complete these hours including helping with public programs, working with the public, and assisting with behind-the-scenes work. Although these projects typically start when teachers or parents approach the museum to see what opportunities are available, museums can be proactive in seeking-out these volunteers.

Working with teachers, museums might find opportunities for whole classes to be involved in community service projects at the museum. This could include having a class develop an activity or regularly help present school programs.

The grounds of Uniacke Estate Museum Park are iconic in Nova Scotia. After the hard 2015 winter a class of grade nine students from the local school came to museum as a class community service project to help restore the grounds and help get the site ready for the 2015 season.

Work Experience

As with interns, discussed in Module Six, high school work experience is an opportunity for both museum and student to benefit, often during school hours. Work experience students can complete a project for the museum while gaining practical work skills and a work reference. Museums can explore these opportunities with their local high school 02 (Options and Opportunities), co-op or IB (International Baccalaureate) programs

Students may first come to the museum looking for work experience, community service hour, or mentorship opportunities, but if they have a positive experience, they may stay on as permanent volunteers. This dedicated volunteer at the Museum of Natural History began as a co-op high school placement.

Alternatives In the Museum: Mentoring

MODULE SEVEN

Mentoring

As students prepare for their career they may wish to interview, job shadow or start a long-term mentorship with a museum professional. Museums should make sure local schools and guidance councilors are aware the museum is able to help students explore careers in a variety of different museum areas including interpretation, collections, visitor services (for example, tourism and retail), public relations, design, fabrication, and management. Additionally, museums can offer mentoring on the topics presented at their site, such as history, heritage skills, or specific sciences.

For sites that have female scientists or interpreters with a scientific background, formal or informal mentoring of young women and girls may help to break down barriers to science and provide valuable work experience. Providing students with advice and guidance regarding career choices can have a lifelong impact. Many programs already exist in Nova Scotia, like Techsploration and WISE, but simple one-on-one engagement with youth that reach out can be very effective and rewarding.

Museums offer many opportunities to see people working in non-traditional roles, for example women in science. Here a female naturalist at the Museum of Natural History mentors two female students in entomology using the museum's beehive. The students learn not only about bees, but also interact with a successful female scientist.

The Black Loyalist Heritage Center, in partnership with Hillcrest Academy, provides weekly djembe sessions in the school to a group of students in grades 4, 5, and 6. A teacher from the school helps students learn the rhythms and techniques of the djembe. The Black Loyalist Heritage Center supports the group with an end of year celebration. The Hillcrest Academy Djembe drummers were invited to perform on stage during the Grand Opening of the Black Loyalists Heritage Center in June 2015.

Although teachers, parents or students will approach museums directly to establish mentoring relationships there are also opportunities to provide special events for students to job shadow museum staff. Consider offering the museum as a host venue on days such as "Take Our Kids to Work" day for students who are unable to go to work with their parent.

Another type of formal mentorship is through special classes. Working with small groups of students over an extended period of time, museums can mentor as they develop specific skills. This type of mentorship program has been particularly successful in Nova Scotia when it comes to museums mentoring students in intangible heritage, such as language and music.

MODULE SEVEN

Alternatives In the Museum: Museum as Venue and Partner

As part of youth engagement, it is important for museums to be seen to be giving back to the youth in their community. Many times this can be done as part of regular programming however there are many examples in Nova Scotia of museums going above and beyond their call of duty in the service of schools and youth in their community.

The Highland Village Museum presented an exhibit in their church of posters created by students. Each poster represented an aspect of Nova Scotia Gaelic.

Museum as Venue

Schools are often looking for places beyond their school to host events. Consider some of the following ways a museum could invite a school to use the site, at little-to-no-cost:

- Offer exhibit space to display projects.
- Host special events such as award nights.
- Encourage classes to use the nature trails, even during the off-season if it is safe to do so.
- Invite clubs or groups to host meetings at the museum.
- Offer the museum grounds for class picnics.
- Invite graduating classes and proms to take photos on the grounds.

Lawrence House Museum staff have supported a bursary at the local high school. It has been awarded annually to a graduating student who excelled in high school history courses. Preference is given to students who plan to pursue studies in history, museum studies, or related discipline.

Providing Prizes and Sponsorship

Invite schools to approach the museum when they are looking for community prizes and sponsorship. Museums may not be able to provide financial support however there are many ways museums can support schools, including:

- Providing prizes for school fundraisers: free passes to the museum or items from the gift shop.
- Offering unique opportunities for silent auctions: behind-the scenes tours or curator for a day.
- Donating prizes for students: free admission to special events.
- Hosting fundraising events: wine and cheese or family days.

Earn A Badge

Other than on-site programs, how could your museum support schools? The last seven pages are examples that have been proven successful at NSM sites. How can you make your own success story?

1. Search online for ways museums are inviting schools to use their museum beyond the traditional school program. Find at least five examples.
2. Based on examples in the last six pages and the ones you found online, write a SMART Goal for a new and alternative way your museum could support schools using existing on-site resources.

What is a SMART Goal? Specific, Measurable, Attainable, Relevant and Time-Bound.

Alternatives In the School: In-School Programs

For various reasons some schools are unable to bring their classes to the museum. In order for museums to remain accessible to everyone, one option is to create in-class programming. Providing this option may lead to future on -site visits.

In-class programming can been thought of as a mini pop-up museum. Interpreters arrive at the school with programs that are either modified from the exiting school programs or programs created specifically to be delivered in a classroom. Either way, teachers must still justify in-school programs, just like field trips, by demonstrating they relate to specific curriculum outcomes (SCOs). In-school programs must therefore still address the five principles of successful school programs (Module Two) and should follow a similar program development process as outlined in Module Four.

In-School Programs also provide an opportunity for a more personal experience for the students. Teachers may wish to have wish to have less of a structured program and more of an opportunity for their class to interact with "an expert." This can be particularly useful when students are working on research projects. Students can prepare questions which the expert can help them answer and/or teach them research skills.

Nova Scotia Archives has actively sought out schools to which they can offer primary source document activities. Discussion with the teacher prior to the visit allows them to select a range of documents related directly to the community in which the school is located. They try to use many different types of documents including textual records, photographs, maps, film and audio clips and newspapers. Activities are currently aimed at Grade 5 social studies specific curriculum outcomes (SCOs) but they are able to adapt to address outcomes from other grades as well.

Mount Saint Vincent University pre-service teachers and the Maritime Museum of the Atlantic form an annual partnership in which the museum visits schools during the pre-service teacher's placements. Together they a teaching with objects program. The museum uses objects like this sailor's valentine to help students learn about the lives of sailors.

The Highland Village's in-class program is titled Sgadan's Buntàta. This program provides opportunities for students to see, and interact with craft demonstrations. The program relates to many aspects of Nova Scotia curriculum and interpreters provide an educational encounter with the tangible and intangible past.

MODULE SEVEN

Alternatives In the School: Heritage Fairs and Science Fairs

Some schools participate in heritage fairs and science fairs. The projects created by students in upper elementary, middle and high school can be compared to mini-museum exhibits. This makes museums an ideal partner. Participation in these fairs varies across the province and can include school, school board, provincial and national opportunities.

Heritage Fairs

In Nova Scotia, heritage fairs are for students in grades four to nine. Projects explore local and Canadian cultural heritage and allow students to showcase their research at a public event.

Learn about Heritage Fairs in Nova Scotia: www.facebook.com/novascotiaheritagefairs

Science Fairs

In Nova Scotia, science fairs are normally hosted in grades seven to twelve. Projects can relate to any branch of science (for example, geology, biology, physics or chemistry) and aim to solve a scientific question through experiment, research, and finally presentation of results.

Learn about Science Fairs in Nova Scotia: www.sciencefairinfo.ns.ca

How Museums Can Help

Heritage and science fairs are normally run by teachers and volunteers (parents and community members). There are many opportunities for museums to get involved.

- Offer to host a student workshop on how to do research or exhibits. For heritage fair this can include how to research with primary sources. For science fair this can include how to follow the scientific method.
- Invite students to use any on-site resources, including archives or libraries for research projects.
- Volunteer to judge at local and regional heritage and science fairs.
- Host student projects, either for judging and/or display winners or projects relevant to the museum projects.
- Provide prizes, such as passes to the museum or special experiences.
- Offer a workshop for students to participate in on the day of the fair while other students are being judged.

(Above) Nova Scotia Archives does a workshop on how to use primary sources as part of heritage fair research.
(Left) At the 2014 & 2015 Provincial Heritage Fair, museums and archives assisted by helping students with projects, acting as judges, sharing experience, and supplying prizes.

Alternatives In the School: Museum Kits and Loans

MODULE SEVEN

When museums are unable to visit schools and schools are unable to visit museums, loaning a "museum kit" can act as an alternative experience. Kit programs are popular with teachers as it allows them to supplement their classroom experience with tangible objects and resources from a reliable source.

What's in a Museum Kit?

In this digital age, teachers are excited about the opportunity to present "real things" for their students to interact with. Museums are able to create kits with museum quality reproductions, props, and/or working collection artifacts as well as museum approved resources such as maps, books, posters and images. Additionally, museums can provide lesson plans and suggested activities for how the teacher can use the kit in the classroom.

Logistics of Loaning Museum Kits

Kit programs might seem like a simple way to make the museum accessible when resources for in-person visits are limited. Museums kits however are still resource heavy programs. Museums should have a plan and budget to sustain a museum kit program before starting to develop kits. This includes ensuring there are staff available to arrange booking of the kits, plans to have kits shipped to and returned from teachers, checking kits back-in after use, and resources to replace and repair kit items that unavoidably will become lost or damaged.

Working with Partners

Due to the logistics of running a museum kit program, many museums have moved away from managing such programs on their own. Working with the Department of Education and Early Childhood Development some museums, including the Africville Museum and Parks Canada, have had success creating kits to be placed in the schools. Museums provide the content expertise and objects, such as reproductions or props, and the Department of Education and Early Childhood Development provides the lessons plans, curriculum links and training to teachers on using the kit. When working with the Department of Education, kits must be produced in high enough numbers so that one can be given to every school in Nova Scotia. Museums may wish to explore similar partnerships with their local school board. Kits placed in schools allows for increased access to the museum's materials without a regular strain on museum resources. They do however require a large, one-time commitment of resources. Partnering organizations may be able to help with resources.

The Nova Scotia Museum, and later Museum of Natural History, ran a provincial museum kit program from 1950 to 2010. The popular program was ended as it was no longer sustainable. Resources from the kits were distributed to every NSM site. Some sites have chosen to use these resources as part of their on-site programs while others, like the Museum of Industry, continue to offer the resources as loans to local teachers.

MODULE SEVEN

Alternatives Online: Online Lessons (Including Pre– and Post– Visit Activities)

Using a website or other online tools, museums can provide teachers with pre-and post-visit activities that enhance a museum school program. These are activities that the teacher can do with their class to build on the experience students will have or have had at a museum. Attending a museum school program is a major investment for teachers – both financially and in terms of the limited time they have to teach each subject. The more benefit students receive from a program, the more the investment is of value to teachers. That being said, teachers have many curriculum outcomes to address and pre-and post-visit activities often fall to the wayside as there is not always time to incorporate them into their classroom lesson plans.

Additionally, museum interpreters often do not fully know what makes for a good classroom activity. Just as developing museum school programs requires different skills from designing classroom activities, pre- and post-visit activities require different skills than those used for developing an interpretive program at a museum. One way museums can increase the usability of their pre- and post- visit activities is to develop them in partnership with a teacher. This helps to create resources that are relevant and reflective of classroom logistics. In addition to accessing current teachers, museums may wish to work with recently retired or pre-service teachers (B.Ed. students), as they often have more time to work in partnership with a museum.

Tips for Pre- and Post-Visit Activities:

- **Keep the activities short**, 15-30 minutes maximum, so that teachers can easily fit them into their day.
- **Build on the knowledge and skills the students develop during the program**. Suggestions include providing vocabulary, reading a story, or spending time interacting with a virtual exhibit or museum's social media feed.
- **Don't make "busy work."** Although many students find them fun, activities such as word searches, crosswords or colouring pages have limited educational value.
- Provide instructions for an **activity that used to be part of a museum school program, but may be better accomplished in a classroom setting**. This could include crafts or watching movies.
- Provide a **simple activity that students could do on the bus ride to or from the museum**, such as visual bingo or scavenger hunt. This is especially useful when students have a long bus ride.
- **Don't assume teachers will do the pre- and post- visit activity.**

A good post-visit activity encourages students to take the information they learned during a program and apply it to their lives. Students will look at farms that they see as they drive along Nova Scotia's roads differently after a visit to Ross Farm Museum.

Alternatives Online: Virtual Exhibits

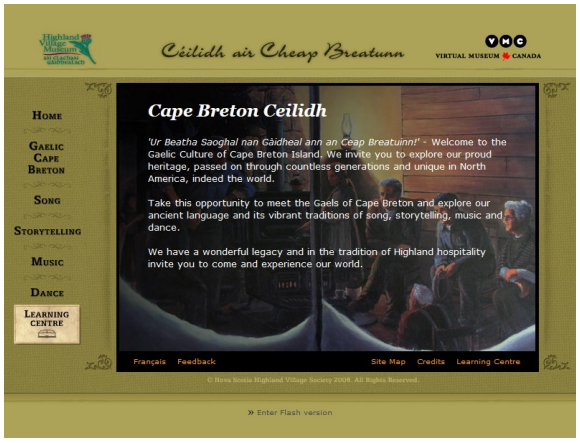
MODULE SEVEN

The traditional way of measuring museum attendance was to count the number of admissions. However, internet access lends an entirely new avenue for museum attendance. By interpreting a collection of specimens/artifacts and making it available online, a whole new audience can be reached. This "virtual attendance" creates an engagement opportunity for those unable to visit the museum site and extends its reach. These virtual exhibits are an excellent way of showcasing the resources available to visiting classes and could be used to create opportunities for pre- and post- visit activities.

Virtual exhibits can replace or supplement outreach methods traditionally used by museums, including in-school programs and museum kits. Online experiences are often an effective use of resources as they are able to be used by more schools, including those a great distance from the museum, and can be more sustainable to maintain with a museum's existing resources.

Virtual exhibits can be supplemented with lesson plans, activities, links to curriculum and opportunities for students to learn more through a "For Teachers" section.

Partnering with other museums or education organizations is an excellent way to create a vibrant virtual exhibit. Partnering organizations can bring resources that museums might not easily have access to, including diverse perspectives, access to different mediums such as video, and interactive exhibit elements.



Three virtual exhibits created by or in partnership with Nova Scotia Museum sites. Each of these exhibits can be used in schools to gain access to museums, collections or stories that teachers and students might otherwise not be able to reach.

(Top Left) "Cape Breton Ceilidh" a Virtual Museum of Canada exhibit created by the Nova Scotia Highland Village Society.

(Right Top) "Nova Scotia Made, Used, Found" a virtual exhibit of the Nova Scotia Museum Collection created by the NSM.

(Right Bottom) "Black Halifax: Stories from Here" a webpage in which the Maritime Museum of the Atlantic was one of many partners.

MODULE SEVEN

Alternatives Online: Social Media

A great way to start and build relationships with teachers and schools is social media, especially as it is a place where many teachers are already. The benefit of maintaining a social media presence goes beyond advertising school programs. If a consistent and engaging strategy is used, a museum can reach a wide audience thereby opening up dialogues between learners and museum experts while providing interpretation.

Remember that social media is an official means of communication. Users are speaking for their site and therefore should avoid any personal statements or beliefs as well as statements that go against site mission or mandate. Nova Scotia Museum sites should follow the Province of Nova Scotia's Social Media Policy (www.novascotia.ca/treasuryboard/manuals/PDF/300/30609-02.pdf).

Using Social Media to Raise Awareness about What a Museum Can Offer Schools

By using popular social media platforms, a site can quickly get information into the right hands. Most social media tools have a way to target specific audiences, making it even more likely that it will be discover by teachers. Facebook has open groups for teacher's unions, Twitter posts with strategic use of hashtags can provide updates to interested parties, and an Instagram account can be a great way of sharing images and videos of programs in action.

To widen following and provide a better chance of teachers coming across program information, museums need to provide a consistent social media presence that extends beyond advertising school programs. Dedicate some time each day to posting interesting information in order to increase following. Keep it light and positive and do not engage users who act inappropriately or overtly combative. ("Don't feed the trolls!")

Examples of Daily Social Media Posts:

- **"Behind the Scenes"** information on museum operations.
- **Interesting objects** from the collection.
- **Current events and research** related to the museum or its main subject matter (history, archaeology, biodiversity, etc.)
- **Upcoming museum or community events**.
- **Photos or videos of successful past events**.
- **Interaction with other social media users**. Answer questions promptly, engage in discussions, and interact in a professional but conversational tone (be personable, rather than official).
- **Links to your school programs webpage**. This outline should follow the template in Appendix E, including a brief summary of the subject, curriculum outcomes, and activities.

Need an idea for a daily social media post You can never go wrong a picture of a museum cat. Check out this Instagram post from Ross Farm Museum:

Alternatives Online: Continued... Social Media

The Nova Scotia Museum is on a variety of social media platforms. Check them out:

Facebook: www.facebook.com/novascotiamuseum

Twitter: twitter.com/ns_museum

YouTube: www.youtube.com/user/NovaScotiaMuseum

Flickr: www.flickr.com/photos/novascotiamuseum/

@AskACurator Day is in September and #MuseumWeek is in March. These are both international museum events on twitter that museums can participate in, either through their own twitter account or through the @NS_Museum account.

#NSBotany was a series of twitter chats which allowed the public to "ask an expert." Museums con host this type of event, targeting teachers and schools.

Social Media within the Nova Scotia Museum

Nova Scotia Museum sites do not need to do social media alone. All sites, especially seasonal sites, should consider submitting content to be used on the Nova Scotia Museum social media channels. This gives museums access to much larger audiences than they can easily build on their own.

Using Social Media to Reach Schools That Can't Visit

The advantage of social media extends beyond its ability to attract potential class visits. It can also be a powerful tool to engage those schools who are too far away for a field trip. Although a full, hands-on program can't be delivered in the same way as a physical visit to the museum, there are strategies to offer these groups a program remotely. This kind of engagement can be approached in a number of ways. Here are just a few ideas:

- Create activities based on the museum's virtual exhibits.
- Have an interpreter or curator use Skype or Google Hangouts to video conference with the class for a demonstration or discussion.
- Use Twitter to create an 'Ask an Expert' day and respond to questions from students. This is a great way to engage multiple classes and schools at once.
- Create an Instagram account to act as an online exhibit that a class can build themselves from objects that students collect, photograph and interpret. Answer questions about museum collections and provide advice about how to write labels. Have classes share their "online exhibits" with each other.
- Live tweet public and special events so that schools and homeschool groups can follow along from their classroom.
- Create an age appropriate weekly/biweekly blog that has subject matter aligning with curriculum outcomes and the site's IMP mandate. Encourage classes to brainstorm and share comments and questions about each blog.

Remember when planning to use social media to deliver a program or experience to a school, check with the school to see which social media platforms the school can access. Many schools have firewalls that block specific websites, which can include Facebook and Twitter.

MODULE SEVEN

Alternatives In the Community: Professional Development for Teachers

The skills and experiences that museums can offer to students are also the same skills and experiences that teachers are looking for. They are always looking for ways to enhance their in-class experience. Museums can help teachers with this by offering professional development opportunities that "teach the teacher." This helps to establish relationships with teachers and encourages them bring the museum's resources to the classroom even if they can't bring the class to the museum.

The Maritime Museum of the Atlantic has fostered a successful partnership with the Bachelor of Education program at Mount Saint Vincent University. Working with professors, museum staff have conducted a teaching with objects seminar to give the university students some insight into using artifacts. The artifacts range from antique ice skates and snow shoes for oxen to reproductions of items from the shipwreck treasures exhibit.

Workshops for Pre-Service Teachers

Nova Scotia has several universities that offer Bachelor of Education degrees. Working with the students in these programs, known as pre-service teachers, allows museums to ensure teachers starting their career are familiar with how they can use museum resources. Museums should work with the Bachelor of Education faculties to find ways to offer these workshops.

Professional Development for Current Teachers

Teachers regularly participate in professional development. There are several different opportunities for museums become involved.

- **Provincial Teachers' Conferences:** Every October teachers in Nova Scotia attend a one-day conference. There are multiple conferences offered across the province that day, each relating to a different subject and organized by a different teacher's association. Museums have traditionally participated in the AST (Atlantic Science Teachers) and SSTA (Social Studies Teachers Association) conferences however there are also opportunities to participate in conferences on teaching art, physical education, and literacy to name just a few. There are two primary ways museums can participate. Museums may wish to set up a display in the exhibitor's hall where they can speak with teachers individually during breaks. Having an exhibitor's display will result in increased awareness and promote the site's products. Museums may also choose to offer a workshop to teachers during the conference. Workshops allow museums to create more interactive environment in which to build relationships with teachers, rather than just market programs.

The exhibitor's hall at a provincial teachers' conference is a great way to raise awareness. Although it may not immediately result in program bookings, it does introduce teachers to the different ways museums can support them. Here Ross Farm (above) and Haliburton House (below) participate in the Social Studies Teachers Association's conference.

Alternatives In the Community: Continued… Professional Development for Teachers

Professional development for teachers can include both curatorial and interpretation staff. Pictured above are two workshops run for the Atlantic Science Teacher's conference. The workshops gave teachers access to both curators (expert on the workshop content) and interpreters (experts on engaging students.)

The IMP suggests that museums work with teachers by:

- "Tie-in with university education programs to promote educators as interpreters – teach the teachers!"
- "Be present at teachers' conferences (for example, perform skill based exhibit and programming talks; market museums for PD days)."
- "Identify curriculum links for all levels of education." (IMP p. 100)

- **Local In-Service Days:** School boards have local in-service days. Some museums have had success working with principals or school boards to offer workshops to teachers on these days. Although they can be more difficult to arrange than participation in the provincial conference, they do provide a more meaningful opportunity to build relationships with local teachers, especially in smaller communities.

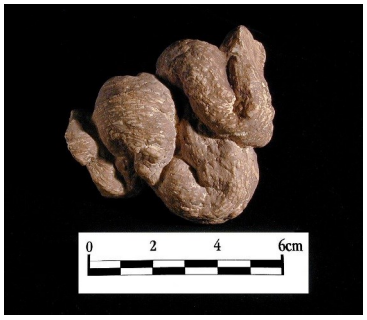
- **Hosting Workshops by Others:** There are many organizations who, like museums, can offer professional development to teachers but don't always have a venue in which to host their workshop. This includes partners from the Department of Education and Early Childhood Development or special interest groups, like Project Wet. Museums can partner with these organizations by hosting the workshop.

- **Support as Needed:** Just being available to answer teacher's questions, provide resources and discuss projects can have a positive impact. Museums can use social media or email to encourage teachers to contact them directly.

- **Special Events:** Invite teachers to be part of the museum by inviting them to special events, such as exhibit openings and public programs. Also consider offering special events just for teachers such as behind-the-scenes tours or coffee with a curator.

Working with Hospitals

Local children's hospitals, such as the IWK in Halifax, and some pediatric wards in local hospitals have teachers on staff to provide educational programming to short- and long-term patients. These teachers collaborate with the patient's community school and facilitate educational outings in the community as appropriate. Museums may wish to reach out to children's hospitals to provide programming or offer to provide museums as a venue for teachers to lead their own programming.



Museums can use working collections to bring museums to students in hospitals. This can create positive memories during stressful time. Imagine a student's reaction to getting to hold this coprolite (fossilized poop).

MODULE SEVEN

Alternatives In the Community: Participation in Special Day Community Events

Community organizations occasionally host special events and invite schools to attend the event. This provides an opportunity for museums to make contact with both the school and their community at the same time.

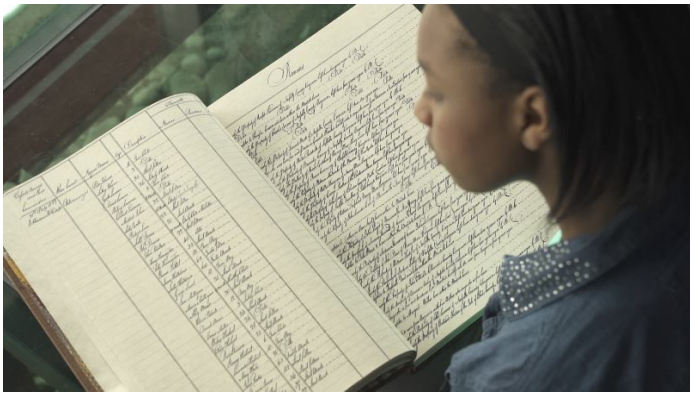
As there are often multiple groups participating in these events, students will often only have a few minutes to interact with the museum. Sites may choose to bring a component of a school or public program, marketing materials, and/or materials created for the specific event.

Participation in these events gives schools and teachers a taste of what they can expect if they were to visit the museum for a program. It is important that what they experience reflects the interpretation available at the site. Therefore, it is still good to the five key principles of successful school programs, as introduced in Module Two.

The following pages contain a list of possible special days museums could find opportunities to participate in.

The Maritime Museum of the Atlantic hosts World Oceans Day in June. This free day-long event brings together over 30 organizations, including the Museum of Natural History and Fisheries Museum of the Atlantic, with exhibits and displays. The event annually attracts over a thousand visitors, including school groups.

The Museum of Natural History has participated in events such as Kids in the Forest, Bio Blitz, and Science Literacy Week. These events are organized by community partners like the NS Department of Natural Resources, Saint Mary's University, and Ducks Unlimited. The museum's participation in these one-day events has not only given them opportunities to present components of their school program, it has also created partnerships for on-site program partnerships.



The official opening for the Black Loyalists Heritage Center in 2015 was a true community event. Not only was the community invited to participate on the big day, but the center included the local school by both having a special reading at the school and inviting students to the opening.

Alternatives In the Community: List of Special Days

MODULE SEVEN

The following list of possible special days was compiled for the Nova Scotia Library and reviewed by the Archives, Museums and Libraries Education Sub-Committee. It is by no means exhaustive.

January:

- New Year - January 1: New beginnings, Resolutions
- World Braille Day - January 4: www.brailleliteracycanada.ca
- Family Literacy Day - January 27: www.ns.literacy.ca/fld.php

February:

- **African Heritage Month:** ansa.novascotia.ca/African-Heritage-Month
- Random Acts of Kindness Week - 2nd Week of February: www.randomactsofkindness.org
- International Safer Internet Day - February 10: www.saferinternetday.org/web/canada
- World Radio Day - February 13: www.diamundialradio.org
- National Flag of Canada Day - February 15: canada.pch.gc.ca/eng/1449158599459
- Pink Shirt Day - February 25: www.erasebullying.ca/resources/resources-pink-shirt.php
- Nova Scotia Heritage Day - 3rd Monday in February: heritageday.novascotia.ca

March:

- **March Break -** Dates Change Annually. Check your local school board.
- International Women's Day - March 8: www.internationalwomensday.com
- International Francophonie Day - March 20: www.francophonie.org/Welcome-to-the-International.html
- International Day for the Elimination of Racism - March 21: www.un.org/en/events/racialdiscriminationday
- World Theatre Day - March 27: www.world-theatre-day.org
- #MuseumWeek on Twitter - Mid-March: www.museumweek2016.org

April:

- **School Library Month**: www.ala.org/aasl/slm
- **Autism Awareness Month:** autismcanada.org
- National Volunteer Week - Mid-April: volunteer.ca
- International Children's Book Day - on or around April 2: www.ibby.org/1494.0.html
- World Health Day - April 7: www.who.int/campaigns/world-health-day/2015/en/
- Earth Day - April 22: earthday.ca
- Canada Book Day/World Book Day - April 23: www.un.org/en/events/bookday
- National Canadian Film Day - April 29: canadianfilmday.ca
- International Dance Day - April 29: www.international-dance-day.org
- Viewfinders Film Festival - Late April: http://www.atlanticfilm.com/viewfinders

Although schools may be out, March Break is one of the busiest weeks of the year for many museums. Here students participate in art projects at the Fisheries Museum of the Atlantic. This is a great chance to show students and teachers visiting with their families that museums are a great place to have fun while learning.

MODULE SEVEN

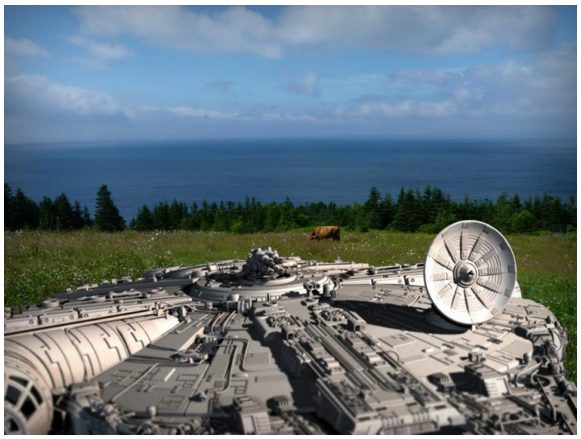
Alternatives In the Community: Continued… List of Special Days

May:

- **Asian Heritage Month**: www.cic.gc.ca/english/multiculturalism/asian/index.asp
- **Gaelic Awareness Month**: www.gaelic.ca
- **Speech & Hearing Awareness Month**: www.chs.ca/news/may-speech-and-hearing-awareness-month
- Halifax Youth Week - May 1-7: www.halifax.ca/youth
  (Both National Youth Week and National Youth Arts Week take place during this time.)
- National Mental Health Week - May 1st week: mentalhealthweek.cmha.ca
- Aboriginal Awareness Week - 4 days that follow Victoria Day: www.pc.gc.ca/eng/agen/aa/saa-aas.aspx
- Free Comic Book Day (first Saturday in May): www.freecomicbookday.com
- Music Monday - (first Monday of May): www.musicmonday.ca/aboutus
- World Press Freedom Day - May 3: www.unesco.org/new/en/world-press-freedom-day
- Star Wars Day - May 4: www.starwars.com/may-the-4th
- Nova Scotia Walk Day - Second Wednesday in May: walkaboutns.ca
- International Day Against Homophobia, Biphobia and Transphobia - May 17: dayagainsthomophobia.org
- International Museum Day - May 18: icom.museum/activities/international-museum-day

June:

- **National Aboriginal History Month**: www.aadnc-aandc.gc.ca/eng/1100100013778/1100100013779
- Summer Reading Program Kick Off at Nova Scotia Libraries
- Nova Scotia Bike Week - Early June: www.halifax.ca/bikeweek
- World Environment Day - June 5: www.unep.org/wed
- International Archives Day—June 9: www.internationalarchivesday.org
- World Oceans Day – June 8: www.worldoceansday.org
- World Refugee Day – June 20: www.un.org/en/events/refugeeday
- National Aboriginal Day – June 21: www.aadnc-aandc.gc.ca/eng/1100100013248/1100100013249
- Canadian Multiculturalism Day - June 27: canada.pch.gc.ca/eng/1462818531019
- International Hug a Museum Worker Day—June 29: hugamuseumworker.org



Participation doesn't always need to be complicated. Here Nova Scotia Museum and Nova Scotia Archives get into the spirt of May the Fourth—Star Wars Day using Photoshop and social media.

Alternatives In the Community: Continued… List of Special Days

July:

- Canada Day – July 1: canadaday.gc.ca/eng/1399898650690
- Halifax Pride Festival - Mid-July: halifaxpride.com
- Canada History Week – July 1-7: canada.pch.gc.ca/eng/1455910731459/1455910810005

August:

- International Day of the World's Indigenous People – Aug. 9: www.unesco.org/new/en/indigenous-people-day
- International Youth Day – August 12: www.un.org/en/events/youthday
- National Acadian Day – August 15: acadien.novascotia.ca/en/celebrations

September:

- **Back to School**—Dates Change Annually
- **Library Card Sign-Up Month**: www.ala.org/conferencesevents/celebrationweeks/card
- International Day of Democracy – September 15: www.un.org/en/events/democracyday
- @AskACurator Day on Twitter—September 16: twitter.com/askacurator
- International Day of Peace – September 21: www.un.org/en/events/peaceday
- Halifax Book and Magazine Festival – Mid-September: www.thewordonthestreet.ca/wots/halifax
- Meet Your Farmer Day—Mid-September: www.meetyourfarmer.ca/openfarmday
- Science Literacy Week—Late-September: scienceliteracy.ca

October:

- **Mi'kmaq History Month:** mikmaqhistorymonth.com
- **Women's History Month:** www.swc-cfc.gc.ca/commemoration/whm-mhf/index-en.html
- Earth Science Week: www.earthsciweek.org/about-esw
- Treaty Day - October 1: www.unsi.ns.ca/treaty-day
- World Teachers' Day - October 5: www.unesco.org/new/en/unesco/events/prizes-and-celebrations/celebrations/international-days/world-teachersday-2014
- World Mental Health Day – October 10: www.who.int/mental_health/world-mental-health-day/en/
- International Day of the Girl – October 11: www.un.org/en/events/girlchild
- Nocturne Halifax - Mid-October: nocturnehalifax.ca
- World Food Day – October 16: www.worldfooddaycanada.ca
- International Day for the Eradication of Poverty – October 17: www.un.org/en/events/povertyday
- Persons Day – October 18: canadianwomen.org/node/1955
- Nova Scotia Teacher Conference Day (late Friday in October) - www.nstu.ca

Community events like Nocturne engage students and teachers who might not normally visit museums. Here a family examines an exhibit based on lobster tin labels at the Nova Scotia Archives during Nocturne.

MODULE SEVEN

Alternatives In the Community: Continued… List of Special Days

November:

- Media Literacy Week – November 2-6, 2015: www.medialiteracyweek.ca
- Veteran's Week – Week of Nov. 11: www.veterans.gc.ca/eng/remembrance/get-involved/remembrance-day
- Remembrance Day – November 11: www.veterans.gc.ca/eng/remembrance/get-involved/remembrance-day
- Canadian Museums Day—Mid-November: www.museums.ca/site/cmd
- National Child Day – November 20: www.phac-aspc.gc.ca/ncd-jne/index-eng.php
- International Day for the Elimination of Violence Against Women – Nov 25: www.un.org/en/events/endviolenceday/
- International Games Day – (third Saturday of November): http://igd.ala.org

December:

- World Aids Day – December 1: www.worldaidsday.org
- International Day of Persons with Disabilities – December 3: www.unesco.org/new/en/unesco/events/prizes-and-celebrations/celebrations/international-day-of-persons-with-disabilities/
- National Day of Remembrance and Action on Violence Against Women – December 6: www.swc-cfc.gc.ca/commemoration/vaw-vff/remembrance-commemoration-en.html
- Human Rights Day – December 10: www.un.org/en/events/humanrightsday

Earn A Badge

How else can you use your existing school program in your community?

1. Look at the list of "special days" on the last few pages. Add any special days relevant to your museum's theme or days important to your community.
2. Identify at least one day on your updated list which matches the themes and outcomes of your school program
3. Identify a community event or venue for your chosen day where school aged students will be present.
4. Write a SMART goal identifying how you could reuse your school program on your decided upon special day.

What is a SMART Goal? Specific, Measurable, Attainable, Relevant and Time-Bound.

"Badges" for Training Exercises

Appendix A Contains:

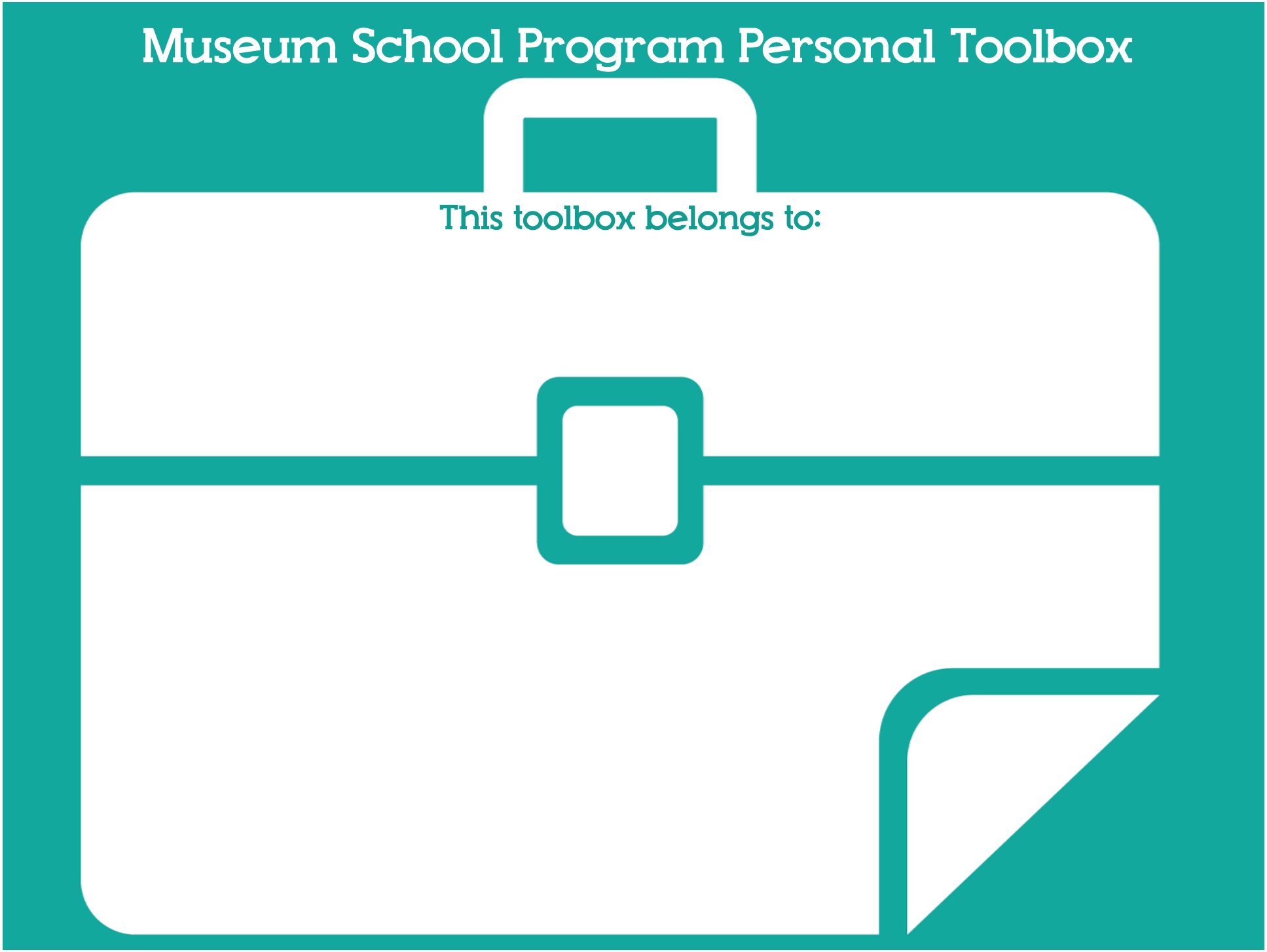
- Certificate to place badges on
- Badges to be earned

Module One introduces the concept of earning badges for training exercises. Each module has at least one opportunity to complete a training exercise, which upon completion, results in earning a badge. Badges can be placed on the certificate provided in this appendix.

Each training exercise is designed to take between 20-30 minutes. Upon completion, the participant can earn with a badge. Although there is no marking system it is encouraged before "earning" the badge that they share their completed training exercise with a co-worker and discuss how they could improve their completed exercise.

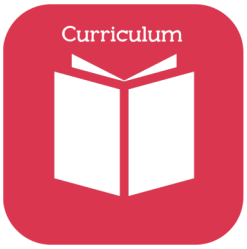
A Note on Awarding Badges: The badges are designed that they can be self-awarded. This will be particularly useful for lead interpreters and/or site managers. In cases where lead interpreters and/or site managers are using the toolbox as a training tool with their staff, they may choose to award badges rather than have staff self-monitor/award.

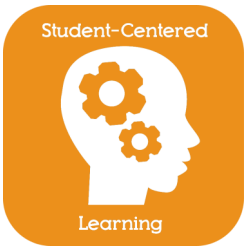
Museum School Program Personal Toolbox



This toolbox belongs to:

"Badges"
to be printed on sticker paper





Pull-Out Pages

Appendix B Contains:

- Easy Steps to Engaged Learning
- Five Key Principles of Successful Museum School Programs
- Periodic Table of Play
- Interpreter as Museum Educator

There are several pages throughout the document marked as pull-outs. These pages are provided in large format in this appendix so that they can be posed in staff areas where they will act as a reminder during program development and/or presentation.

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

Easy Steps to Engaged Learning

1. **Ensure Physical Needs are Met**
   Point out washroom locations, provide appropriate seating and a comfortable environment. Allow time to eat snacks.

2. **Be Welcoming.**
   Welcome the group and introduce museum staff and volunteers who will be facilitating the program. Establish expectations. Have and know emergency plans.

3. **Use Participatory Learning.**
   Allow students to choose to participate in a way they are comfortable with. This can include posing and answering questions verbally, by writing, drawing, nodding, acting, etc.

4. **Be Prepared to Facilitate.**
   Set-up before the group arrives. Know your subject material. Allow time for activity, discovery, questions, discussion, and reflection. Do not just talk at your audience.

5. **Empower Students to take Ownership of their Learning.**
   Let students have choices, be creative, think critically and not focus on getting the "right" answer. Relate material to students' lives.

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

Five Key Principles of Successful Museum School Programs

Programs are Address Specific Curriculum Outcomes.

Put curriculum first. Subject matter and activities are chosen based on the curriculum.

Activities are Object-Based.

Objects are unique to a museum setting. Programs are different than classroom experiences through interaction with objects.

"Good Questions" are Asked.

Interpreters ask questions that allow students to discover answers for themselves and think critically about what they learn.

Learning is Student-Centered.

Museums provide students with the tools, context, and activities, but allow the students to take ownership of their learning.

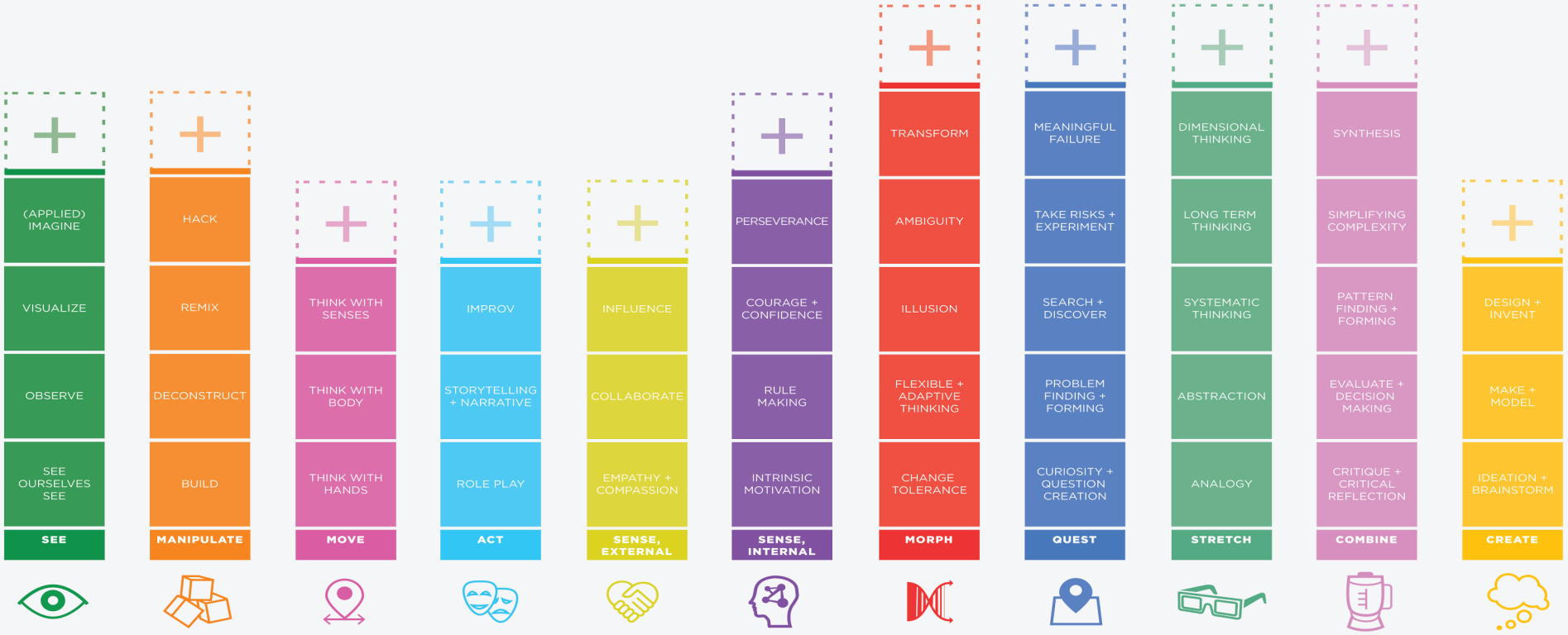
Museums and Program Partners Work Together.

Museums build relationships with teacher? and community groups in order to meet specific needs.

The Periodic Table of Play ™

Play is the greatest natural resource in a creative economy. Without play, there is no creativity. Without creativity, there is no innovation. Our future lies in promoting play as our power.

[+] Like the traditional Periodic Table of Elements, this list is not fixed. As humans push toward the future, there will always be new elements to add. I encourage you to add your own.



Poster Design by Troy Whittington

TOOLBOX FOR MUSEUM SCHOOL PROGRAMS

Museum Interpreter as Host, Teacher, and Knowledge Sharer

Uses appropriate vocabulary. Doesn't yell but rather projects voice.

Asks "good questions."

Includes appropriate humour.

Gives an orientation to the museum, program, and activities.

Facilitates dialogue by asking students for opinions, reactions, and interpretations.

Provides clear directions and instructions.

Works as a partner with teachers & stakeholders.

Is well prepared: knows the focus of the program and the sequence of activities.

Demonstrates enthusiasm and excitement via verbal and body behaviour.

Is flexible and able to modify their program to be inclusive of students of all abilities and needs.

Builds bridges between objects and information.

Understands how the program supports the IMP and curriculum.

Maintains good eye contact with students.

Provides review and closure at the end of a program which emphasizes the program theme.

Offers a warm greeting and a welcoming learning environment.

Has tricks up their sleeve for positive group management.

Good time management: starts and ends on time, adapting as necessary.

Creates a student-centered supportive learning environment that encourages questioning.

Relates to the student experience when possible.

In an accident or health emergency:

- Notifies and assists teachers. Remembers the teacher is ultimately responsible for the student's safety.
- Follows incident reporting procedures for their site.
- Knows and follows fire and emergency procedures.

Appendix C

Museum School Program Development Template

Appendix C Contains:

- Template for Program Overview Page
- Template for Program Research Page
- Template for Activity Description Page

The Museum School Program Development template is used throughout Module Four: Program Development Strategies. It is broken into three pages: program overview, which addresses the logistics and outcomes of program development; program research, which is the foundation of the program; and an activity description page for each activity in the program.

The template is also available as a Microsoft Word document so that it can be completed on your own computer. Download the template from the Nova Scotia Museum's Toolbox for Museum School Programs Website. (museum.novascotia.ca/toolbox).

Museum School Program Development Template

Program Overview Page

"Program Title"

Program Highlights (Description for Marketing Purposes):

Content and Outcomes

Overarching Objective: *(1 sentence containing 1 idea that describes what the program is about.)*	
Curriculum Outcomes addressed by this program:	
IMP Content Area:	

Basic Logistics

Grade:			
Program Created by:		**Date of Creation:**	
Program Updated by:		**Date of Update:**	
Development Partners:			
Program Availability:			

Program Structure

Program Length:			
Maximum Group Size:			
Student Groupings:			
Facilitation – # of Staff:		**# of Volunteers:**	

Program Outline

Activity	Location	Time	Featured Objects
Introduction			
Activity			
Activity			
Activity			
Conclusion			

Museum School Program Development Template

Program Research Page

“Program Title”

Research

Background Information:	
Sources and References:	

Museum School Program Development Template

Activity Description Page

"Program Title"

Activity: "Activity Title"

Activity Highlights (Short Description for Marketing Purposes):

Activity Logistics

Location	Time	Materials
Purpose of Activity:		
Curriculum Outcomes addressed by this activity:		
Set-Up:		

Step-by-Step Procedure

Timing	Instruction	Possible Script

Additional Information

Possible Discussion Questions for Extension:	
Suggestions for Modifications:	
Safety Considerations:	

Appendix D

Curriculum Outcomes and How They Relates to NS's Interpretive Master Plan (2016)

Appendix D Contains:

- 21st Century Competencies
- Curriculum to IMP Chart

The NSM site name abbreviations as used in this appendix are as follows:

BGM: Balmoral Grist Mill Museum
BLHC: Black Loyalists Heritage Centre
BWM: Barrington Woolen Mill Museum
CHM: Cossit House Museum
DS: The Dory Shop Museum
FLM: Fisherman's Life Museum
FMA: Fisheries Museum of the Atlantic
FFM: Firefighters' Museum
FGM: Fundy Geological Museum
HH: Haliburton House
HV: Highland Village Museum /*An Clachan Càidhealach*
LHM: Lawrence House Museum
MMA: Maritime Museum of the Atlantic
MHM: McCulloch House Museum
MOI: Museum of Industry
MNH: Museum of Natural History
NH: North Hills Museum
OMH: Old Meeting House Museum
SPH: Perkins House Museum
PHM: Prescott House Museum
RTH: Ross-Thomson House and Store
RFM: Ross Farm Museum
SHM: Shand House Museum
SV: Sherbrooke Village
SSM: Sutherland Steam Mill Museum
UEMP: Uniacke Estate Museum Park
AV: Acadian Village/ *Le Village historique acadien de la Nouvelle-Écosse*
WCM: Wile Carding Mill Museum

This chart simplifies the NS Department of Education and Early Childhood Development's Curriculum and highlights curriculum outcomes that relate to the IMP. This chart is by no means an exhaustive list of all possible ways the NS Curriculum relates to the IMP; rather it focuses on selected units which have the strongest and most obvious connections. The curriculum outcomes chosen are also that would lend themselves easily to experiences impossible to replicate in the classroom but easy to produce in a museum setting.

This appendix will be updated annually to reflect the current curriculum. Updates will be released on the Nova Scotia Museum's Toolbox for Museum School Programs Website. (museum.novascotia.ca/toolbox).

The next page explains the 21st century competencies introduced in Module Two: 21st Century Skills and Competencies in greater detail as well as the codes used in this appendix. For more information on working with curriculum see Module Two: Programs Address Specific Curriculum Outcome.

Appendix D

21st Century Competencies

In addition to Essential Learning Outcomes, outcome indicators also include 21st century competencies (see page 22). The following codes are used by the Department of Education and Early Childhood Development are used for these competencies:

- **CZ = Citizenship**: Learners are expected to contribute to the quality and sustainability of their environment, communities, and society. They analyze cultural, economic, environmental, and social issues, make decisions, judgment, solve problems, and act a stewards in a local national, and global context.

- **PCD = Personal-Career Development**: Learners are expected to become self-aware and self-directed individuals who set and pursue goals. They understand and appreciate how culture contributes to work and personal life roles. They make thoughtful decisions regarding healthy and wellness, and career pathways.

- **COM = Communication**: Learners are expected to interpret and express themselves effectively through a variety of media. They participate in critical dialogue, listen, read, view, and create for information, enrichment, and enjoyment.

- **CI = Creativity and Innovation**: Learners are expected to demonstrate openness to new experiences, engage in creative processes, to make unexpected connections, and to generate new and dynamic ideas, techniques, and products. They value aesthetic expression, and appreciate the create and innovative work of others.

- **CT = Critical Thinking**: Learners are expected to analyze and evaluate evidence, arguments, and ideas using various types of reasoning and systems thinking to inquire,, make decisions, and solve problems. They reflect critically on thinking processes.

- **TF = Technological Fluency**: Learners are expected to use and apply technology to collaborate, communicate, create, innovate, and solve problems. They use technology in a legal, safe, and ethically responsible manner to support and enhance learning.

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Primary Science • Life Science: Explore Living Things	Outcome 2: Students will explore different living things. Indicators: • ask simple questions about different living things (CT, CI, COM, TF, CZ) • observe and describe living things in familiar places (e.g., outside) (CT, CI, COM, TF) • use equipment properly to investigate living things found in the community (CT, CI, COM)	**A.5 Biodiversity** A.4.1 Life Forms and Ecosystems A.4.2 Species Diversity A.4.3 Ecosystem Diversity **B.1 Vegetation** B.1.1 Diversity of Plant Life **B.2 Birds, Fish, and Animals** B.2.1 Birds and Fish […]Habitats B.2.2 Diversity of Birds and Fish B.2.3 Mammal […] Habitats B.2.4 Diversity of Mammals B.2.4 Amphibians and Reptiles	BGM BLHC BWM FLM FGM FMA HH HV LHM MHM MNH PHM RTH RFM SV UEMP AV
Primary Social Studies • Diversity of the local people, including the Acadians, African Nova Scotians, Gaels, Mi'kmaq and other cultures	Outcome 1: Students will recognize that people (local) have varied traditions, historical roots, rituals, and celebrations, including Acadians, African Nova Scotians, Gaels, Mi'kmaq, including Treaty Education, and additional diverse cultures Indicators: • begin to ask questions about people and traditions, historical roots, rituals, and celebrations (COM, CT, PCD) • describe and discuss varied traditions, historical roots, rituals, and celebrations, including Acadian, African Nova Scotian, Gaels, Mi'kmaq, including Treaty Education, and diverse cultural groups in the province (COM, CT, PCD) • create positive images (both print and digital) to convey perceptions/ideas/ learnings of peoples and traditions, historical roots, rituals, and celebrations (COM, CT, PDC, CI, TF)	**B.3 Exploring & Settling the Unknown** B.3.1 Early Aboriginal Settlement B.3.2 Mi'kmaq Exploration & Settlement B.3.3 European Explorers: Myth/Reality B.3.4 European/Mi'kmaq Contact **B.4 Migration, Outmigration, Exodus** B.4.1 French Colonization: Acadia B.4.2 French-English "Borderland" B.4.3 Expulsion & Return of Acadians B.4.6 Black Experience B.4.7 Early 19th C. Immigration B.4.8 Late 19th C. Immigration B.4.10 20th & 21st C. Immigration **D.1 Peoples of Nova Scotia** D.1.1 Indigenous D.1.2 European D.1.3 South & Central Amer./Caribbean D.1.4 African D.1.6 Asian/Middle Eastern D.1.7 Marginalized Groups **E.4 Cultural Expression** E.4.1 Architecture E.4.2 Landscapes/Gardens E.4.3 Folklore and Celebrations E.4.4 Media (i.e.: radio, TV, film, etc.) E.4.5 Literature/Poetry/Drama E.4.6 Music E.4.7 Fine/Folk Art E.4.8 Cuisine as Cultural Expression E.4.9 Clothing and Costume	BGM BLHC BWM CHM DS FLM FMA FFM FGM HH HV LHM MMA MHM MOI MNH NH OHM SPH PHM RTH RFM SHM SV SSM UEMP AV WCM

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 1 Science • Life Science: Needs and Characteristics of Living Things	Outcome 2: Students will investigate needs and characteristics of different living things, including humans. Indicators: • ask questions about the needs of living things (CT, CI, COM, PCD, CZ) • investigate different living things to determine their characteristics (CT, CI, COM, CZ) • Compare, through explorations, the needs of different living things (CT, CI, COM, PCD, CZ) • recognize and explain that humans and other living things depend on their environment (CT, CI, COM, PCD, CZ)	**A.5 Biodiversity** A.4.1 Life Forms and Ecosystems A.4.2 Species Diversity A.4.3 Ecosystem Diversity **B.1 Vegetation** B.1.1 Diversity of Plant Life **B.2 Birds, Fish, and Animals** B.2.1 Birds and Fish […]Habitats B.2.2 Diversity of Birds and Fish B.2.3 Mammal […] Habitats B.2.4 Diversity of Mammals B.2.4 Amphibians and Reptiles	BGM BLHC BWM FLM FGM FMA HH HV LHM MHM MNH PHM RTH RFM SV UEMP AV
Grade 1 Social Studies • Diversity of Nova Scotia's people, including Acadians, African Nova Scotians, Gaels, Mi'kmaq and additional diverse cultural groups	Outcome 1: Students will demonstrate an understanding of the diversity of cultural groups, including Acadians, African Nova Scotians, Gaels, Mi'kmaq, including Treaty Education, and additional diverse cultures Indicators: • ask questions to gain understanding of the diversity of cultural groups, including Acadian, African Nova Scotian, Gaels, Mi'kmaq, including Treaty Education, and additional diverse cultural groups in the province (COM, CT, CZ) • create positive images (both print and digital) to convey ideas/perceptions/ learnings of the diversity of cultural groups (COM, CT, CI, TF) • discuss and share information about cultural groups in the community (COM, CT, CZ)	**B.3 Exploring & Settling the Unknown** B.3.1 Early Aboriginal Settlement B.3.2 Mi'kmaq Exploration & Settlement B.3.3 European Explorers: Myth/Reality B.3.4 European/Mi'kmaq Contact **B.4 Migration, Outmigration, Exodus** B.4.1 French Colonization: Acadia B.4.2 French-English "Borderland" B.4.3 Expulsion & Return of Acadians B.4.6 Black Experience B.4.7 Early 19th C. Immigration B.4.8 Late 19th C. Immigration B.4.10 20th & 21st C. Immigration **D.1 Peoples of Nova Scotia** D.1.1 Indigenous D.1.2 European D.1.3 South & Central Amer./Caribbean D.1.4 African D.1.6 Asian/Middle Eastern D.1.7 Marginalized Groups **E.4 Cultural Expression** E.4.1 Architecture E.4.2 Landscapes/Gardens E.4.3 Folklore and Celebrations E.4.4 Media (i.e.: radio, TV, film, etc.) E.4.5 Literature/Poetry/Drama E.4.6 Music E.4.7 Fine/Folk Art E.4.8 Cuisine as Cultural Expression E.4.9 Clothing and Costume	BGM BLHC BWM CHM DS FLM FMA FFM FGM HH HV LHM MMA MHM MOI MNH NH OHM SPH PHM RTH RFM SHM SV SSM UEMP AV WCM

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 1 Social Studies • Nova Scotia's Mi'kmaq communities	Outcome 3: Students will demonstrate an understanding of Mi'kmaq communities in the province Indicators: • ask questions and share information about where Aboriginal (Mi'kmaq) communities are located in Nova Scotia and the names of the communities (CT, COM, TF) • create positive images (both print and digital) to convey learnings about modern Mi'kmaq communities in Nova Scotia from the point of view and perspective of Mi'kmaq community/ people (COM, CT)	**B.3 Exploring & Settling the Unknown** B.3.1 Early Aboriginal Settlement B.3.2 Mi'kmaq Exploration & Settlement B.3.4 European/Mi'kmaq Contact **B.5 Response to Place** B.5.1 Mi'kmaq Settlement Patterns **D.1 Peoples of Nova Scotia** D.1.1 Indigenous	FMA FGM HV LHM MMA MOI MNH SPH RFM SV UEMP AV
Grade 2 Science • Earth Science: Air and Water in the Environment	Outcome 1: Students will investigate air and water in the environment Indicators: • ask questions about air and water in the environment (CT, CI, COM, TF, CZ) • observe evaporation and condensation in the environment (CT, CI, COM, TF) • use equipment properly to collect data about air and water (CT, CI, COM, TF)	**A.2 Making Landscapes** A.2.4 Bays and Harbours A.2.5 Rivers and Lakes **A.3 Climate** A.3.2 Weather **A.4 Ocean Environment** A.4.1 Currents and Tides **C.6 Environmental Values** C.6.1 Depletion of Natural Resources C.6.2 Environmental Impact (Then and Now) C.6.5 Air Quality	BGM BWM DS FLM FMA MMA MOI MNH SV UEMP AV WCM
Grade 2 Science • Life Science: Animal Growth and Changes	Outcome 2: Students will compare, in detail, stages in the life cycle of animals Indicators: • ask questions about animal growth (CT, CI, COM, PCD, CZ) • Identify and describe similarities and differences between life cycles of familiar animals (CT, CI, COM, TF) • describe features of natural and human-made environments that support the health and growth of some familiar animals (CT, CI, COM, PCD, CZ)	**A.5 Biodiversity** A.4.1 Life Forms and Ecosystems A.4.2 Species Diversity A.4.3 Ecosystem Diversity **B.1 Vegetation** B.1.1 Diversity of Plant Life **B.2 Birds, Fish, and Animals** B.2.1 Birds and Fish […]Habitats B.2.2 Diversity of Birds and Fish B.2.3 Mammal […] Habitats B.2.4 Diversity of Mammals B.2.4 Amphibians and Reptiles	BGM BWM FLM FGM FMA HH HV LHM MHM MNH PHM RTH RFM SV UEMP AV

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 2 Social Studies • How individuals and cultural groups have contributed to change	Outcome 2: Students will demonstrate an understanding of how individuals and cultural groups have contributed to change, including Acadians, African Nova Scotians, Gaels, Mi'kmaq, including Treaty Education, and additional diverse cultural groups Indicators: • ask questions regarding individuals or groups that have contributed positive change in their school or community, including Acadians, African Nova Scotians, Gaels, Mi'kmaq, including Treaty Education, and additional diverse cultural groups in the province (CT, COM, PCD, CZ) • explain how individuals and groups and contributed to change in their school or community, including Acadians, African Nova Scotians, Gaels, Mi'kmaq, including Treaty Education, and additional diverse cultural groups in the province (COM, CT, CZ, CI, TF)	**B.3 Exploring & Settling the Unknown** B.3.1 Early Aboriginal Settlement B.3.2 Mi'kmaq Exploration & Settlement B.3.3 European Explorers: Myth/Reality B.3.4 European/Mi'kmaq Contact **B.4 Migration, Outmigration, Exodus** B.4.1 French Colonization: Acadia B.4.2 French-English "Borderland" B.4.3 Expulsion & Return of Acadians B.4.6 Black Experience B.4.7 Early 19th C. Immigration B.4.8 Late 19th C. Immigration B.4.10 20th & 21st C. Immigration **B.5 Response to Place** B.5.1 Mi'kmaq Settlement Patterns B.5.2 Acadian Marshland Settlement B.5.2 Strategic Halifax & Louisbourg B.5.4 Coastal Communities B.5.5 Age of Sail: 1830-1880 B.5.6 Mining, Farming and Logging Towns B.5.7 Halifax: Metropolis **D.1 Peoples of Nova Scotia** D.1.1 Indigenous D.1.2 European D.1.3 South & Central Amer./Caribbean D.1.4 African D.1.6 Asian/Middle Eastern D.1.7 Marginalized Groups **D.7 Social Equality** D.7.1 Class D.7.3 Social Conflict D.7.4 Capital and Labour **E.2 Communities** E..2.1 Coastal Towns/Villages E.2.2 Inland Towns/Villages **E.5 Social Development and Organizations** E.5.2 Justice E.5.3 Health Care E.5.5 Antigonish Movement E.5.7 Philanthropy & Social Conscience	BGM BLHC BWM DS FLM FMA FFM FGM HH HV LHM MMA MHM MOI MNH NH OHM SPH PHM RTH RFM SHM SV SSM UEMP AV WCM

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 2 Social Studies • How communities can support sustainable development.	Outcome 4: Students will demonstrate and understanding of sustainable development and its importance to communities (local). Indicators: • ask questions about sustainable development and identify a sustainable topic/issue (CT, COM, CZ, PCD) • convey ideas/perceptions/ understandings (both print and digital) about sustainable development and its importance through listening, speaking, and creating a visual (mindful of Mi'kmaq beliefs and practices in relation to the environment (COM, CZ, PCD, CI, TF)	**B.3 Exploring & Settling the Unknown** B.3.1 Early Aboriginal Settlement B.3.2 Mi'kmaq Exploration & Settlement B.3.3 European Explorers: Myth/Reality B.3.4 European/Mi'kmaq Contact **C.2 Resource Development** C.2.1 Agriculture C.2.2 Fishing C.2.3 Forestry **E.1 Life at Home and Work** E.1.1 Gender Roles and Homelife E.1.3 People in the Workplace E.1.4 Social Value of the Workplace E.1.5 Places of Community Interaction E.1.6 Food on the Table	BGM BWM DS FLM FMA HV MMA MOI MNH SPH PHM RFM SV SSM UEMP AV WCM
Grade 3 Social Studies • History and expressions of culture of the diverse people in Nova Scotia, including Acadians, African Nova Scotians, Gaels, Mi'kmaq and additional diverse cultures	Outcome 2: Students will examine the origins of diverse peoples in their province and their expression of culture, including Acadians, African Nova Scotians, Gaels, Mi'kmaq, including Treaty Education, and additional diverse cultures Indicators: • formulate questions and generate ideas for research and inquiry about diverse people and cultures in the province (CT, COM, PCD) • deduct ideas and synthesize facts from sources about peoples and cultures in the province, including Acadians, African Nova Scotians, Gaels, Mi'kmaq, including Treaty Education, and additional diverse cultures (CT, COM, PCD)	**B.3 Exploring & Settling the Unknown** B.3.1 Early Aboriginal Settlement B.3.2 Mi'kmaq Exploration & Settlement B.3.3 European Explorers: Myth/Reality B.3.4 European/Mi'kmaq Contact **B.4 Migration, Outmigration, Exodus** B.4.1 French Colonization: Acadia B.4.2 French-English "Borderland" B.4.3 Expulsion & Return of Acadians B.4.6 Black Experience B.4.7 Early 19th C. Immigration B.4.8 Late 19th C. Immigration B.4.10 20th & 21st C. Immigration **D.1 Peoples of Nova Scotia** D.1.1 Indigenous D.1.2 European D.1.3 South & Central Amer./Caribbean D.1.4 African D.1.6 Asian/Middle Eastern D.1.7 Marginalized Groups **E.4 Cultural Expression** E.4.1 Architecture E.4.2 Landscapes/Gardens E.4.3 Folklore and Celebrations E.4.4 Media (i.e.: radio, TV, film, etc.) E.4.5 Literature/Poetry/Drama E.4.6 Music E.4.7 Fine/Folk Art E.4.8 Cuisine as Cultural Expression E.4.9 Clothing and Costume	BGM BLHC BWM CHM DS FLM FMA FFM FGM HH HV LHM MMA MHM MOI MNH NH OHM SPH PHM RTH RFM SHM SV SSM UEMP AV WCM

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 4 Science • Habitats	Outcome 1: Students will explore a variety of local natural habitats. Some Indicators: • Explore 2 to 3 models of habitats. (Com, CI, CT, TF) • Use data from explorations to recognize patterns and relationships and reach conclusions. (Com, CI, CT, TF) • Infer why particular organisms share a habitat. (COM, CI, CT, TF) Outcome 2: Students will investigate the interrelatedness among animals, plants, and the environment in local habitats. Some Indicators: • Investigate and share the characteristics of a variety of habitats. (Com, CT, PCD, TF) • Investigate and compare local habitats and their associated populations of plants and animals, inclusive of Aboriginal perspectives. (Com, CT, PCD, TF) • Describe how human actions and natural phenomena can change an/or conserve the environments of habitats, inclusive of Aboriginal perspectives (CZ, Com, CT, PCD)	**A.5 Biodiversity** A.5.1 Life Forms and Ecosystems A.5.2 Species Diversity A.5.3 Ecosystem Diversity **B.1 Vegetation** B.1.1 Diversity of Plant Life B.1.2 Botanical Study and Research **B.2 Birds, Fish, and Animals** B.2.1 Bird and Fish Environments and Habitats B.2.2 Diversity of Birds and Fish B.2.3 Mammal Environments and Habitats B.2.4 Diversity of Mammals B.2.5 Amphibians and Reptiles **B.7 Understanding Our World** B.7.1 Scientific Inquiry: 19th-21st Century	BGM BLHC BWM FLM FMA FGM HH HV LHM MMA MHM MNH PHM RTH RFM SV UEMP AV
Grade 4 Science • Rocks, Minerals and Erosion	Outcome 7: Students will explore the characteristics of rocks, minerals, and fossils. Some Indicators: • Explore rocks in the environment, collect samples, and record observations. (Com, CT, PCD, TF) • Classify and compare rocks and minerals according to characteristics. Com, CI, CT, TF) • Explore the uses of rocks. (Com, CT, PCD, TF) • Infer how fossils can help us interpret pas environments (CZ, Com, CI, CT, PCD, TF) • Explore how fossils are formed (Com, CT, PCD, TF) Outcome 8: Students will explore how the Earth's surface changes over time. Some Indicators: • Explore the connection among the rock cycle, soil, and weather. (Com, CI, CT) • Investigate an example of erosion. (Com, CI, CT, TF)	**A.1 Geological Formations** A.1.1 Plate Tectonics A.1.2 Geology and Landscape Diversity A.1.3 Creation of Mineral Deposits A.1.4 Nova Scotia's Fossil Record **A.2 Making Landscapes** A.2.1 Ancient Landscapes and Drainage A.2.2 Glaciers, Deposits, and Erosion A.2.3 Offshore Coastal Landforms A.2.4 Bays and Harbours A.2.5 Rivers and Lakes A.2.6 Soil Development **C.2 Resource Development** C.2.4 Mining	BGM FGM HH HV LHM MOI MNH PHM RFM SV UEMP

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 4 Social Studies • Exploration and Nova Scotia's Founding Cultures (Mi'kmaq, Acadians, African Nova Scotians, and Gaels)	Outcome 1: Students will examine the concept of exploration. Some Indicators: • Investigate explorers within the local community. (CZ, Com, CT) • Reflect upon why we explore. (Com, CT, PCD) • Reflect upon how we explore. (Com, CI, CT, PCD) Outcome 2: Students will examine the stories of various explorers, inclusive of Acadians, African Nova Scotians, Gaels, and Mi'kmaq, an additional cultures, of land, ocean, space and ideas. Some Indicators: • Investigate the motivations for various explorers. (CI, CT, PCD) • Infer the risks and challenges faced by explorers. (Com, CI, CT) • Examine the relationship between exploration and innovation. (CZ, CI, CT) Outcome 3: Students will examine the impact of exploration. Some Indicators: • Explore the consequences of exploration (e.g. environment, technology, communities, ideas) on people and physical environments. (CZ, Com, CT, TF) • Recognize that exploration leads to changes in peoples' views and attitudes. (CI, CT, PCD)	**B.3 Exploring and Settling the Unknown** B.3.1 Early Aboriginal Settlement B.3.2 Mi'kmaq Exploration and Settlement B.3.3 European Exploration: Myth/Reality B.3.4 European/Mi'kmaq Contact **B.7 Understanding Our World** B.7.1 Scientific Inquiry: 19th-21st Century	BLHC HH HV MMA MHM MOI MNH PHM RFM SV AV
Grade 5 Science • Forces and Simple Machines	Outcome 3: Students will explore forces and mechanical advantage by designing common simple & compound machines. Some Indicators: • Locate examples of simple and compound machines used in daily life (levers, pulleys, ramps, screws, wheels, sedge, inclined plane). (Com, CI, CT, PCD, TF) • Investigate common simple and compound machines and he relationship between the two. (CZ, Com, CI, CT, PCD, TF) • Design and experiment with an imaginary compound machine using the processes of start, reason, draw design, build a working model, identify and difficulties, improve design. (Com, CI, CT, TF)	**B.6 Agents of Change** B.6.4 New Technology: Effects/Experience **C.1 Energy** C.1.1 Animal/Human Power C.1.2 Water Power C.1.3 Coal & Wood Power C.1.4 Steam Power C.1.5 Solar/Wind Power C.1.6 Hydroelectric Power C.1.7 Oil Fired Electrical Power	BGM BWM DS FMA FFM MMA MOI RFM SV SSM AV WCM

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 5 Social Studies • How we Learn about the Past	Outcome 1: Students will develop an understanding of how we learn about the past with a focus on Acadians, African Nova Scotians, Gaels, Mi'kmaq and additional cultures. Some Indicators: • Communicate understandings about primary source artifacts (origin, material made from, possible uses, and who used them). (Com, CI, CT, TF) • Discuss why we learn about the past. (Com, CI, CT) • Investigate the role of oral story tellers, Elders, archaeologists, and historians to help us learn about the past. (CI, CT, PCD) • Reflect on differences between the present and the past. (Com, CI, CT)	**B.7 Understanding Our World** B.7.1 Scientific Inquiry: 19th-21st Century B.7.2 Archaeology B.7.4 Amateur Inquiry and Collection **Additionally**—any IMP topic can be presented through a "Learning with Objects" style program (for example, see Appendix I—"History Detectives" A Generic Grade Five Museum School Program)	BLHC FGM LHM MMA MHM MOI MNH PHM UEMP **Additionally**—ALL NSM Sites
Grade 5 Social Studies • First Peoples	Outcome 3: Students will demonstrate an understanding of the diverse societies of First Nations an Inuit, in what later became Canada. Some Indicators: • Explore how artifacts provide information on the diversity of First Nations and Inuit cultures and societies. (This must be a First nations perspective on artifacts). (Com, CI, CT) • Use primary and secondary sources to examine the diversity of First Nations and Inuit societies, in what later became Canada. (Com, CI, CT) • Investigate how First Nations and Inuit societies developed in relation to the diverse physical and geographic regions of Canada. (Com, Ci, CT, TF) Outcome 5: Students will examine interactions between British and French and First Nations and Inuit in what later became Atlantic Canada. Some Indicators: • Examine the relationships the English had with First Nations and Inuit of Atlantic Canada. (CZ, Com, CI, CT) • Examine the relationship the French had with the First Nations and Inuit of Atlantic Canada. (CZ, Com, CI, CT)	**B.3 Exploring and Settling the Unknown** B.3.1 Early Aboriginal Settlement B.3.2 Mi'kmaq Exploration and Settlement B.3.3 European Exploration: Myth/Reality B.3.4 European/Mi'kmaq Contact **D.1 Peoples of Nova Scotia** D.1.1 Indigenous D.1.2 European	FLM FMA FGM HV LHM MMA MHM MOI MNH NH SPH RFM SV UEMP AV

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 6 Social Studies • Expressions of Culture	Outcome 1: Students will explore the concept of culture and demonstrate an understanding of its role in their lives, inclusive of Acadians, African Nova Scotians, Gaels, Mi'kmaq, and additional cultures. Some Indicators: • Classify elements of culture as material or non-material. (Com, CT, TF) • Explore the role of culture in their lives. (CZ, Com, CI, CT, TF) • Identify factors that shape culture. (Com, CI, CT) • Investigate how culture is passed on from generation to generation. (CZ, Com, CI, CT, TF) Outcome 2: Students will analyze the importance of cross cultural understanding inclusive of Acadians, African Nova Scotians, Gaels, Mi'kmaq, and additional cultures. Some Indicators: • Discuss the importance of cross-cultural understanding, and the consequences of its absence. (CZ, CI, CT, PCD, TF) • Examine the concept of stereotypes and the extent to which the mass media stereotype different cultural groups. (CZ, Com, CI, CT, TF) Outcome 4: Students will examine how traditions relate to culture in a region, inclusive of the traditions of the Acadians, African Nova Scotians, Gaels, Mi'kmaq, and additional cultures. Indicators: • Explore how traditions, customs, and ritual s influence a regions' culture. (Com, CI, CT, TF) • Investigate to infer how cultural traditions are affected by change factors. (Com, Ci, CT, TF) • Explore how cultural values and beliefs are reflected and preserved through language, literature, and oral tradition. (Com, CI, CT, TF)	**E.4 Cultural Expression** E.4.1 Architecture E.4.2 Landscapes/Gardens E.4.3 Folklore/Gardens E.4.4 Media (example: radio, TV, film) E.4.5 Literature/Poetry/Drama E.4.6 Music E.4.7 Fine/Folk Art E.4.8 Cuisine as Cultural Expression E.4.9 Clothing and Costume E.4.10 Heritage Preservation	All NSM Sites

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 6 Science • Diversity of Life	Outcome 6: Students will explore diversity with a particular focus on the Animal Kingdom. Some Indicators: • Explore animal life, from single-celled to multi-celled, using appropriate tools. (CI, CT, TF) • Classify a set of living things and share rationale. (CZ, CI, CT, TF) • Differentiate animals based on their characteristics (mammals, birds, reptiles, amphibians, and fishes), including vertebrates and invertebrates. (Com, CT, PCD, TF) • Compare how animals families adapt differently depending on where they live. (CZ, Com, Ci, CT, TF)	**A.5 Biodiversity** A.5.2 Species Diversity A.5.4 Genetic Diversity A.5.5 Extinction of Species **B.1 Vegetation** B.1.1 Diversity of Plant Life B.1.3 Paleobotany in Nova Scotia **B.2 Birds, Fish, and Animals** B.2.2 Diversity of Birds and Fish B.2.4 Diversity of Mammals B.2.5 Amphibians and Reptiles **B.7 Understanding Our World** B.7.1 Scientific Inquiry: 19th-21st Century	BGM BWM FLM FMA FGM HH HV LHM MMA MOI MHM MNH PHM RTH RFM SV UEMP AV
Grade 7 Science • Geology	Students will be expected to… • Analyze and compare data to determine patterns and trends on some catastrophic events that occur on or near Earth's surface (210-6, 311-1, 311-4, 311-5) • Classify minerals and rocks on the basis of their characteristics and method of formation, and compare with classification keys (210-1, 310-2) • Explore and describe the composition of Earth's crust, using common samples, scientific studies, and society's needs (109-7, 111-2, 310-1)	**A.1 Geological Formation** A.1.1 Plate Tectonics A.1.2 Geology and Landscape Diversity A.1.3 Creation of Mineral Deposits A.1.4 Nova Scotia's Fossil Record **A.2 Making Landscapes** A.2.6 Soil Development **B.7 Understanding our World** B.7.1 Scientific Inquiry: 19th-21st Century **C.2 Resource Development** C.2.4 Mining	BGM FGM HH HV LHM MOI MNH PHM RFM SV
Grade 7 Science • Interactions within Ecosystems	Students will be expected to… • Identify the roles of producers, consumers, and decomposers in a local ecosystem and describe both their diversity and their interactions (304-2) • Identify questions, investigate, and record collected data on the ecosystem's components using materials effectively (208-2, 208-3, 210-1)	**A.5 Biodiversity** A.5.1 Life Forms and Ecosystems A.5.2 Species Diversity A.5.3 Ecosystem Diversity A.5.6 Contemporary Research **B.1 Vegetation** B.1.1 Diversity of Plant Life **B.2 Birds, Fish, and Animals** B.2.2 Diversity of Birds and Fish B.2.4 Diversity of Mammals B.2.5 Amphibians and Reptiles **B.7 Understanding Our World** B.7.1 Scientific Inquiry: 19th-21st Century	BGM BLHC BWM FLM FMA FGM HH HV LHM MMA MOI MHM MNH PHM RTH RFM SV UEMP AV

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 7 Social Studies • Political Empowerment: The Road to Confederation	Students will be expected to… • Evaluate the conditions of everyday life for diverse peoples living in British North America in the mid-1800s, including Aboriginal peoples, African-Canadians, and Acadians (7.3.1) • Analyze how the struggle for responsible government was an issue of political empowerment and disempowerment (7.3.2) • Analyze the internal and external factors that led to Confederation (7.3.3)	**B.4 Migration, Outmigration, Exodus** B.4.3 Expulsion and Return of the Acadians B.4.6 Black Experience B.4.7 Early 19th Century Immigration B.4.8 Late 19th Century Immigration **D.2 Governance and Politics** D.2.2 Responsible Government D.2.3 Canadian Confederation	BGM BLHC HH HV LHM MHM MOI NH SPH RTH RFM SV UEMP AV
Grade 7 Social Studies • Societal Empowerment: How Everyday life Changed at the turn of the 20th Century	Students will be expected to… • Evaluate the conditions of everyday life for the peoples of Canada at the turn of the 20th century (7.5.1) • Describe the impact of the Industrial Revolution on industry and workers in Newfoundland and Labrador, the Maritimes, and across Canada (4.5.2) • Examine how women became more empowered through their role in the social reform movements of the late 19th and early 20th centuries (7.5.3)	**B.4 Migration, Outmigration, Exodus** B.4.10 20th and 21st Century Immigration **B.6 Agents of Change** B.6.4 New Technology: Effects/Experiences **D.2 Governance and Politics** D.2.4 Women's Rights and Universal Suffrage **D.7 Social Equality** D.7.1 Class D.7.3 Social Conflict D.7.4 Capital and Labour D.7.5 Privilege/Social Circles	BGM BLHC BWM FMA FFM HV MMA MOI SHM SV SSM WCM
Grade 8 Science • Ocean Waves, Tides, and Shorelines	Students will be expected to… • Explain how waves and tides are generated and how they interact with shorelines (311-10) • Describe process of erosion and deposition that result from wave action and water flow (311-11) • Investigate and describe, with technological examples from various sources, process that lead to the development of ocean basins and continental drainage systems (311-7) • Apply the concept of systems to describe the interactions of ocean currents, winds, and regional climates (111-6, 311-9)	**A.2 Making Landscapes** A.2.2 Glacier, Deposits and Erosion A.2.3 Offshore Coastal Landforms A.2.4 Bays and Harbours **A.3 Climate** A.3.1 Causes and Influences **A.4 Ocean Environment** A.4.1 Currents and Tides A.4.2 Continental Shelf Environments A.4.3 Costal Intertidal Environments	DS FLM FMA FGM LHM MMA MNH AV

Grade and Overarching Theme	Some related Curriculum Outcomes (Updated Fall 2016)	Some possible IMP Content Areas	Possible NSM Sites
Grade 8 Social Studies • Decades of Change: Post-1920 Canada	Students will be expected to… • Demonstrate an understanding of the nature of migration and its impact on post-1920 Canada (8.2.3) • Analyze the impact of changing technology and socio-economic conditions on differing prosperities and lifestyles in Canada in the 1920s and 1930s (8.3.1) • Analyze the effect of WWII on Canada and her people (8.3.3) • Analyze the impact of changing technology and socio-economic conditions on Canada's prosperity and lifestyles in the 1950s and 1960s (8.3.5) • Compare the social and cultural trends in Canada in the 1950s, 1960s and 1970s	**B.4 Migration, Outmigration, Exodus** B.4.9 Outmigration: 19th and 20th Century B.4.10 20th and 21st Century Immigration **D.2 Governance and Politics** D.2.7 'Regional Development' since 1945 **D.3 War and Defense** D.3.7 Nova Scotians at War	BLHC FFM HV MMA MOI SHM SV
Grade 9 Social Studies • How Natural Resources and Technology have shaped Nova Scotia	Students will be expected to… • Link human activity to the natural resources of the Atlantic region (9.1.4) • Examine and describe the historical application of technology in the Atlantic region (9.4.2) • Analyze the effect of technology on resource industries in Atlantic Canada (9.4.6)	**B.5 Response to Place** B.5.6 Mining Towns, Farming Towns, Logging Towns **B.6 Agents of Change** B.6.4 New Technology: Effects/Experiences **C.2 Resource Development** C.2.1 Agriculture C.2.2 Fishing C.2.3 Forestry C.2.4 Mining C.2.5 Oil and Natural gas **C.3 Industry** C.3.1 Boat and Shipbuilding C.3.2 Textiles C.3.3 Steel	BGM BWM DS FLM FMA FFM FGM HH HV LHM MMA MOI MNH SPH PHM RFM SV SSM AV WCM

Working with Teachers Templates

Appendix E Contains:

- Communicating with Teachers Checklist
- Website Template
- Model Release Form (for Photos)
- Teacher Evaluation
- Student Evaluation

The following templates are meant to be modified to suit the individual needs of a museum. Using these templates will help ensure successful working relationships between museums and teachers.

Quick Note about Website Template: This template was developed by the IWG Education Sub-Committee taking into account what teachers need to know before booking programs. All museums are encouraged to work with ISD (Internet Strategies and Design) to present this information on their website. In order to enhance websites it is highly recommended that museums include photos with each section of the website template. It is very important to get model releases signed for all students who you will be photographing. The CCH model release form is included in this appendix after the website template.

Quick Note about Student Evaluation: The format for student evaluation is called 3 Stars and a Wish. In this evaluation students are asked to record the three things they most enjoyed (the stars) and one thing they would have liked better or would like to do next time (wish). This evaluation format might seem simple but it has proved to be very effective at several NSM sites with both students and adults.

Communicating with Teachers Checklist

During Booking:

☐ **Get contact information for the teacher**

- Name:_____
- School: _____
- Grade:_____
- Phone: _____
- Email: _____
- Fax: _____
- Personal Cell Phone:_____
  (in case of emergency or last minute change)

☐ **Get logistical information**:

- What program do they want?
  _____
- On what date are they coming?
  _____
- What time are they coming?
  _____
- How are they arriving - bus or walking?
  _____
- How many are coming?
  Students:_____
  Chaperones:_____
- Are they staying for lunch?
  _____

☐ **Offer to adapt program to meet specific needs**:

- Ask about any special concerns or needs.
- Ask what students are covering in class.
- Ask if there are any learning or physical adaptations needed for specific students.

☐ **Other Notes**:

_____
_____
_____
_____

After the Booking – Before Arrival:

☐ **Send booking confirmation, which includes:**

- Their contact information gathered during booking to ensure it is correct.
- Program logistical information gathered during booking to ensure it is correct.
- Program outline with curriculum outcome.
- Museum's expectations for chaperones during the program.
- Pre- and post visit activities, if available.
- Send booking confirmation to teacher to confirm contact and logistical information.
- Logistical information about museum, including relevant information about washrooms, gift shop, and lunch area.

☐ **Share booking information program presenters and any other museum staff or volunteers who may interact with the group.**

During the Program:

☐ **Follow the program as outlined in the written program development template.**

☐ **Use presentation and engagement strategies from Module Five.**

Post-Trip:

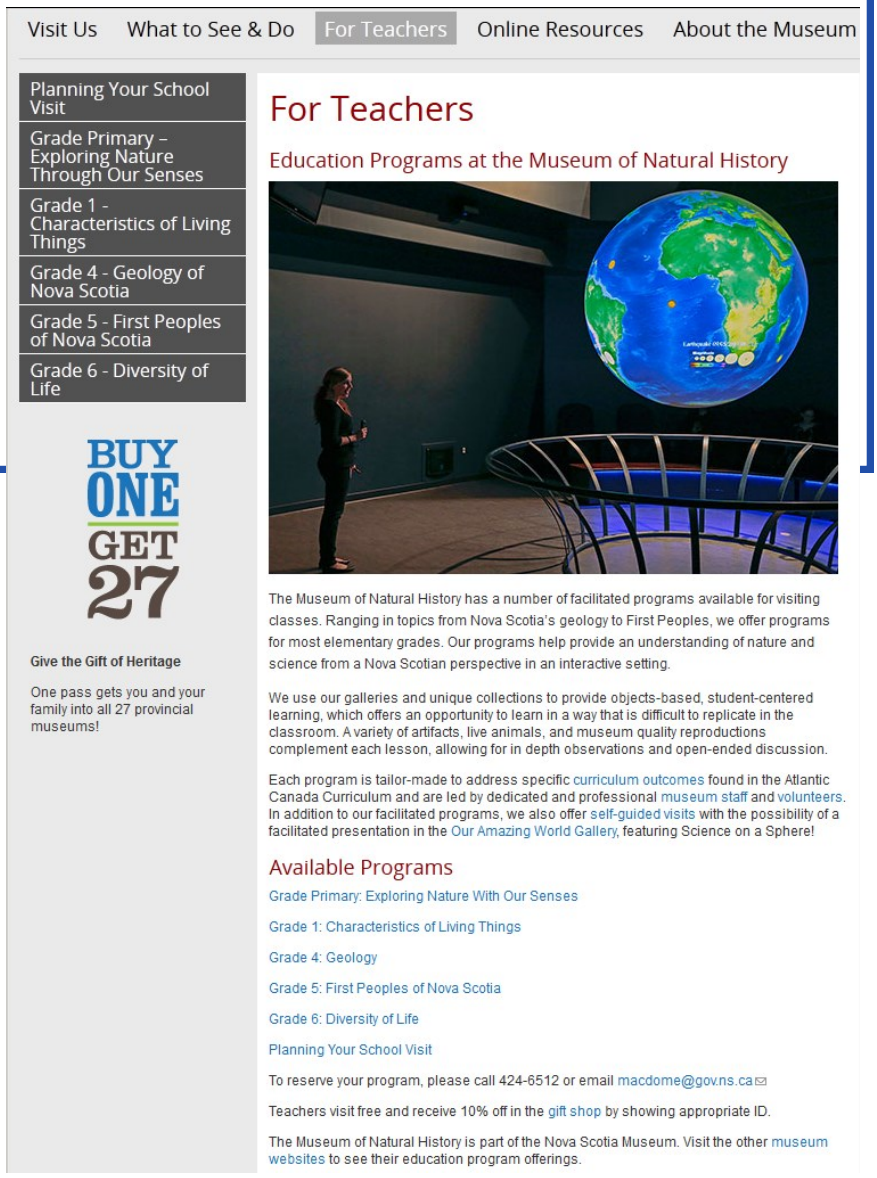
☐ **Follow up with teacher:**

- Send a thank you.
- Ask teacher to complete an evaluation (See a sample in Appendix E).
- Re-send post-visit activity, if available.
- Invite students and chaperones to come back for another visit.
- Invite the teacher back the next year.

"For Teachers" NSM Site Webpage Template

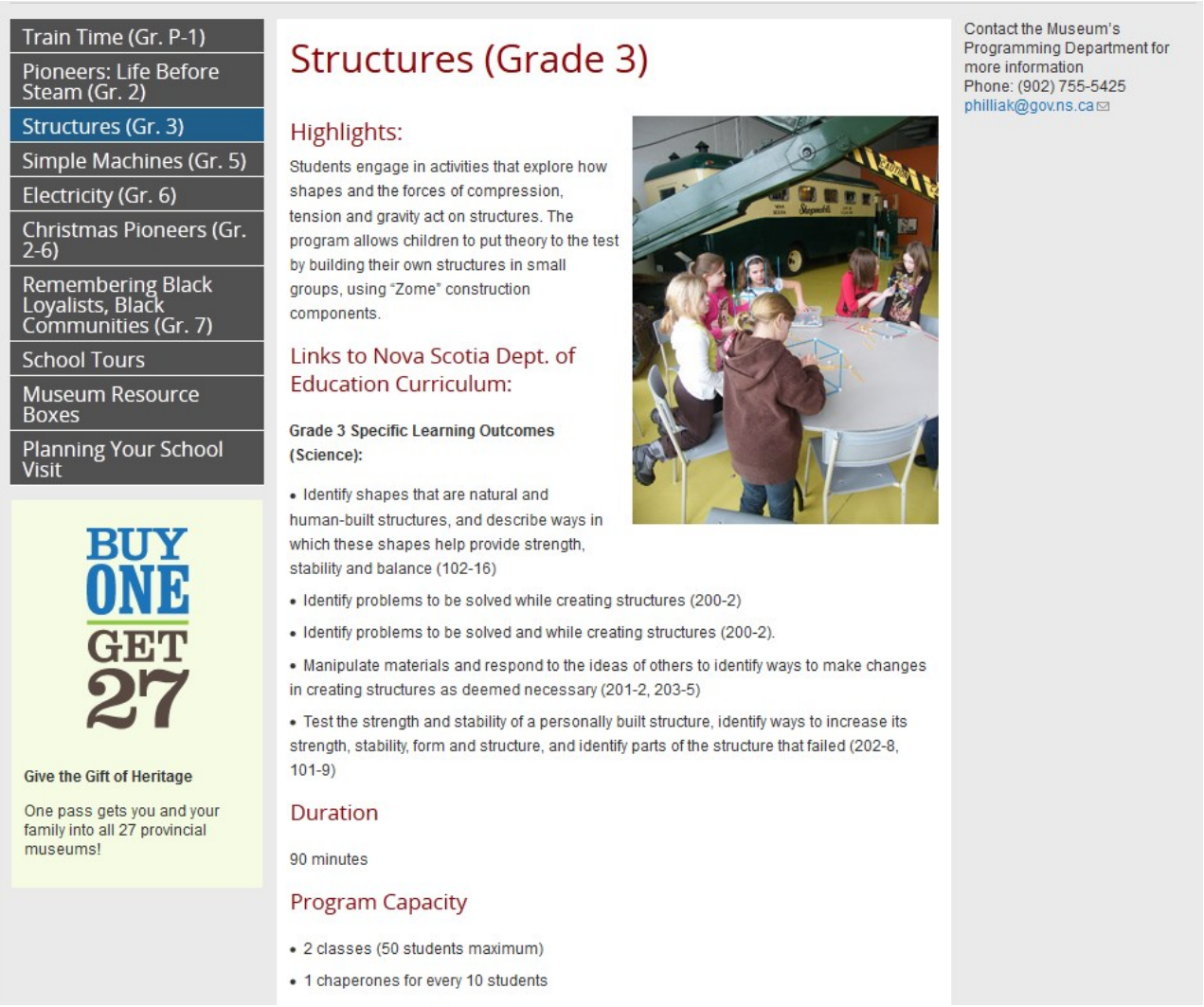
"For Teachers" Home Page

- **Photo**: of an Activity that students could experience at the museum in a school program. Ideally include students in the picture.
- **Introduction Blurb**: Include 2-3 short paragraphs that introduce teachers to what they can expect to experience at your museum. It is ideal to include information that highlights how programs at the museum provide an experience that teacher cannot replicate in the classroom. It is also important to explicitly state if and how programs address curriculum.
- **Available Program:** Provide a hyperlinked list of program titles available, along with the grades which the programs have been designed for.
- **Provide Booking Information**: Phone, Fax and Email are preferred.
- **Finish by refer to other NSM Sites.**



Program Specific Page—Each Program has its own Page

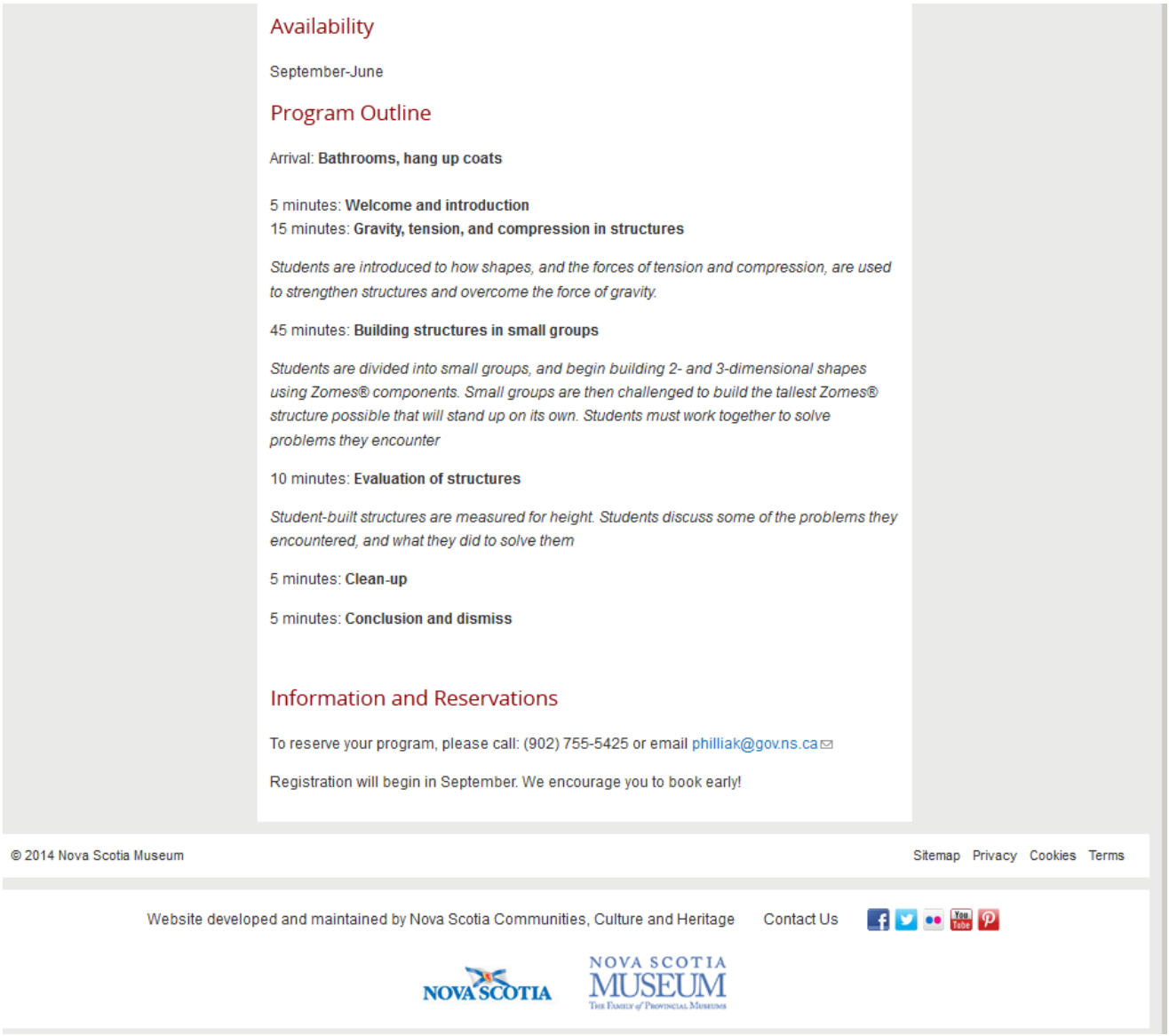
- **Photo**: of an Activity that students could experience at the museum in a school program. Ideally include students in the picture.



- **The following information can be pulled directly from a completed Museum School Program Development Template:**
  - **Program Title**: Top of Program Overview Page
  - **Highlights**: Top of Program Overview Page (Program Highlights: Description for Marketing Purposes)
  - **Curriculum Outcomes:** In "Content and Outcomes" as "Curriculum Outcomes Addressed by this Program" on Program Overview Page
  - **Duration**: In "Program Structure" as "Program Length" on Program Overview Page
  - **Program Capacity:** In "Program Structure" as "Maximum Group Size" on Program Overview Page

Continued on Next Page...

Continued Program Specific Page



Availability

September-June

Program Outline

Arrival: **Bathrooms, hang up coats**

5 minutes: **Welcome and introduction**
15 minutes: **Gravity, tension, and compression in structures**

Students are introduced to how shapes, and the forces of tension and compression, are used to strengthen structures and overcome the force of gravity.

45 minutes: **Building structures in small groups**

Students are divided into small groups, and begin building 2- and 3-dimensional shapes using Zomes® components. Small groups are then challenged to build the tallest Zomes® structure possible that will stand up on its own. Students must work together to solve problems they encounter

10 minutes: **Evaluation of structures**

Student-built structures are measured for height. Students discuss some of the problems they encountered, and what they did to solve them

5 minutes: **Clean-up**

5 minutes: **Conclusion and dismiss**

Information and Reservations

To reserve your program, please call: (902) 755-5425 or email phillak@gov.ns.ca

Registration will begin in September. We encourage you to book early!

- **Availability**: In “Basic Logistics” as “Program Availability” on Program Overview Page

- **Program Outline:** In “Program Framework” on Program Overview Page.
  - **Activity Title**: Top of Activity Description Page
  - **Description**: Top of Activity Description Page (Activity Highlights: Description for Marketing Purposes)

"Planning Your Visit" Page

- Include the following information:

Visit Us | What to See & Do | For Teachers & Educators | About Uniacke Estate

A Trip to the Past (Grades 2 to 4)
Uniacke Wetlands (Grades 2 to 4)
Planning Your School Visit

Give the Gift of Heritage

One pass gets you and your family into all 27 provincial museums!

Planning Your School Visit

Booking Programs

All programs are booked on a first come, first served basis. If possible, bookings can be made for the time and date that best meets your needs. To reserve your program, Call: (902) 866-0032 Fax: (902) 866-2560 or Email: gaykc@gov.ns.ca

Group Size

The cost for each program is $3.00 per student (tax included). Payment can be made by cash, cheque, or credit card. Cheques are the preferred method of payment and should be made payable to the "Uniacke Estate Museum Park".

Chaperones

Teachers, assistants, and chaperones are admitted free.

Chaperones must stay with the group of students assigned to them at all times. Teachers and chaperones are responsible for the safety and behaviour of students during their visit.

Lunch

When the weather is fine, there are picnic tables and plenty of area on the grounds for students to eat their lunch outside. Students should not bring meals that require refrigeration or heating. In bad weather, the Carriage House can be made available for lunch.

Bathrooms

Male and female bathrooms are located in the tea room, each having only one toilet. Additionally there are outhouses on site at the trail head.

Tea Room and Gift Shop

The Post Road Tea Room and Gift Shop entrance is located at the rear of the house. It caters to students with inexpensive treats and gifts. To avoid disappointment, additional time should be allocated following the end of a program or tour for students to visit the tea room. Students visiting the tea room must be accompanied by a chaperone.

What to Expect

Prior to your visit

- Confirmation of school program booking, date and time, along with a Pre-Visit Package will be sent to teachers via fax or email.
- If possible, students should eat recess snacks on the bus, prior to arrival.

On Arrival

- You will be met on arrival by Museum staff and volunteers, who will conduct your program or tour.
- Admission can be paid in the tea room by cash, credit card, or cheque, payable to the "Uniacke Estate Museum Park."

Programs

- Programs are generally 2 hours long. Planning additional time after the program allows students to enjoy a picnic lunch and to explore the grounds.
- We have spacious grounds and teachers are invited to bring balls or other items for students to use after lunch.
- Trip to the Past includes outside activities and the Wetlands is an outside program entirely. Students should come dressed for the weather!

Consent Form – Image Services

NOVA SCOTIA

My name is _____

My address is _____

My phone number is _____

☐ This Consent Form is about images of me taken on (date) _____

at (event location) _____

_____

☐ This Consent Form is about images of my child/children, (names)

_____

_____

taken on (date) _____ at (event location) _____

I confirm that I am the parent or guardian of the child/children and that I have the authority to give consent on their behalf.

I consent to the images being used or published by the Province of Nova Scotia for public relations, promotions, commercial and advertising purposes.

I consent to images being placed in the Office of Communication Nova Scotia's Visual Library.
I understand that the Visual Library is a collection of images that can be accessed, used and published by any Department or Office of the Province of Nova Scotia.

I consent to the images being used or published on any number of occasions and in digital or printed form. Some examples of the ways that the images may be used or published are: on websites, on social media, in printed brochures and reports, in displays, in videos, in newspaper or magazine ads, television ads, and in presentation materials.

I understand that the Province of Nova Scotia will not be required to notify me prior to the use or publication of the images.

I understand that the Province of Nova Scotia holds copyright in the images and may, in its sole discretion, provide permission to third parties to use or publish the images. I consent to the use or publication of the images by any third parties that have received this permission from the Province.

I understand that by signing this Consent Form, I am waiving any legal right I may have to the images.
I understand that I will receive no payment or other compensation for the use or publication of the images.

I understand that the images may be stored in a location outside of Canada and accessed from outside of Canada (for example, images uploaded to a social media service or a government website).
I consent to the images being stored outside of Canada and accessed from outside of Canada.

Signature: _____ Date: _____

Teacher and Chaperone

Museum School Program Evaluation

Thank you for helping us evaluate our museum school program.
Your feedback will be used to help make this program more successful for future groups.

Quick Questions...	
Today's date is...	
Where you here today as...	☐ The Teacher ☐ A Chaperone ☐ Other:
What program did you participate in...	
Which activities did you see...	

On a Scale of 1 to 5, how do you rate this program…	**Poor**		**Neutral**		**Excellent**
	1	**2**	**3**	**4**	**5**
Addressed Specific Curriculum Outcomes (SCOs)	1	2	3	4	5
Allowed students to develop the skill of communication.	1	2	3	4	5
Allowed students to develop the skill of inquiry.	1	2	3	4	5
Allowed the students to develop the skill of participation.	1	2	3	4	5
As a learning experience, that enhances learning done in the classroom.	1	2	3	4	5
Overall.	1	2	3	4	5

Quick Thoughts...	
What was your favourite part of the program and why?	
What was your least favourite part of the program and why?	
What types of pre– or post– visit activities would you use?	
How did you find out about the program?	
Do you have any other comments or suggestions?	

Thank you for your feedback. We hope we can look forward to working with you again.

3 Stars and a Wish

Please tell us what you think about your field trip.

Thank you for helping us to make our programs better!

3 Stars and a Wish

Please tell us what you think about your field trip.

Thank you for helping us to make our programs better!

Appendix F

Additional Resources

Would you like to learn more about the topics covered in this toolbox? Check out the following online resources which were used in the toolbox's development:

Appendix F Contains:

- List of Additional Resources
- "How to Read a Shoe" from the Bata Shoe Museum
- Examples of Worksheets Museums can Customize for Programs

Nova Scotia's Interpretive Master Plan:

- Nova Scotia Museum, 2009, "Interpretive Master Plan" (museum.novascotia.ca/about-nsm/interpretive-master-plan)

Survey exploring Nova Scotians' views and support of museums:

- Association of Nova Scotia Museum, 2014, "Fund for Museums in Nova Scotia Survey Report" (www.ansm.ns.ca/about/ansm-information/museum-fund.html

Addressing Nova Scotia's Curriculum:

- Department of Education and Early Childhood Development, 2014, "Curriculum Learning Outcomes Framework" (https://sapps.ednet.ns.ca/Cart/index.php?UID=20150814160136198.166.214.5)

Addressing 21st Century Skills and Competencies:

- C21 Canada: Canadians for 21st Century Learning and Innovation, 2012, "Shifting Minds: A 21st Century Vision of Public Education for Canada" (c21canada.org/wp-content/uploads/2012/11/Shifting-Minds-Revised.pdf)
- Institute for Museums and Libraries Services"Museums, Libraries and 21st Century Skills" (www.imls.gov/about/21st_century_skills_home.aspx). Be sure to check out:
    - "Report: Museums, Libraries and 21st Century Skills - 2009" (www.imls.gov/assets/1/AssetManager/21stCenturySkills.pdf)

Object-Based Learning:

- John Hennigar Shuh, 1982, "Teaching Yourself to Teach with Objects", *Journal of Education*, 7 (4). (isites.harvard.edu/fs/docs/icb.topic1025195.files/2011%20Version/Supplementary%20Readings/shuh.pdf)
- Nova Scotia Department of Education and Early Childhood Development, 2012, "Learning with Objects: Artifact Exploration Guide" (Digital copy available via email from ICI Interpretive Researcher)
- Smithsonian—National Museum of American History, "Engaging Students with Primary Sources" (historyexplorer.si.edu/PrimarySources.pdf)
- Historical Thinking Project, "Resources" (historicalthinking.ca/resources)

Asking "Good" Questions:

- Museum 2.0 Nina Simon, 2009, "Design Techniques for Developing Questions for Visitor Participation" (museumtwo.blogspot.ca/2009/04/design-techniques-for-developing.html)

Student-Centered Learning:

- Faculty Focus, 2012, "Five Characteristics of Learner-Centered Teaching" (www.facultyfocus.com/articles/effective-teaching-strategies/five-characteristics-of-learner-centered-teaching)

Learning through Play:

- Department of Education and Early Childhood Development "Let's Talk About… Learning Through Play" (https://sapps.ednet.ns.ca/Cart/description.php?II=423&UID=20070502151011)
- High Five "The Best Way to Play" (http://www.highfive.org/). Be sure to check out the Nova Scotia section supported by Recreation Nova Scotia:
    - "High Five Nova Scotia" (http://www.recreationns.ns.ca/high-five/)
- Laura Seargeant Richardson, 2014, "The Superpowers of Play" (laurasergeantrichardson.com/the-superpowers-of-play-2/), Be sure to check out:
    - "Periodic Table of Play" (laurasergeantrichardson.com/portfolio-item/periodic-table-of-play)
    - "Play Possibilities Cards" (laurasergeantrichardson.com/wp-content/uploads/2014/02/Play_Possibilities_Measurement_DOWNLOAD.pdf)

Creating a Kid/Youth Friendly Museum:

- Scotland's Commissionaire for Children and Young People "7 Golden Rules for Participation" (www.sccyp.org.uk/education/golden-rules)
- Kids in Museums, "Kids in Museums Manifesto" (kidsinmuseums.org.uk/manifesto-2/)

Interpreting Difficult Knowledge:

- Dr. Julia Rose, 2011, "Technical Leaflet: Interpreting Difficult Knowledge" (Small coast to download leaflet at : resource.aaslh.org/view/interpreting-difficult-knowledge/)

Working with Volunteers

- Nova Scotia Department of Tourism, Culture and Heritage (Predecessor to Department of Communities, Culture and Heritage), 2008, "Volunteer Policy" (maritimemuseum.novascotia.ca/sites/default/files/inline/documents/volunteer_policy_guidelines.pdf)
- Volunteer Canada, "Engaging Volunteers" (volunteer.ca/engagement)
- Events Nova Scotia, "Nova Scotia Volunteer Tool" (Sign up for free to access a database of +1000 skilled and engaged volunteers: eventsnovascotia.com/be-a-volunteer/)

Working with Teachers:

- National Museum Australia, 2011, "The museum education mix: students, teachers and museum educators" (nma.gov.au/research/understanding-museums/JGriffin_2011.html)
- Nova Scotia's "Social Studies Teachers Association" (ssta.nstu.ca)
- Nova Scotia's "Association of Science Teachers" (ast.nstu.ca)

Working with Partners in Education

- SuperNova Dalhousie University "Partnership Programs" (www.supernova.dal.ca/partnership-programs/)

Alternative Ways of Working with Schools

- Center for the Future of Museums "Building the Future of Education" (www.aam-us.org/docs/default-source/center-for-the-future-of-museums/building-the-future-of-education-museums-and-the-learning-ecosystem.pdf?sfvrsn=2)

Activity : How to Read a Shoe

Foot coverings have been worn since prehistoric times, and are worn in almost all cultures, by all types of people, and for hundreds of different reasons. This universal quality makes footwear a wonderful medium through which to study human culture and society. A shoe can tell you many things if you ask it the right questions. Here are just a few:

WHO

- Who was the owner of this shoe?
- What type of person wore this shoe?
- Is it a man's shoe or a woman's shoe?
- Did it belong to a child or an adult?
- Were they upper, middle, or working class?
- Were they from a particular tribe, or geographical group?
- Did they hold a special place in society or perform a certain function?

WHAT

- What is it called?
- What is it made of?
- What do you think it feels like?
- What distinguishes it from other shoes?
- What was its specific function?
- What other items of clothing were worn with this shoe?
- What did this shoe say about its wearer?
- What kind of restrictions, laws, or social norms regulated the wearing of this type of shoe?
- What customs, traditions, superstitions, or stories, if any, are associated with this shoe?
- What do signs of wear and damage tell about the shoe?
- What repairs/alterations have been made to the shoe?
- What measures have been taken to preserve the shoe?
- What do display materials convey about the shoe?

WHEN

- When was this shoe worn?
- Is there an exact date when the shoe was made?
- Does the shoe resemble footwear from other periods?
- How long did this style last and did the style recur?
- If it is an old shoe, does it compare to anything in our own time?
- What was the political and social climate of the period, and is this reflected in any way in the shoe design, decoration, and materials?
- Was this shoe worn every day or only for a certain purpose or special occasion?
- Has the attitude toward this type of shoe changed over time?
- What was the life span of this type of shoe?

WHERE

- What country is this shoe from?
- What was the climate like where this shoe was worn?
- Was this shoe worn indoors or outdoors?
- Were there social or political reasons why this shoe could or could not be worn in certain places?
- Was it worn in the same place it was made?
- Was it exported or traded to other places?
- Does the style or shape reflect influences from other places?

WHY

- Why is this shoe shaped the way it is?
- Why is it decorated the way it is?
- Why is it made out of these materials?
- Why was this shoe worn, as opposed to other types of footwear?
- Why did it come into fashion, and why did it fall out of fashion?

HOW

- How was this shoe made?
- Was it made by hand or by machine?
- Was it made in several parts or in one piece?
- How was each separate piece made and how were they attached?
- How was it worn?
- How did it influence the way a person walked, moved, and stood in relation to other people?
- How was this shoe put on and taken off?
- How did this type of footwear develop?
- How much does it weigh and what kind of noise would it make?
- How comfortable do you think it was to wear?

Source: Adapted by permission from *The Bata Shoe Museum*, www.batashoemuseum.ca.

Worksheets and Organizational Charts

Developing worksheets for students to use as part of a school program can be challenging. Appendix I: History Detectives has several worksheets already developed. Sites developing their own program should look at the worksheets in that program for examples of worksheets that have been successfully tested.

In addition to the examples in History Detectives Notebook, sites might wish to consider the organizational charts presented in this appendix. These organizational charts are tools that students are often familiar with. Starting with something students are familiar with will help to more smoothly move students into activities.

Some features to keep in mind when developing worksheets are:

- Provide basic written instructions directly on the worksheet.
- Provide students with choice as to how they will respond (for example, using checklists, writing notes, writing full sentences, drawing, matching, etc.)
- Keep it simple. This includes vocabulary, design, and instruction.
- Be aware of the reading and writing levels of students at different ages.
- Direct students to objects when completing the worksheet. It should add to the experience, not be the experience.
- Don't rely on the worksheet to teach the program. The worksheet should compliment activities and discussions. Remember activities should be ones not easily reproduced in the classroom. Worksheets should reflect this.

This appendix presents four common organizational charts:

- KWL Chart
- Venn Diagram
- Time Lines
- Spider Maps

There are many other types of organizational charts students may be familiar with and that would work well as part of a museum school program. The following websites are good places to start when researching organizational charts:

- Teacher Vision: Graphic Organizers (www.teachervision.com/graphic-organizers/printable/6293.html)
- Enchanted Learning: Graphic Organizers (www.enchantedlearning.com/graphicorganizers)
- Ed Helper: Graphic Organizers (edhelper.com/teachers/graphic_organizers.htm)

KWL Chart

The KWL chart is an effective tool for having students organize their prior knowledge of a topic along with how they would like to further that understanding.

The chart is composed of three columns. These columns are labelled K (what you know), W (what you want to know), and L (what you learned). Students fill in the first two columns prior to an activity and complete the last column when the activity is complete.

This is a valuable way to assess student understanding before an activity, to provide insight into the facets of the subject matter that students are interested in, and to give students an opportunity to self-assess and compare what they learned with what they hoped to learn.

This activity can be completed by students individually, in small groups on one sheet, or as a large group on a large chart. Another approach is to mix up individual and group activity by allowing students to write or draw their individual K, W, and Ls on post-its which are then placed on a large group chart for discussion as part of the introduction and conclusion.

Example:

Title of Program or Subject		
K What you Know	**W** What you Want to Know	**L** What you Learned

Venn Diagram

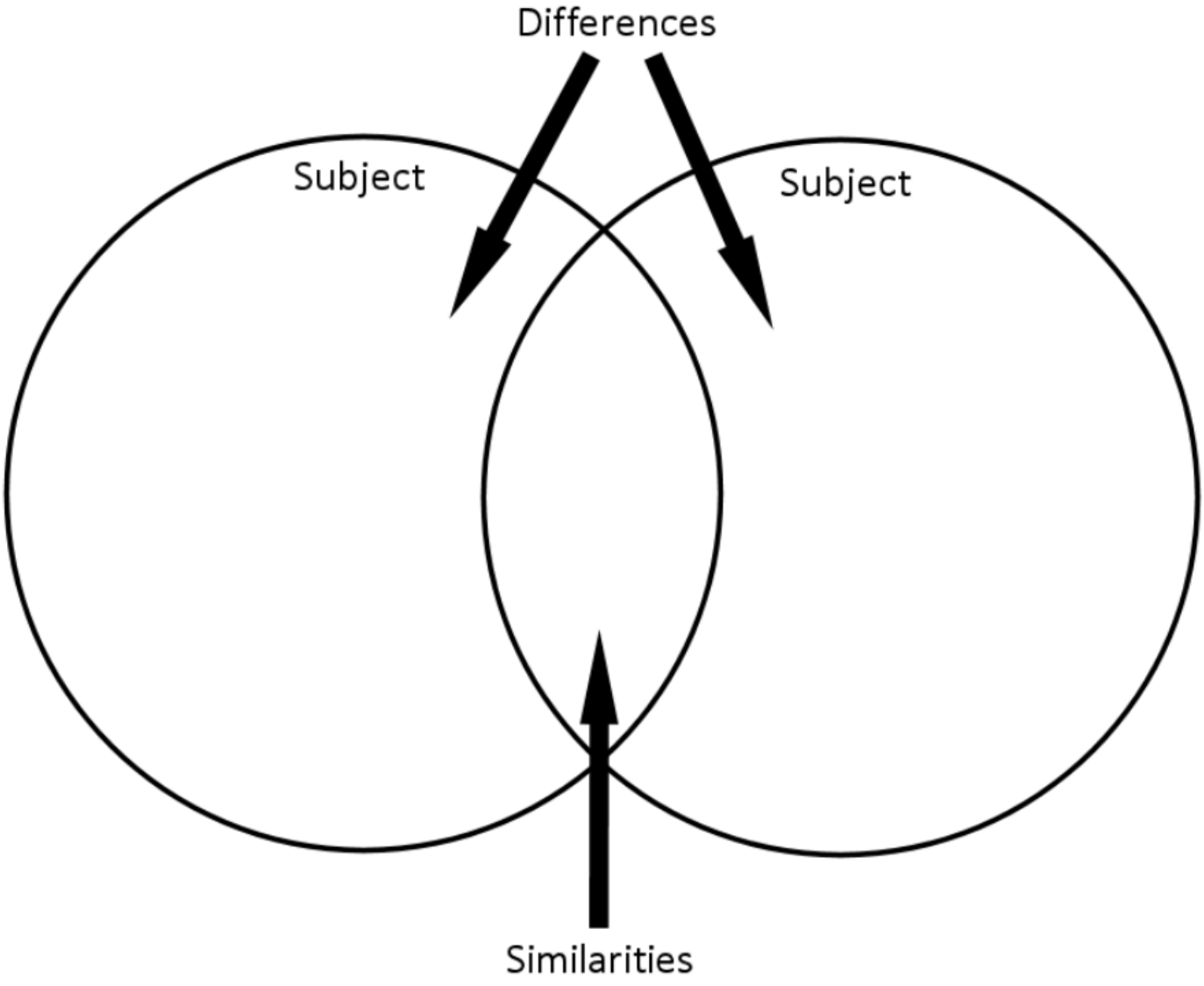
Venn diagrams are an excellent way for students to graphically depict the similarities and differences between distinct objects or ideas.

The diagram is composed of two or more circles, each representing a single object or idea. Similarities are represented where the circles overlap and differences are represented where the circles are distinct from each other.

Venn diagrams are useful as a visual organizer during activities that ask students to compare and contrast things.

This activity can be completed by students individually, in small groups on one sheet, or as a large group on a large chart. It is particularly useful for students when they are examining specific objects, for example, compare a modern and old version of something or two similar items, for example, a wasp vs a bee.

Example:



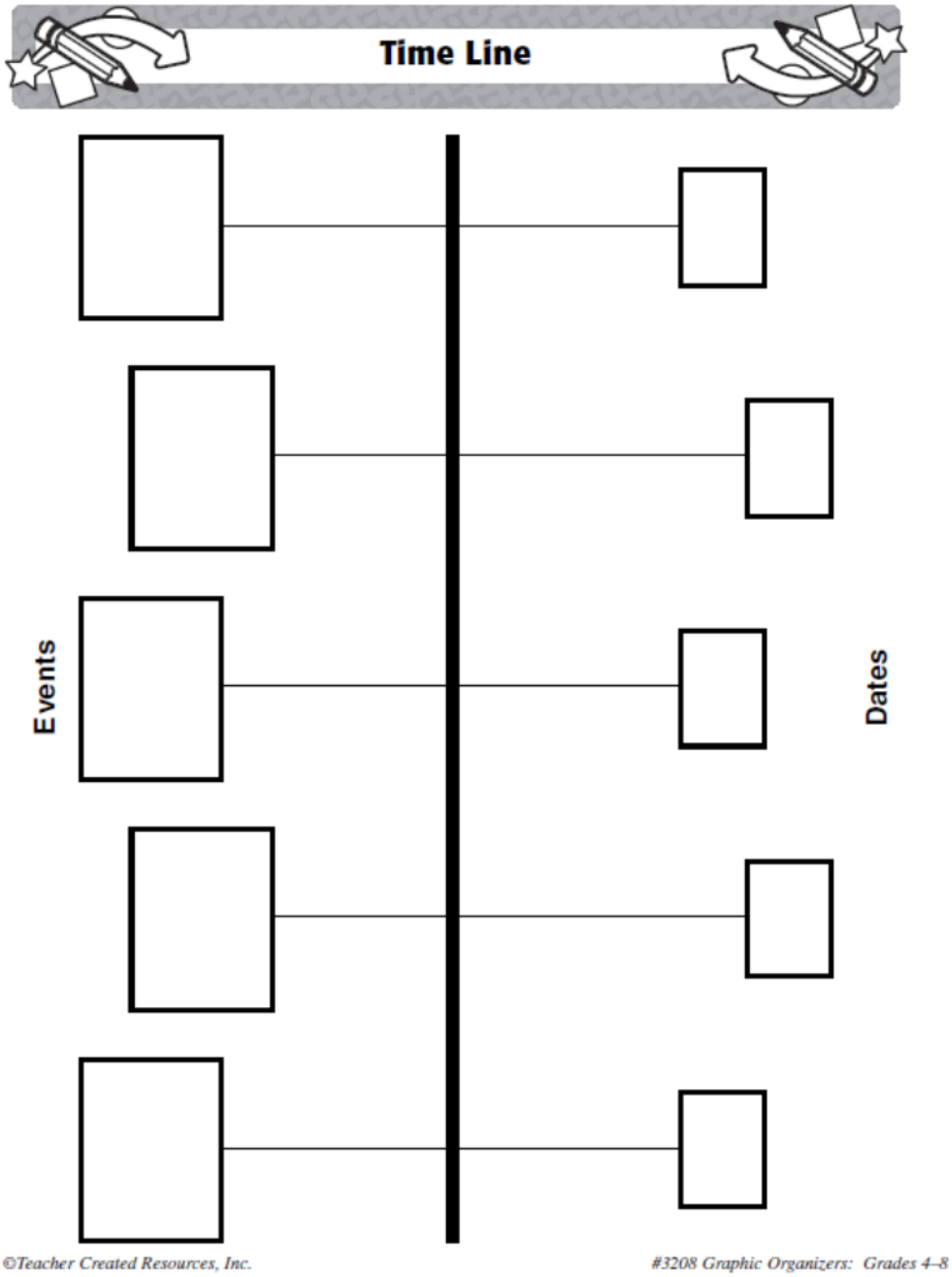
Time Lines

When students are required to think about the relationships between a number of different events, it can be helpful for them to arrange those events in sequence using a simple time line.

This allows students to make sense of when the events occurred relative to each other, how they relate to each other, and how they can be used to make inferences about future events.

This activity makes for a great group conclusion activity as it allows students to assemble the information they discovered in the program. This can be done with a large chart that the interpreter writes on using student input. Alternatively this can be done using objects which are placed in the timeline or providing students with identities and having them physically form the timeline (for example, historical events or lifeforms spanning different geological time periods).

Example:



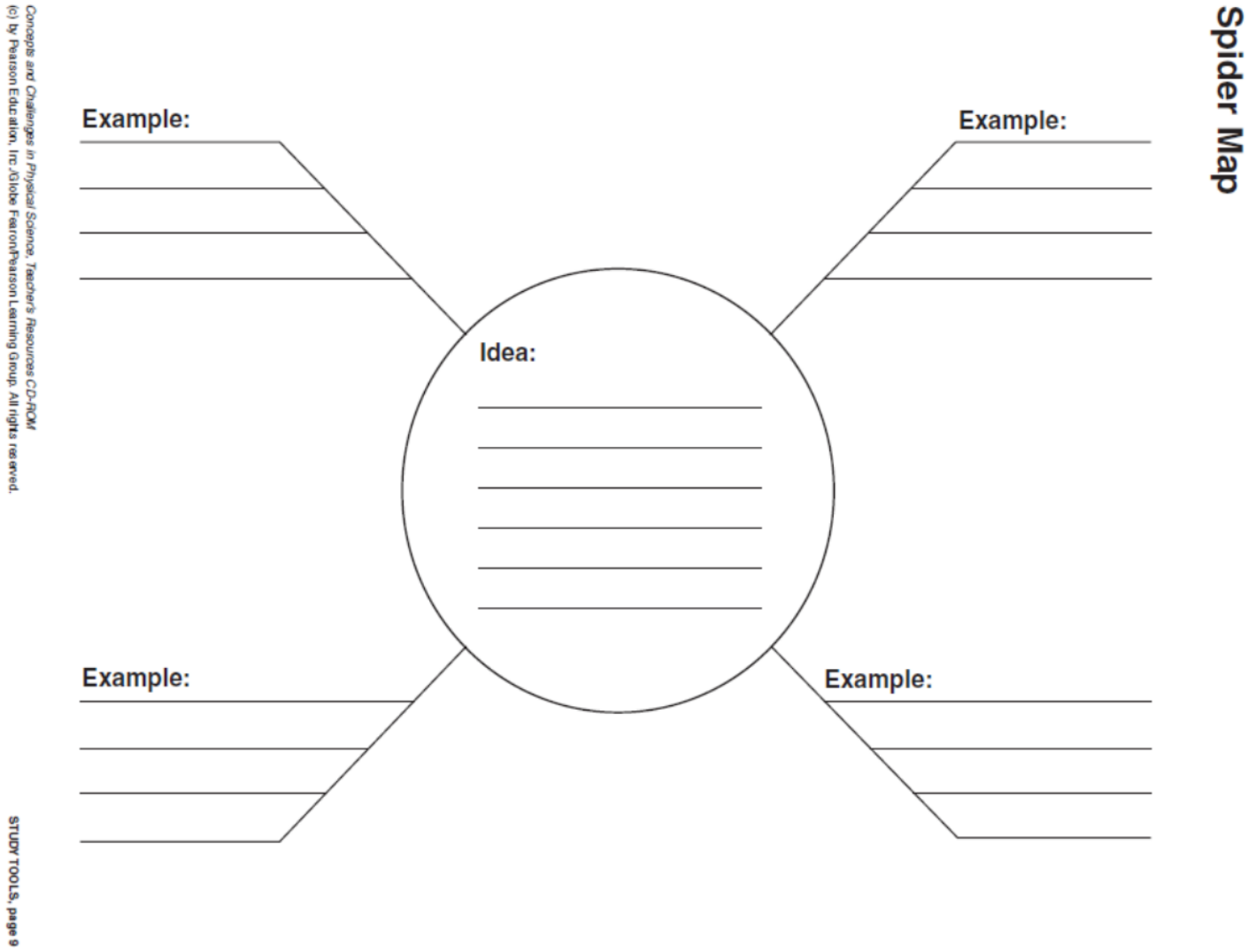
Spider Maps

Spider maps provide students with a graph to provide examples based on a specific idea.

Giving students a visual representation to record their thoughts gives them a concrete way to express their ideas.

This activity is useful for brainstorming or as part of an object investigation. Although it can very successfully be done individually it works best when students are working with partners or in small groups as it allows students to build on each other's ideas.

Example:



Glossary

Accessioned: Objects which have completed the formal act of being recorded as an addition to the museum collection. Accessioned objects will be marked with an accession number.

Abstract Concepts: An idea that does not have a tangible or easily observable representation. Often, they can be perceived differently relative to one's perspective or experience. Examples include time, distance, value.

Archival Records: A document that is part of an archive collection that records information about past human activities. May include contemporary and period images (photographs, drawings, charts, plans, maps, etc.), books, oral history recordings, theme-related or site-related archival records.

Artifact: An object that is part of a museum collection which shows human workmanship or modification, as distinguished from a natural object (specimen); may include archival records.

Behavioural Engagement: Student engagement as demonstrated through adherence to expectations and participation in activities and discussion.

Building: Buildings are an important part of interpretation at sites, particularly historic sites where buildings are historic or represent a period in history. Some buildings are purpose built to reflect a theme or support an interpretive function.

Chaperone: Adults who accompany students on a field trip other than the classroom teacher. Chaperones can include, but are not limited to, other teachers, EAs (Education Assistants), parents and grandparents. Different school boards and different grade levels have different requirements for how many chaperones much accompany a group on a field trip.

Cognitive Engagement: Student engagement as demonstrated through a desire to expand the knowledge gained in a lesson and build a further understanding independently. Those who display cognitive engagement demonstrate critical thinking and see failure as an acceptable part of learning.

Collection: The accessioned objects owned by the museum or archives.

Critical Thinking: High level thinking that uses a number of strategies to assess a problem in a logical and balanced way. Effectively, it is stopping to reflect on an idea based on a deeper consideration of the many factors and perspectives that influence it.

Critical Thinking Skills: Strategies that can be used to facilitate higher level thinking about an idea.

Emotional Engagement: Student engagement as demonstrated through a displayed interest or comfort with the task at hand and the learning environment.

Engagement: Engagement in school programs is how students are involved, immersed and take "ownership" for the information being presented. As engagement increases so does participating and critical thinking. This toolbox encourages museums to consider three main types of engagement: behavioural, emotional and cognitive

Exhibit: Interpretive displays which include panels, labels, cases, signage, audio-visual, multimedia (computers, electronics, internet initiatives, etc.). Most exhibits include a combination of objects and text. Exhibits can be permanent, temporary or travelling.

Facilitation: The process of guiding those participating in an activity. Facilitators ensure that a program meets each stated outcome, accommodates the needs of each participant, and they act as a "sounding board" for participants' ideas and connections to the material.

First-Hand Experience: Interaction in which the visitor engages with something. This engagement can be with interpreters (personal or audio/digital tours, demonstrations, theatre); hands-on/interactive interpretation; costumed presentations; activity sheets; discovery rooms. Interpretive programming can be designed for school visitations or for the general public.

Formal Learning: Learning that has goals, outcomes, and evaluations defined by an instructor with the learner intentionally being introduced to specific knowledge. This type of learning is often attributed to classrooms and structured learning environments.

Hands-on, Minds-on: Using physical exploration and manipulation of objects to encourage educational engagement in an activity. For example, touching an artifact while completing a worksheet that encourages critical thinking.

Heritage Skills: Activities done in the past as part of everyday life but that is no longer done, or done now as more of a novelty than a regular activity. These can be excellent 'hands-on, minds-on' activities that are object-based and have participants reflect on how technology has changed and how it has stayed the same (for example, blacksmithing, churning butter, carding and spinning wool, baking bread).

ICI: Innovation, Collections and Infrastructure are the three sections that make up ICI. ICI supports Nova Scotia Museum sites in the areas of interpretation, collections, and infrastructure.

IMP: The Nova Scotia Interpretive Master Plan (IMP) represents the work undertaken by the provinces' Heritage Division to identify significant stories and values inherent in the provincial cultural and natural landscape. It sets out a series of best practices, goals and objectives, as well as strategies and recommendations that direct interpretive renewal.

Inclusive: Programs are considered inclusive if they are made available to participants with varying backgrounds, abilities, and needs. They should be easily adaptable to accommodate all visitors.

Informal Learning: Learning that is not based on a rigidly structured plan. It generally takes place spontaneously, with the learner taking ownership over what is learned and how. Informal learning can be facilitated to a degree by giving learners a choice in their actions and control over the subject matter to elaborate on ideas as their interest dictates.

In Situ: An object in its original place and context (for example, fossils still embedded in a cliff, an artifact found in a historic house).

Intangible: Something that is unable to be physically seen, manipulated, or that is difficult to define. Abstract concepts can sometimes be described as intangible.

Intangible Heritage Objects: Heritage objects that cannot be physically manipulated, seen or may be difficult to define however represent an important aspect of a heritage. These can be described as the living aspects of heritage and can include songs, music, stories, language, expressions, smells, dance, etc.

Intellect: A trait associated with the ability of an individual to reason and understand concepts objectively. It is often demonstrated through content knowledge and the ability to think critically about that knowledge.

Interpretation: A dynamic communication process designed for audiences to reveal meaning, relationships, and appreciation of cultural and natural heritage. Interpretation enhances understanding through media/activities including but not limited to: exhibits, first-hand experiences, objects, buildings, landscapes and websites.

Interpretive Working Group (IWG): The Interpretive Working Group is made up of members from NSM, ICI and Nova Scotia Archives, Museums and Libraries. The purpose of this group is to provide a collective, collaborative and consistent approach to interpretation, focusing primarily on the NSM sites. The IWG has several sub-committees, including the Education Sub-Committee, who produced this toolbox document.

IPP (Individual Program Plan): An individualized plan created to support a student's success in school. These plans indicate the adaptations required to ensure a student has the opportunity to be an active participant in all activities and to cater to their strengths and needs.

Landscape: Landscapes can help to interpret a museum's natural and cultural history, habitats, and land use (agriculture, mining, etc.). Landscapes can be further interpreted through trails, panels, signage, print media and guided hikes.

Lifelong Learning: Learning that happens throughout the course of a person's lifetime. It can be formal (through structured lessons), informal (through conversations and experiences), intentional, and/or incidental.

NSM: The Nova Scotia Museum which contains 28 provincial sites.

Object: Objects are the basis or stepping off point for interpretation. They can include tangible and intangible objects. Tangible objects can be artifacts and specimens in the collection or in exhibits as complete objects. They can also be representative of another object such as illustrations, pictures of an artifact or specimen. Objects can also be props used to support (and sometimes be used in lieu) of collections artifacts and specimens. Intangible objects can be presented as complete objects or experiences, such as song, language, dance, music, etc. Intangible objects can also be presented through a representative object (for example, fiddle to represent music) or archival records such as paper documents, videos, sound recordings or images.

Object-Based Learning: The use of objects in an activity as a medium for exploration and discovery. Through the manipulation and examination of objects, learners are encouraged to think critically about their purpose, importance, and the story that they tell.

Open-Ended Questions: Questions that can be answered in a number of ways, giving the opportunity for deeper consideration and critical thinking. They encourage the learner to draw upon their own knowledge and experiences to provide a thoughtful response.

Primary Source: A first-hand account, original record, or physical object that provides novel information about a person, place, process, or event. Oral histories, objects, photographs, documents such as newspapers, ledgers, census records, diaries, journals, and inventories are examples of primary sources.

School Program: An experience designed specifically for students to meet their specific learning needs, including addressing curriculum outcomes.

Specific Curriculum Outcomes (SCOs): Specific curriculum outcomes (SCOs) are written by the Department of Education and Early Childhood Development as specific goals for teachers to include in their curriculum.

Specimen: A natural object, including rock, mineral, fossil, animal, or plant material, as distinguished from an object made or modified by human actions (artifact).

Student: In this toolbox students refer to those attending school from primary to grade 12. Younger (pre-school) and older (college, university, graduate) youth may also be considered students but this toolbox only addresses those in P-12.

Student-Centered Learning: A teaching strategy that provides students with control over what and how they learn. There can be varying degrees of student-centered learning, depending on the amount of control that the educator is willing to give up. It does not necessarily mean that there should be no structure to a lesson, merely a more flexible one. The main idea behind this style of instruction is giving students choice and ownership over what they are learning.

Tangible: An object or concept which is able to be directly related through touch or experience.

Tour: The process of an interpreter guiding visitors around a site while talking about what visitors are seeing. Tours are often less interactive than programs and hence not always effective school program activities.

Website and Online Initiatives: Audiences can access museum interpretation via the internet on museum websites, virtual exhibits, and social media. These extend the range of museum users to a general broader awareness of museum resources. Museums using website and online initiatives for school programming should be aware that many schools have firewalls which block access to specific websites. Amongst the sites most often blocked include social media websites like Facebook and Twitter.

Working Collection: Accessioned artifacts or specimens which collections staff have designed as objects that can be operated or handled by staff, volunteers, and the public and that, ultimately, may be expendable. They must fulfill a program need, be appropriate to the program, be demonstrated to be expendable (for example, a duplicate with no defined purpose, over representation in the collection), be safe to use and not contravene legislation (for example, firearms). Should be denoted in accession number by 'W.'

Appendix H

Photo and Image Credits

Module One: Why Focus on School Programs

Page 9 Le Village historique acadien, NSM Webpage

Page 11 Sherbrooke Village Museum, NSM Webpage

Page 12 Top: NSM Publication, "Museum Education," 1967

Middle & Bottom: From NSM Publication "Museum Education," 1967

Page 13 Top: Cossit House Museum, NSM Webpage

Bottom: Sutherland Steam Mill, NSM Webpage

Page 14 NS Department of Education and Early Childhood Development' Webpage, "Nova Scotia's Action Plan for Education 2015: The 3Rs: Renew, Refocus and Rebuild"

Page 15 Interpretive Master Plan, About NSM, NSM Webpage

Module Two: Five Key Principles of Successful School Programs

Page 17 Museum of Natural History, Province of Nova Scotia/ Photo by Len Wagg

Page 20 Ross Farm Museum's Facebook

Page 22 Fisherman's Life Museum, Province of Nova Scotia/ Photo by Len Wagg

Page 23 Maritime Museum of the Atlantic, NSM Webpage
NSM Artifact Accession Number: M2005.4.1a,b

Page 24 Top: McCulloch House Museum, NSM Webpage

Middle: Ross Thomson House Museum, Province of Nova Scotia

Bottom: Lawrence House Museum, NSM Webpage

Page 25 Top: North Hills Museum, NSM Webpage

Bottom: Collections & Research, NSM Webpage

Page 26 Black Loyalists Cultural Center, Province of Nova Scotia/ Photo by Len Wagg

Page 27 Perkins House Museum, Province of Nova Scotia

Page 28 Highland Village Museum's Facebook

Page 29 Fisherman's Life Museum, Province of Nova Scotia/Photo by Len Wagg

Page 30 Museum of Natural History's Facebook

Page 31 Left: Maritime Museum of the Atlantic, Province of Nova Scotia/Photo by Len Wagg

Center: Museum of Industry, Province of Nova Scotia/ Photo by Len Wagg

Right: Fisheries Museum of the Atlantic, NSM Webpage

Page 33 History Detectives CCH Pilot at Museum of Natural History, Photo by Maggie MacIntyre

Page 34 Top: Fundy Geological Museum's Facebook

Bottom: Maritime Museum of the Atlantic, Province of Nova Scotia/Photo by Len Wagg

Page 35 Haliburton House Museum's Facebook

Page 36 Top: Wile Carding Mill Museum, NSM Webpage

Bottom: Firefighter's Museum, Province of Nova Scotia

Module Three: Getting to Know Your Audience

Page 37 Sherbrooke Village Museum, NSM Webpage

Page 40 Haliburton House Museum's Facebook

Page 41 Top: Maritime Museum of the Atlantic's Facebook

Bottom: Museum of Natural History, Province of Nova Scotia/Photo by Len Wagg

Page 42 Left: Highland Village Museum, NSM Webpage

Middle: Fundy Geological Museum, NSM Webpage

Right: Fisheries Museum of the Atlantic, NSM Webpage

Page 43 Museum of Natural History, Province of Nova Scotia/ Photo by Len Wagg

Page 44 "The Periodic Table of Play" Designed by and used with permission of Laura Seargeant Richardson

Page 45 Museum of Natural History, NSM Webpage

Page 46 Uniacke Estate Museum Park, NSM Webpage

Page 47 Left & Right: Le Village historique acadien de la Nouvelle-Écosse, NSM Webpage

Page 48 Highland Village Museum's Facebook

Page 49 Barrington Woolen Mill Museum, NSM's Facebook

Module Four: Program Development Strategies

Page 51 Shand House Museum, NSM Webpage

Page 54 History Detectives Pilot at Museum of Natural History, Nova Scotia Museum/Photo by Roger Lloyd

Page 56 Left & Right: Balmoral Grist Mill, NSM Webpage

Bottom: Collections & Research, NSM Webpage

Page 57 School Bus in Winter, Province of Nova Scotia/Photo by Shirley Robb

Page 58 Prescott House Museum, NSM Webpage

Page 59 Old Meeting House Museum, Province of Nova Scotia

Page 60 History Detectives Pilot at Museum of Natural History, Nova Scotia Museum/Photo by Roger Lloyd

Page 61 Fisherman's Life Museum, NSM Webpage

Page 62 Highland Village Museum, NSM Webpage

Page 63 Museum of Natural History, NSM Webpage

Page 64 Top: Uniacke Estate Museum Park, NSM Webpage

Bottom: Black Loyalists Heritage Center, Province of Nova Scotia/Photo by Len Wagg

Page 65 Ross Farm Museum, NSM Webpage

Page 66 Dory Shop Museum, NSM Webpage

Page 67 History Detectives Pilot at Highland Village Museum, Photo by Maggie MacIntyre

Page 68 Merlin Macaw's (Maritime Museum of the Atlantic) Facebook

Page 69 Fundy Geological Museum, NSM Webpage

Page 70 Museum of Industry's "For Teachers" NSM Webpage

Module Five: Program Presentation Strategies

Page 73 Museum of Industry, NSM Webpage

Page 75 Highland Village Museum's Facebook

Page 76 "Museum Interpreter as Host, Teacher and Knowledge Sharer" created for Toolbox for Museum School Programs, photo of Liz Spence, MNH Naturalist, photo by Victoria Veenstra, ICI intern

Page 77 Nova Scotia Interpretive Master Plan, page 72

Page 81 Le Village historique acadien de la Nouvelle-Écosse, Province of Nova Scotia

Page 82 Left: Black Loyalist Heritage Center, NSM Webpage

Right Top: Fisheries Museum of the Atlantic, NSM Webpage

Page 82 Right Middle: Maritime Museum of the Atlantic, Province of Nova Scotia/Photo by Len Wagg

Right Bottom: Five Islands Provincial Park, Photo by Len Wagg

Page 83 Ross Farm Museum's Facebook

Module Six: Working with Partners and Where to Get Help

Page 85 Maritime Museum of the Atlantic, NSM Webpage

Page 88 Maritime Museum of the Atlantic, NSM Webpage
Reference Number: *Nova Scotia Archives RG 41, vol. 75, no. 35*

Page 89 Top: Council of Nova Scotia Archives Webpage

Bottom: Nova Scotia Archives, Historical Maps of Nova Scotia Virtual Exhibit
Reference Number: *Nova Scotia Archives Map Collection: 200-1745: loc.3.5.2*

Page 90 Top: Nova Scotia Provincial Library Website

Bottom: Halifax North Memorial Public Library, Province of Nova Scotia

Page 91 Nova Scotia Provincial Library Website

Page 92 Photo used courtesy Halifax Citadel National Historic Site, Parks Canada/Photo by Dale Wilson

Page 93 Uniacke Estate Museum Park, NSM Webpage

Page 94 Highland Village Museum's Facebook

Page 95 Top & Bottom: Maritime Museum of the Atlantic, NSM Webpage

Page 96 Top: ICI Intern, 2014, Photo by Museum of Natural History

Bottom Left & Right: ICI Interns, 2015, History Detectives Pilot at Museum of Natural History, Nova Scotia Museum/ Photo by Roger Lloyd

Page 97 Top: Museum of Natural History, NSM Webpage

Bottom: Support 4 Culture Webpage

Module Seven: Beyond the School Program

Page 99 NSM at SSTA Conference 2015, Photo by Derek Harrison

Page 102 Top: Firefighters Museum, Province of Nova Scotia, Photo by Len Wagg

Bottom: Maritime Museum of the Atlantic, Province of

Page 103 Museum of Industry, Province of Nova Scotia, Photo by

Page 105 Top, Middle & Bottom: Maritime Museum of the Atlantic/É*cole Grosvenor Wentworth Park School, Photo by Roger Lloyd*

Page 106 Top: Uniacke Estate Museum Park, NSM Webpage

Bottom: Museum of Natural History, Photo by Amy Coleman

Page 107 Top: Museum of Natural History, Photo by John Kemp

Bottom: Hillcrest Academy Djembe Drummers, Photo by Greg Bennet, The Shelburne County Coast Guard

Page 108 Top: Highland Village Museum, Photo by Katherine MacLeod

Bottom: Holly Hanes is presented with the Lawrence House Museum Bursary, 2010. Photo courtesy of Lawrence House Museum

Page 109 Top: NS_MMA Instagram (Maritime Museum of the Atlantic)

Bottom Left: Nova Scotia Archives, Photo by Andrea Trimper

Bottom Right: Highland Village Museum, NSM Webpage

Page 109 Top: Nova Scotia Archives, Photo by Andrea Trimper

Bottom: Nova Scotia Heritage Fair's Facebook

Page 111 Museum of Industry, NSM Webpage

Page 112 Ross Farm Museum, NSM Webpage

Page 113 Left: Highland Village Museum's Virtual Exhibit "Cape Breton Ceilidh" Webpage, Virtual Museum of Canada

Right Top: NSM's Collection & Research Webpage

Right Bottom: Black Halifax: Stories from Here Webpage

Page 114 Ross Farm Museum's Instagram Account

Page 115 Top: @AskACurator Twitter

Bottom: @NS_Museum Twitter

Page 115 Top, Middle & Bottom: NSM at SSTA Conference 2015, Photo by Derek Harrison

Page 117 Top, Left & Right: NSM at AST Conference, 2015, Photo by Maggie MacIntyre

Bottom: Nova Scotia Museum/Photo by Roger Lloyd Accession Number: NSM001GF020.001a

Page 118 Top Left: Maritime Museum of the Atlantic Flickr

Top Right: Student of Hollis Road Elementary School, Province of Nova Scotia, Photo by Len Wagg

Bottom: Black Loyalists Heritage Center's Facebook

Page 119 Fisheries Museum of the Atlantic, Province of Nova Scotia, Photo by Len Wagg

Page 120 Left: Nova Scotia Museum Facebook

Right: Nova Scotia Archives Facebook

Appendices

Page 135 "The Periodic Table of Play" Designed by and used with permission of Laura Seargeant Richardson

Page 137 "Museum Interpreter as Host, Teacher and Knowledge Sharer" created for Toolbox for Museum School Programs, photo of Liz Spence, MNH Naturalist, photo by Victoria Veenstra, ICI intern

Page 157 Museum of Natural History's "For Teachers" NSM Webpage

Page 158 Museum of Industry's "For Teacher's" NSM Webpage

Page 188 All: History Detectives Pilot at Museum of Natural History, Nova Scotia Museum/Photo by Roger Lloyd

Page 190 History Detectives' Supplies, Photo by Maggie MacIntyre

Appendix I

"History Detectives" A Generic Grade Five Museum School Program

Appendix I Contains:

- Instructions for personalizing "History Detectives" School Program
- Information about materials used in "History Detectives"
- Sample "History Detectives" Program Script and Procedures
- Templates for Components of "History Detectives"
- Student Workbook for "History Detectives"

The following school program has been designed to be presented at any Nova Scotia Museum site. The program was developed in partnership with the Nova Scotia Department of Education and Early Childhood Development and is approved by the Social Studies Curriculum Consultant as meeting curriculum outcomes. The activities are designed to meet the principles of successful museum school programs as outlined in Module Two of the Museum School Programs toolbox, with a strong focus on learning with objects. Sites are encouraged to adapt and personalize this program as needed to meet their IMP outcomes and logistical realities.

For simplicities sake the program in this appendix is written as it was presented for the pilot at the Museum of Natural History Sable Island exhibit. The program has also been piloted at Fisheries Museum of the Atlantic and in two separate historic houses at the Highland Village Museum. As the pilots have proved, every activity can easily adapted to be presented in any location—from an exhibit based space to a historic room.

Assistance is available to Nova Scotia Museum sites wanting to personalize "History Detectives" from the IWG Education Sub-Committee. Assistance can include, but is not limited to:

- Training on program development and presentation
- Loan of supplies needed to present the program
- Assist research and sourcing archival records (documents/ images)
- Accessing funding to purchase supplies.

For more information on assistance on personalizing the "History Detectives" school program for the 2016-17 and 2016-17 school years contact ICI's Interpretive Researcher, Maggie MacIntyre. (Maggie.MacIntyre@novascotia.ca or 902-424-4451).

Personalizing "History Detectives" Grade Five School Program for your Museum

Choosing Activities

The program provided comes with four activities. Sites should choose which three activities best meet their logistical requirements and the stories they want to tell.

- **Modern Mysteries**: Compares artifacts to modern items students are familiar with. Can be done with artifacts in situ or in a prepared space. Best for historic sites. Best done with working collection that students can touch but can be done without touching artifacts. Easy to prepare.
- **Object Investigation:** Students each examine a single object. Can be done with artifacts or specimens. Objects can be in a prepared space or in situ. Best done with working collection that students can touch but can also be done without touching. Easy to prepare.
- **Clues from the Archives:** Students examine archival records in pairs. Documents can be reproductions. Best done in a clean area where students can spread out with paper and partner (tables or clean mats). Requires research to prepare activity.
- **Curious Construction:** Students examine building and landscape and draw a picture. Activity designed to be done outside. Requires little preparation and could easily be facilitated by a volunteer or chaperone.

Alternatively, sites may choose to do only one or two of the activities and supplement the program with existing or new activities unique to their site.

Students tested all four activities in multiple pilot programs. Photos from pilot at Museum of Natural History: Modern Mysteries, Object Investigation, Clues from the Archives and Curious Construction.

Continued...Personalizing "History Detectives" for your Museum

Personalizing Script and Activities

The script provided in this appendix was used for the pilot in the Museum of Natural History Sable Island Exhibit. Areas that need to be changed have been highlighted in a light teal colour. A callout box has been added to explain what needs to be changed. Example:

Grade:	Grade 5 Social Studies		
Program Created by:	IWG Education Sub-Committee & MSVU B.Ed. Interns	**Date of Creation:**	August 2015
Program Updated for Specific Museum by:		**Date of Update:**	
Program Availability:	To be determined by site presenting the program		

Add names and dates for your site's update.

When will you offer it?

Curriculum

The program has been designed to address grade five social studies curriculum outcomes. Sites could easily alter the program to also include grade four social studies curriculum, comparing history detectives to history explorers.

The program could also be adapted for other grades however the activities would need to be changed to reflect the capabilities of students in younger or older grades. See Appendix D for other curriculum outcomes this program could be adapted to address.

"The Case"

Early iterations of this program focused on students solving a case. Through multiple pilots it was proven that solving a specific mystery did not work in the ninety minutes allotted. Museums personalizing this program should avoid the template to try to have students solve a specific mystery.

In the current version of "History Detectives" the case is presented as a case the students can explore. The activities each give them a chance to explore different aspects of the case but the focus is on the skill they are learning rather than the facts. The final goal is to acquire the skills needed to earn their official history detective badge rather than find a specific fact or answer.

Objects and Materials for "History Detectives"

Purchasing Objects and Materials

This program was designed to be easily implemented at little cost to a museum. It however still requires some props and materials. Many of these items are things that a museum might already own (for example, whiteboard), could make inexpensively (for example, notebooks), or could purchase at little cost (for example, pencils).

Nova Scotia Museum sites looking to develop this program but who need help purchasing supplies should apply for a Support 4 Culture (S4C) interpretive renewal grant. This grant program looks favorably upon this type of ask. For more information see Module Six.

Detective Kits

Each student participating in the program requires their own detective kit. Detective kits include:

- History Detective-in-Training Badge*
- Pencil
- Clipboard
- Magnifying Glass
- Gloves
- Notebook*

Detective kits are available to borrow through the IWG Education Sub-Committee.

Additional items that supplement the detective kits include:

- Supervisor Badges for Teachers/Chaperones*
- Pencil Sharpeners—at least one to be kept at each activity
- Only if doing Curious Construction: Kid Binoculars (inexpensive)
- Optional: Pencil Case to Hold Everything (these turned out to be more hassle than help during the pilots so they are no longer recommended but some museums might find them useful)

* Templates for these items are available at the end of this appendix.

All the items for the detective kits can be purchased through an office supply store like Staples. Currently (2016), detective kits can also be borrowed for testing and piloting programs through the ICI Interpretive Researcher (Maggie.MacIntyre@novascotia.ca).

Continued...Objects and Materials for "History Detectives"

Large Props/Infrastructure

In addition to a detective kit for each student, the museum should have the following items to be used in the program:

- Whiteboard with markers, eraser and stand
- Noise makers, one per group leader
- Tables and Chairs (amount depends on activity and set-up)
- Mystery Case Files*
- Smaller tags, arrows and other paper props—will depend on activity*

* Templates for these items are available at the end of this appendix.

Museum should also have clean mats specifically for programs for students if they will be sitting on the floor. This could be large room rugs that multiple students can sit on or smaller individual mats.

Working Collection, Reproductions and Artifacts

This program relies heavily on students learning from objects. Although hands-on is always preferred when working with students, this program was designed to provide an object rich experience without any risk to museum collection. For this reason, this program encourages students and staff to wear gloves at all times when interacting with objects, even if they are working collection, prop or reproduction. Museums should consider the following ways to ensure their program is object-rich:

- **Use working collection pieces**. These are pieces that are officially designated or purchased as working collection or prop.
- **Use museum collection pieces in situ**. Invite students to get close to museum exhibits or come into historic rooms. Explain that although they cannot touch they can use their magnifying glass to see details.
- Use reproductions. Artifacts and specimens can be replaced with reproductions that students can handle. Reproductions are particularly useful with archival records as high resolution images can be inexpensively printed.
- Provide photographs. If students are unable to pick-up or manipulate an artifact, provide photographs of the parts of it they cannot see while it is on display in situ. These photographs can be printed or provided digitally on appropriate technology.
- Get creative and have discussions with collections and conservation staff. Explain to collections staff the programs and work with them to find alternative ways for students to interact with the objects.

Museum School Program Development Template

Program Overview Page

"History Detectives: *The Sable Island Case*"

Retitle to reflect case students will be exploring at your site.

Program Highlights (Description for Marketing Purposes):
Can your students solve a history mystery? In this hands-on, minds-on program students become history detectives as they learn about who used to live on Sable Island. Students will rotate through three interactive stations at which they search for clues and develop skills used by historians, researchers and museums to learn about the past. Based on the concept of "learning with objects," this program will engage students with primary sources, including artifacts and archival records. Students will discover how objects provide evidence of the past and

Change to reflect the mystery students will be exploring at your site.

Content and Outcomes

Overarching Objective: *(1 sentence containing 1 idea that describes what the program is about.)*	By interacting with real objects at a museum, students will develop skills that relate to how we learn about the past.
Curriculum Outcomes addressed by this program:	**Social Studies Grade 5 Curriculum Outcomes** Students will develop an understanding of how we learn about the past with a focus on Acadians, African Nova Scotians, Gaels, Mi'kmaq and additional cultures. (Outcome 1) **Skills**: Citizenship, Communication, Critical Thinking
IMP Content Area:	**E.4 Cultural Expression** E.4.10 Heritage Preservation

Basic Logistics

Grade:	Grade 5 Social Studies		
Program Created by:	IWG Education Sub-Committee & MSVU B.Ed. Interns	**Date of Creation:**	August 2015
Program Updated for Specific Museum by:	IWG Education Sub-Committee (New Curriculum Outcomes)	**Date of Update:**	October 2016
Development Partners:	• Nova Scotia Museum Pilot Sites: Fisheries Museum of the Atlantic, Highland Village Museum, Museum of Natural History • Nova Scotia Archives • Nova Scotia Department of Education and Early Childhood Development		
Program Availability:	To be determined by site presenting the program		

Add names and dates for your site's update.

Add partners who helped your site.

When will you offer it?

Program Structure

Program Length:	90 minutes		
Maximum Group Size:	30 students – 1 class		
Student Groupings:	Divide group into 3 smaller groups		
Facilitation – # of Staff:	3 staff	**# of Volunteers:**	Optional: 3 volunteers

Increase to 60 students? (2 classes)

Use more/ less staff or volunteers?

Program Outline

After a full group introduction, the students are divided into three smaller groups, or squads, which will rotate between Activity 1, 2 and 3. They will come back together for a full group conclusion. Museums may wish to substitute Activity 1, 2, or 3 with Activity 4 if it better meets their site's theme or logistical requirements.

Update locations to reflect where activities will happen at your site

Activity	Location	Time	Featured Objects
Introduction: "History Detective Training"	Central location that can accommodate the whole group	15 mins.	• History Detective Kit
Activity 1: "Modern Mysteries"	Location with lots of artifacts, either in situ or on a display table, that students can examine. Can accommodate 1/3 of the group.	20 mins.	• Artifacts in situ or on display • Photo cards showing modern equivalents of artifacts
Activity 2: "Artifact Investigations"	Location with artifacts where students can spread out to spend time examining a single artifact. Can accommodate 1/3 of the group.	20 mins.	• Artifacts in situ or on display
Activity 3: "Archival Clues"	Location where students can work independently (if necessary without a staff person) which can accommodate 1/3 of the group. Ideally with tables & chairs, however, sitting on the floor can also work. Can be the same space as introduction.	20 mins.	• Collection of archival records (reproductions) representing life at the site. Examples include images, documents, audio and visual components.
Conclusion: "Graduation"	Central location that can accommodate the whole group. Possibly same space as introduction.	15 mins.	• Students' Observations
Alternative Activity – Can be done in lieu of Activity 1, 2, or 3.			
Activity 4: "Curious Construction"	Outside (either the back, front or side yard)	20 minutes	• Historical Building (Your Site)

Select which 3 activities will be done. Delete alternative activity.

Museum School Program Development Template

Program Research Page

"History Detectives"

Background Information:	Insert site and program specific information here. For a general understanding about program presentation, it is recommended that sites use the Museums School Program Toolbox as a resource on principals of successful school program (Module Two) and program presentation strategies (Module Five). Program presenters may also wish to better understand the specific curriculum outcomes and skills addressed by this program. Information on the curriculum outcomes can be found in the "Social Studies Grade 5 Curriculum Guide."
Sources and References:	Insert site and program specific information here. For general resources on program presentation, Appendix F contains a full list of sources and references that could be consulted to better understand the theory behind this school program. The following sources will be of particular use: • Department of Education, (2012) "Learning with Objects: Artifact Exploration Guide". • Department of Education, (2011) "Social Studies Grade 5 Curriculum Guide". • John Hennigar Shuh, (1982), "Teaching Yourself to Teach with Objects", Journal of Education, 7 (4). Additionally, be sure to use the Museum School Program Toolbox.

Write 1/2 to 1 pages of background information to help new staff and volunteers know about the case the students will be exploring.

Add 2-5 sources and references where new staff and volunteers can further explore information presented in background information.

Museum School Program Development Template

Update description to reflect what students will be exploring at your site.

Update program title.

Activity Description Page

"History Detectives: *The Sable Island Case*"

Introduction: "History Detective Training"

Activity Highlights (Description for Marketing Purposes):
During the program introduction students will participate in History Detective Training and be introduced to the Sable Island history mystery they will need to help solve.

Activity Logistics

Update using information from Program Outline.

Need help getting materials? Read the information at the start of Appendix I.

Location	Time	Materials

Central location that can accommodate the whole group	15 minutes	• Large carpets for students to sit on
		• White board with dry erase marker
		• History Detective Kits (one for demonstration plus one per student). Each kit will contain:
		  ◦ History Detective Badge
		  ◦ Clipboard
		  ◦ Notebook
		  ◦ Pencil
		  ◦ Gloves
		  ◦ Magnifying Glass
		  ◦ Kid Binoculars (to be kept for use at "Curious Construction" activity)
		• History Detective Supervisor Badges (one for demonstration plus one for each teacher/chaperone).
		• Pencil Sharpeners – to be held by staff, volunteer or teacher/chaperone
		• Mystery Envelope – "The Case"

Purpose of Activity:	Provide students with an orientation to the site and introduce to them the skills they will be using to do object-based learning.	
Curriculum Outcomes addressed by this activity:	**Social Studies Grade 5 Curriculum Outcomes** Students will develop an understanding of how we learn about the past with a focus on Acadians, African Nova Scotians, Gaels, Mi'kmaq and additional cultures. (Outcome 1) **Skills**: Citizenship, Communication, Critical Thinking	
Set-Up:	• Set-up an area where students can sign the guest book upon arrival. • Prepare a space for students to sit safely as a large group. (See Safety Considerations.) Consider providing chairs for teachers and chaperons. • Set-up demonstration area with one history detective kit and whiteboard in a location that students can easily see it from where they will be sitting. • Divide the history detective kits and badges into three groups, ready to be handed out at the end of the introduction. Have History Detective Supervisor Badges ready to distribute by the volunteers or museum staff to teachers and chaperones.	

Procedure

Timing	Instruction	Possible Script
Minute 1	1. **Welcome students to the museum**. Invite them to take a seat on carpets. Tell them your name and the names of the other staff/volunteers who will be presenting the program.	*"Welcome to the museum. My name is Gus. I would also like to introduce you to Jack and Jill. Today we will be your museum teachers."*
Minute 2	2. **Tell students what will be happening during their visit. (Set expectations.)** Explain that: • First they will participate in detective training where they will learn how to be a detective and about the case they are going to explore. • At the end of the introduction they will be divided into three groups. Each group will visit three stations. At each station they do an activity that will help them explore the case. • After visiting three stations, they will return to the large group to discuss the case and earn their real history detective badges which they will get to take back to school.	*"We are very happy to you are here today. Your teacher tells us you would all make excellent detectives. So today you are going to learn how to be history detectives. After this introduction you will be divided into three groups. Each group will visit three stations where you will do three training activities, each exploring clues from the museum. Once you are done we will come back here together and discuss what you learned. Upon completion you will earn your history detective badge which you can take back to school.*
Mins. 3-5	3. **History Detective Training – Lesson 1: The Tools.** Show students what will be in their history detective kits. Students will be each getting their own badge, clipboard, notebook, pencil and gloves. Explain expected behaviours and reasons for behaviours in regards to the item. • Clipboard, Notebook and Pencil: For recording observations and completing forms. Pencils are used to avoid making accidental permanent marks.	*"First things first. You are going to need training to become official history detectives. The first thing you need to be a history detective are tools.* • *The most important items in a detective kit are clipboard, notebook and pencil. Notebooks are useful to record what you see so that you can refer back to it when solving the mystery. Some detective notebooks, like the ones you will be using today, have forms to fill out to help remind detectives where to look for clues.*

Timing	Instruction	Possible Script
Continued	• Gloves: Worn to touch and protect artifacts. Students must only touch artifacts when given permission. • Magnifying Glass: Used to look at details on an object. • Binoculars: Used in the "Curious Construction" activity to look at details on a building that might be difficult to see from a distance. • History Detective in Training Badge: Used to identify students as part of the school group.	• *Next is a pair of gloves. Although touching in a museum is not generally allowed, today, as history detectives, you have special permission touch certain artifacts. If you are told it is okay to touch something, you need to put on your gloves first. One reason we don't touch artifacts is that the dirt and natural oils on our hands can damage the artifacts.* • *Your magnifying glass will help you look at the small details on objects.* • *In one activity today it might be difficult for you get close to the object you are looking at. In that activity use your binoculars to see details from a distance.* • *The last thing your kit will have is a special history detective in training badge. It will show anybody who sees you today that you are here doing important work.*
Minute 6	4. **Explain to Teachers and Chaperones their role.** Hand-out supervisor badges to the teachers and chaperones. Ask them to review their responsibilities listed on the badges while the students finish training.	*"Teachers and Chaperones will also be given a special history detective supervisor badge. This badge gives them some special responsibilities in order to help the history detectives do their jobs. These responsibilities are written on the back of the badges."*
Mins. 7-9	5. **History Detective Training – Lesson 2: The Rules.** Have the students come up with their own rules that they will follow while in the museum. Use the white board to write down the agreed up on rules. Try to keep it to less than seven rules. Possible rules include: Stay with your group. No running, yelling or pushing. Putting your hand up to talk.	*"As History Detectives you will be exploring many parts of the museum. We will want to make sure that our explorations do not put any of the artifacts at risk and that we are not too disruptive to the other History Detectives. What do you think are some rules we might want to follow today?"*

Timing	Instruction	Possible Script
Mins. 10-13	6. **History Detective Training – Lesson 3: Envelopes.** Explain how the mystery envelopes are used at each station. Open the first mystery envelope and read the document inside which will introduce the case which the students will be exploring.	*"Each station you visit today will have one of these mystery envelopes. The information inside the mystery envelope will give you clues. I am now going to read to you the first mystery envelope which is going to tell you about today's case."* [Open and read envelope: see text below.]
Mins. 14-15	7. **Divide students into four groups and start the program**. Explain to students that now that they have completed their history detective training they are ready to go look for clues. Teachers may have already have divided the students into groups before arriving but if they haven't, work with them to quickly divide the students into groups. Assign each group a leader to take them to their first station where they will receive their detective kits and badges.	*"You now done your history detective training and are ready to receive your training badges and tools. With the help of your teacher, we are now going to divide you into three detective squads. Once in your group you will go to your first station where you receive your detective kit and detective badge. Does anybody have any questions before we start? Have fun."*

Additional Information

Possible Discussion Questions for Extension:	• Do not worry if this section ends a little early as it will allow for more time for discussion during the conclusion.
Suggestions for Modifications:	• If presenting this to a smaller group of students, use one or two groups instead the three recommended here. Try to keep each group to about 10 students.
Safety Considerations:	• Ensure the space where students are seated does not block the flow of traffic in the museum more than necessary. • If doing the introduction outside, ensure the area is safe from any hazards such as broken glass, animal feces, poisonous plants, insect homes (for example, bee hives, wasp nests, ant hills). The area should be checked for hazards every time it is used. Be aware of sitting students in the sun without shade, especially if they don't have sun screen and hats.

Update to reflect the realities of your site.

Mystery Envelope – "The Case"

Sable Island is a small and isolated island that is about 300 km away from Nova Scotia in the Atlantic Ocean. Today approximately five people live there year-round as scientists and caretakers. We know a lot about the work that these scientists do because they share their research with the museum. Much of their research is about the rare plants and animals that call Sable Island home. This includes the world's largest breeding colony of grey seals, over three hundred types of birds, and species of moths and insects found nowhere else on the planet! Most famously, Sable Island is also home for hundreds of wild horses.

The scientists and caretakers who live on Sable Island today are part of a long history of people visiting, researching and living on Sable Island. Some of the first people we know who visited Sable Island over 500 years ago were explorers and fisherman. Over the next three hundred years several people tried to start a community on the island but the conditions were too harsh. During this time, the first horses were brought to the island. When the people left, the horses remained and became wild.

Sable Island is known as the "Graveyard of the Atlantic" because so many shipwrecks happened on or near the island. The island can be very difficult to see in rough seas, storm and fog. Without modern navigational tools, fishing and other boats often ran into the island. In 1801, or just over two hundred years ago, the Nova Scotia government built several life-saving stations and lighthouses on the island. The people who worked in these life-saving stations and lighthouses recorded many observations about the plants and animals on the island. This made them some of the earliest researchers of Sable Island.

In the last fifty years changes in technology made it easier for ships to navigate. Shipwrecks become less common and it was less necessary to have life-saving stations on the island. The people who worked on the island left but their recordings, observations, and research continues today to be very important to researchers today.

At the museum we know a lot about the work done by these unofficial scientists did but we want to learn more about the people themselves. We need the help of history detectives to discover clues about the people who lived on Sable Island approximately one hundred years ago. We have identified areas in the museum we would like you to investigate. Each area you visit will have an activity where you discover clues. Use these clues to help us better understand life in the past on Sable Island.

We look forward to finding out what you discover.

Write text to introduce students to your museum's story and reflect the case they will be exploring. The text should be short and vocabulary age appropriate. Make sure it can be read in less than 4 minutes and should be no longer than 400 words—shorter is better.

Museum School Program Development Template

Activity Description Page

Update program title.

"History Detectives: *The Sable Island Case*"

Activity 1: "Modern Mysteries"

Activity Highlights (Description for Marketing Purposes):
How much has life really changed in the last 100 years? Students will participate in an investigation in which they will be asked to match items used today by researchers living on Sable Island to the equivalent item used by researchers about 100 years ago. Once students have completed their investigation they will examine how the items have changed over history and what these changes tell us about the people who used the

Update description to reflect what students will be exploring at your site.

Activity Logistics

Update location using information from Program Outline.

Location	Time	Materials
Location with lots of artifacts, either in situ or on a display table, that students can examine. Can accommodate 1/3 of the group.	20 minutes	• Working Collection Artifacts (To Be Listed) • Artifact Number Tags • Noisemaker to get students' attention • Mystery Envelope "Modern Mysteries" The students will use the following items from their detective kit: * Clipboard * Notebook * Pencil * Gloves
Purpose of Activity:	Students will look at the similarities and differences between artifacts from the past and their modern equivalent. Using this information they understand that past society was both similar and different from today' society.	
Curriculum Outcomes addressed by this activity:	**Social Studies Grade 5 Curriculum Outcomes** Students will develop an understanding of how we learn about the past with a focus on Acadians, African Nova Scotians, Gaels, Mi'kmaq and additional cultures. (Outcome 1) **Skills**: Citizenship, Communication, Critical Thinking	
Set-Up:	• Set-up tables and place artifacts on the tables, each artifact with a number tag clearly relating to a specific artifact. • Clear area for students to sit in the room.	

List what working collection artifacts activity will use as well as any special handling instructions. Templates for artifact number tags is available at the end of this appendix.

Procedure

Timing	Instruction	Possible Script
Mins. 1-2	1. **Welcome students to the activity and space**. Invite them to take a seat in a prepared area. Read the first section of the mystery file to explain that they will be comparing modern items to the old items they see in this room. This is one method used by researchers to learn about the past.	*"Please come and sit over here for a few minutes. You will be doing an investigation of the artifacts on the table but first I am going to give you some read the mystery file and give some instructions."* (Text for mystery file at end of activity procedure.)
Mins. 3-4	2. **Show and explain to students what they will be doing during this activity. (Set expectations.)** • Students may work individually or in groups of up to 3. Each student is expect to complete their own form, even if working in a team. • They will be completing the training exercise called "Modern Mysteries." Show students which training exercise this is. • Use a copy of the training exercise to demonstrate how to complete the form. First they will put the number beside the name of the modern item. Then they will write one what the old item is different from the modern item. • Tell students to only complete the training exercise up to the "Detective image." They will need extra info to answer the last question.	"*For this investigation you may work alone or with a partner.* *Please turn your detective notebook to the page called "Modern Mysteries." It is the page with a magnifying glass in the top corner. Fill out your own training exercise even if you are working with a partner.* *Let's use the first line as an example.* *In the first column you will see the name and picture of an object you might find in a modern location.* *Look at the artifacts. You will notice numbers attached each one. Try to find the object that matches the one in your training exercise and write down the number.* *Next observe the artifact and write down one way the modern and old objects are different.* *You are going to try to do the same thing for the remaining items on your form. Stop when you get to the detective symbol on the training exercise as after everyone is done I am going to read you information from the mystery envelope that will help you answer that last question.*

Timing	Instruction	Possible Script
Continued	• Remind students about specific behaviour expectations for this room, including how they can touch the artifacts while wearing gloves. • Students will have 10 minutes to complete the activity. • When they hear the noisemaker, it is time to return to where they are sitting. • Ask if anybody has any questions before starting.	*While you are doing your investigation you need to wear your gloves. As long as you are wearing your gloves you will be allowed to touch the artifacts.* *You are going to have ten minutes to try to find all your answers. When you hear me use the noisemaker you know the time is up and you will need to quickly come back here and sit down.* *Does anybody have any questions before we start?"*
Mins. 5-14	3. **Students work independently or in small groups to complete the form.** Allow students to work as independently as possible. Answer questions as needed and supervise they aren't accidentally putting the artifacts at risk. Encourage teachers and chaperones to aid you with this as well as assist students who are struggling. Once time is up, or most everyone is done, use the noisemaker to gather the group together.	None.
Mins. 15-17	4. **Review answers.** Ask the students what artifact number they choose for each of the modern items. If possible allow for discussion amongst the students if some of them choose different numbers for the same item. Ask them to explain to explain their answer. In many cases there may be more than one right answer.	*"What artifact number did you choose as the old version of the first item on your form? Did anybody get something different? Could you explain why you think that artifact is the equivalent to the modern item?"* *(Continue discussion until all items on the training exercise have been identified. Remain aware of time.)*
Mins. 18-20	5. **Read mystery envelope to provide final clue. Ask students to complete the last question on their training exercise (the one after the detective image).** Once students are done, prepare them to move to their next activity.	*"For the final question on your training exercise I have some additional information in this mystery envelope. Let me read to you the clue. [Read envelope.]* *Think about what you just heard and answer the question after the detective on your training exercise."*

Mystery Envelope – "Modern Mysteries"

At start of activity:

One way researchers learn about the past is by comparing modern objects that they understand to the historical objects they want to learn about. Historical objects in museums are called artifacts. As you can see, we have displayed some artifacts from the museum's collection that we normally don't show the public. You will be observing and comparing the modern items on your sheet to the artifacts. You will be asked to infer how objects have changed over time and what this means about life in the past.

At end of activity:

Let's use the skills you just developed to infer about life on Sable Island in the past. Sable Island is very difficult to get to, especially in bad weather. Today, when people on Sable Island need something they have to wait for an airplane to come to the island. In the past, before airplanes existed, the people had to wait for boats to bring their supplies. People on Sable Island can never be sure when the next boat or airplane with supplies is coming so they need to keep a lot of different things with them. The artifacts you just studied are examples of all the different things people needed to keep with them on Sable Island, both for their work and personal needs.

What does this information tell us about life on Sable Island in the past? How was it similar and how was it different from today?

Write text to provide students with some information about your site and to help them understand the artifacts they are exploring. The text should be short and vocabulary age appropriate. Each section of text should take less than 1 minute to read aloud and be no more than 150 words—less is better.

Additional Information

Possible Discussion Questions for Extension:	If time allows, considering extending the discussion in step 4. Some additional questions to those included in the above suggested script could include: • Where do you think these items were purchased? How is this similar or different than today? • What are these items made from? How is this similar or different than today? • Today, if something in our home breaks what do we do? What do you think they do on Sable Island? How would this have been different in the past?
Suggestions for Modifications:	• none
Safety Considerations:	• Some of the artifacts are fragile and might have sharp edges. Wearing gloves should help protect the students. Make sure students are careful and keep the artifacts over the table when handling them.

Write questions specific to your site.

Update to reflect the realities of your site.

Museum School Program Development Template

Activity Description Page

Update program title.

"History Detectives: *The Sable Island Case*"

Activity 2: "Object Investigations"

Activity Highlights (Description for Marketing Purposes):
Researchers collect objects to learn about a place like Sable Island. We ca use the same objects to discover what they were learning. In this activity students will do an in-depth investigation of an object of their choosing, examining it for clues about why people in the past thought it was important to study Sable Island and how their research can still be used today.

Update description to reflect what students will be exploring at your site.

Update location using information from Program Outline.

Activity Logistics

Location	Time	Materials
Location with lots of artifacts, either in situ or on a display table, that students can examine. Can accommodate 1/3 of the group.	20 minutes	• Working Collection or Accessioned Artifacts In Situ • "Look Here" Arrows • Noisemaker to get students' attention • Mystery Envelope "Object Investigations" The students will use the following items from their detective kit: * Clipboard * Notebook * Pencil * Gloves (if they can touch artifacts) * Magnifying Glass
Purpose of Activity:	Students will spend time look at a single artifact in depth in order to develop the skill of learning from objects.	
Curriculum Outcomes addressed by this activity:	**Social Studies Grade 5 Curriculum Outcomes** Students will develop an understanding of how we learn about the past with a focus on Acadians, African Nova Scotians, Gaels, Mi'kmaq and additional cultures. (Outcome 1) **Skills**: Citizenship, Communication, Critical Thinking	
Set-Up:	• Set-up chairs or stools so that students can sit while they are looking at their chosen natural history specimen in situ. • Place the "Look Here" arrows around the room to point out artifacts that might be of interest.	

List what working collection artifacts activity will use as well as any special handling instructions. Templates for artifact number tags is available at the end of this appendix.

Procedure

Timing	Instruction	Possible Script
Mins. 1-2	1. **Welcome students to the activity and space**. Invite them to take a seat in a prepared area. Read the first section of the mystery file to explain that they will each be looking at an object in detail. Doing investigations of a single object is one method used by researchers to learn about the past.	*"Please come and sit over here for a few minutes. You each become an expert on an artifact of your choice in this but first I am going to give you some read the mystery file and give some instructions."* (Text for mystery file at end of activity procedure.)

Mins. 3-4	2. **Show and explain to students what they will be doing during this activity. (Set expectations.)**
	• Give step-by-step instructions for the object investigation:
	  • Students will be completing the training exercise called "Object Investigation." Show students which training exercise this is.
	  • Students will be working individually however they can do the same object as one other person and they can talk to each other about their object.
	  • Explain to students how they will go about choosing their object.
	  • Use an example of the "Object Investigation" training exercise and an easy specimen to demonstrate to students how to do an object investigation. Explain that you will do it quickly but they will have more time in order to go into greater detail.
		"Please turn your detective notebook to the page called "Object Investigation." It is the page with a finger print in the top corner.
		
		You can choose or object from any of the artifacts you see in this room. The arrows point out some interesting ones. You may choose look at the same object as one other person, and you may talk to each other about the object, however you each need to fill out your own form.
		
		Once you have chosen your object, take a minute to look at it carefully. Look at it from different angles. Use your magnifying glass to see the details. Once you are done looking at the object, look at your form.
		
		The training exercise asks you to list or draw at least ten things all the things you notice about your object. You don't have to write full sentences or make fancy drawings. For example with my shoe I notice that it is black and that it looks like it was used a lot. I can quickly draw the design on the button and label the drawing "button". What else do you notice about the shoe (allow class to provide answers).

Timing	Instruction	Possible Script
Continued	• Remind students to only complete the training exercise up to the "Detective image." • Remind students about specific behaviour expectations for this room, including how they can touch the artifacts while wearing gloves. • Students will have 10 minutes to complete the activity. • When they hear the noisemaker, it is time to return to where they are sitting. • Ask if anybody has any questions before starting.	*Stop when you get to the "Detective symbol" on the training exercise as after everyone is done I am going to read more information from the mystery file that will help you answer that last question.* *While you are doing your investigation you need to wear your gloves. As long as you are wearing your gloves you will be allowed to touch the artifacts.* *You are going to have ten minutes to try to find all your answers. When you hear me use the noisemaker you know the time is up and you will need to quickly come back here and sit down.* *Does anybody have any questions before we start?"*
Mins. 5-14	3. **Students work independently or in small groups to complete the form.** Allow students to work as independently as possible. Answer questions as needed and supervise they aren't accidentally putting the artifacts at risk. Encourage teachers and chaperones to aid you with this as well as assist students who are struggling. Once time is up, or most everyone is done, use the noisemaker to gather the group together.	None.
Mins. 15-17	4. **Review what the students discovered.** Invite the students to share with the group which object they chose to investigate. If time allows ask students to add what they found the interesting about their object or why they chose their object.	*"Who would like to tell us what object they investigated? Can you tell us one thing about your object?"* *(Continue discussions until all students who want to share have been given an opportunity or you are out of time.)*

Timing	Instruction	Possible Script
Mins. 18-20	5. **Read mystery envelope to provide final clue. Ask students to complete the last question on their training exercise (the one after the detective image).** Once students are done, prepare them to move to their next activity.	*"For the final question on your training exercise I have some additional information in this mystery envelope. Let me read to you the clue. [Read envelope.]* *Think about what you just heard and answer the question after the detective image on your training exercise."*

Mystery Envelope – "Object Investigating"

At start of activity:

One way researchers learn about the past is by become experts on specific objects. They become experts by looking at the object in detail, recording their observations, and inferring what these observations might tell them. In this activity you will be looking at natural history objects from the museum's exhibits. Natural history objects in museums are called specimens. The exhibits around us right now feature specimens found on Sable Island. You will notice the specimens in this tube shape case, the horse skeleton spinning in the window and some hidden inside these cases. By looking closely at the specimens in this exhibit we can learn what life is like on Sable Island and what types of plants and animals live on the island.

At end of activity:

All of the specimens, or natural history objects, you have been investigating have been collected by researchers who visited Sable Island. The people who lived on Sable Island a hundred years ago weren't official researchers so they didn't collect specimens to send to the museum. Instead they spent time exploring the island and making observations. They would record their observations in letters, diaries, notebooks and drawings, just like the ones you made today. These observations are still used by researchers as proof of what has changed and what has not changed on Sable Island over the years.

What can you infer about life in Sable Island by the observations you made about your chosen object?

Write text to provide students with some information about your site and to help them understand the artifacts they are exploring. The text should be short and vocabulary age appropriate. Each section of text should take less than 1 minute to read aloud and be no more than 150 words—less is better.

Additional Information

Possible Discussion Questions for Extension:	If time allows, considering extending the discussion in step 4. Some additional questions to those included in the above suggested script could include: • Where else might you find objects like these? • Which of these objects do you think would be common for researchers to find on Sable Island? Which objects would be uncommon? • What objects might be missing from this exhibit? • Why would somebody have saved these objects for over a hundred years?
Suggestions for Modifications:	• Use this activity to incorporate technology. If students have their own tablet or handheld computer, allow them to "collect" the artifact (or past) version of the artifact by taking a picture of it with their device.
Safety Considerations:	• The more students can immerse themselves into a space the better experience they will have with this activity. Although it might not always be possible to "go behind the rope" consider using additional supervision, either a volunteer or parent chaperones, to assist keeping both students and artifacts safe. • If using the technology modification remember that one of the dangers to artifacts when being photographed is the people who are not paying attention to their location while they take a picture. People taking pictures often take a step back in order to get a better picture, forgetting that there are objects around them. This can cause people to bump into objects. Provide students with a quick training about this behaviour before letting them take pictures.

Write questions specific to your site.

Update to reflect the realities of your site.

Museum School Program Development Template

Activity Description Page

Update program title.

"History Detectives: *The Sable Island Case*"

Activity 3: "Clues from the Archives"

Activity Highlights (Description for Marketing Purposes):
Not all history is recorded in history books. In this activity students will look closely at archival records to unlock clues about the people whose lives are captured in these documents.

Update description to reflect what students will be exploring at your site.

Activity Logistics

Location	Time	Materials
Location where students can work independently (if necessary without a staff person) which can accommodate 1/3 of the group. Ideally with tables & chairs, however, sitting on the floor can also work. Can be the same space as introduction.	20 minutes	• Archival Records (Reproductions) The students will use the following items from their detective kit: * Clipboard * Notebook * Pencil * Gloves (if they can touch artifacts) * Magnifying Glass
Purpose of Activity:	Students will investigate archival records, learning how to use primary source materials for research.	
Curriculum Outcomes addressed by this activity:	**Social Studies Grade 5 Curriculum Outcomes** Students will develop an understanding of how we learn about the past with a focus on Acadians, African Nova Scotians, Gaels, Mi'kmaq and additional cultures. (Outcome 1) **Skills**: Citizenship, Communication, Critical Thinking	
Set-Up:	• Clear area for students to sit and work with archival records in partners. Students will require space to spread out. Consider providing tables and chairs if possible for all the students. If not possible, a clean area on the floor, maybe with a clean mat (for example, yoga mats) on which they could sit with their archival records and partner. • Set up one table on which to display all the archival records.	

Update using information from Program Outline.

Need help getting archival records to reproduce? Read the information at the start of Appendix I.

Procedure

Timing	Instruction	Possible Script
Mins. 1-2	1. **Welcome students to the activity and space**. Invite them to take a seat in a prepared area. Read the first section of the mystery file to explain that they will each be looking at documents from the archives with a partner. Explain what an archives is and what an archival record is. Explain that doing research with documents from the archives is called using primary sources.	*"Please come and sit over here for a few minutes. You will be working with a partner to examine a document from the archives but first I am going to give you some read the mystery file and give some instructions."* (Text for mystery file at end of activity procedure.)

Mins. 3-4	2. **Show and explain to students what they will be doing during this activity. (Set expectations.)**
	• Give step-by-step instructions for the activity:
	  • Students work in pairs. Each student will be completing the training exercise called "Clues from the Archives." Show students which training exercise this is.
	  • Explain to students how they will go about choosing their document. These instructions will be specific to your site and its set-up.
		"Please turn your detective notebook to the page called "Clues from the Archives." It is the page with a white glove in the top corner.
		
		In pairs you are each going pick and examine an archival record from those on the table here. Even if you are working with a partner, you both need to do your own training exercise.
		
		The first thing you will need to do is choose which document you want to investigate. The documents on the tables are ones that you can handle carefully if you are wearing your gloves. As an example I am going to look at this photograph.
		
		Once you have chosen your document, take a minute to look at it carefully. Use your magnifying glass to see all the details. Once you are done looking at the document, look at your form.
		
		In the middle is a cloud where you can write what you think is the most important clue in your document.
		For example with this photograph. I notice it is black and white.

Timing	Instruction	Possible Script
Continued	• Use an example of the "Clues from the Archives" training exercise and an easy archival record to do a brain storm based on the information they discover in their document. • Remind students to only complete the training exercise up to the "detective image." • Remind students about specific behaviour expectations for this room, including how they can touch the artifacts while wearing gloves. • Students will have 10 minutes to complete the activity. • When they hear the noisemaker, it is time to turn their attention to the group. • Ask if anybody has any questions before starting.	*From there start brainstorming with your partner about all the other things you notice and give them each a cloud attached to your main cloud. For example with this photograph I'm going to give clouds to each of the other things I notice: old, people, house, tree. What else to you see? (allow class to provide answers)* *For each cloud, write all the things you notice about it. So for people I might write how many, what ages, what they are wearing, what they are doing, and so on. Try to gather as many facts as possible from your document.* *Stop when you get to the detective symbol on the form. After everyone is done I am going to read you another clue from the mystery file that will help you answer that last question.* *You are going to have ten minutes for your investigation.* *Now before you stand up to pick out your document and get started I just want to remind that when you hear me use the noisemaker you know the time is up and stop your investigation and turn your attention to the group.* *Does anybody have any questions before we start?"*

Timing	Instruction	Possible Script
Mins. 5-14	3. **Students work independently or in small groups to complete the form.** Allow students to work as independently as possible. Answer questions as needed and supervise they aren't accidentally putting the artifacts at risk. Encourage teachers and chaperones to aid you with this as well as assist students who are struggling. Once time is up, or most everyone is done, use the noisemaker to gather the group together.	None.
Mins. 15-17	4. **Review what the students discovered.** Invite the students to share with the group which archival record they chose to investigate. If time allows ask students to add what they found the most interesting about their document or why they	*""Who would like to tell us what archival record they investigated? Can you tell us one thing about your document?"* *(Continue discussion until all students who want to share have been given an opportunity or you are out of*
Mins. 18-20	5. **Read mystery envelope to provide final clue. Ask students to complete the last question on their training exercise (the one after the detective image).** Once students are done, prepare them to move to their next activity.	*"For the final question on your training exercise I have some additional information in this mystery envelope. Let me read to you the clue. [Read envelope.]* *Think about what you just heard and answer the question after the detective image on your training exercise."*

Additional Information

Possible Discussion Questions for Extension:	If time allows, considering extending the discussion in step 4. Some additional questions to those included in the above suggested script could include: • What does that tell us about the document? • Does this document remind you of anything from your own life today? • Does anything in this document remind you of something

Write questions specific to your site.

Suggestions for Modifications:	• Use this activity to incorporate technology. If students have their own tablet or handheld computer, allow them to look at virtual archival records on a trusted webpage like Nova Scotia Archives. • This activity has been designed to be chaperone led. When possible, have a staff or volunteer person at this station lead instead of the chaperone. • If chaperone numbers allow, consider asking one chaperone to spend the whole time at this station rather than rotating with the groups. Have a staff person give this chaperone a quick bit of training while the other staff leads the introduction. • If activity will regularly be chaperone led, and if technology allows, consider making a movie to play of a staff person explaining the instructions. The movie could have an on-screen timer to help the chaperone stay on time.
Safety Considerations:	• As there may not be a staff or volunteer person at this activity, ensure that it is held in a location of the museum that does not require supervision.

Update to reflect the realities of your site.

Mystery Envelope – "Clues from the Archives"

At start of activity:

One way researchers learn about the past is by looking at documents created in the past. Documents from the past can be called archival records because they are kept in an archives. An archives is like a museum but instead of objects it houses documents, like a library. Some of the documents are very important like birth, marriage and death certificates. Other documents might seem less important but are filled with important information. These could include letters, diaries and even things that could have been considered garbage like receipts and empty packages. We have selected a few documents from the archives that we think will help you learn more about life on Sable Island.

At end of activity:

The documents you have been looking at relate to the research stations on Sable Island. As you have seen they include government documents, newspaper clippings, personal letters, photographs and art from a magazine. Each document only has a small amount of information but also leaves us with lots of questions. This often leads to looking at other archival records. After making observations on your archival record, what is one new questions you have about life on Sable Island?

Write text to provide students with some information about your site and to help them understand the artifacts they are exploring. The text should be short and vocabulary age appropriate. Each section of text should take less than 1 minute to read aloud and be no more than 150 words—less is better.

Museum School Program Development Template

Activity Description Page

Update program title.

"History Detectives: *The Sable Island Case*"

Activity 4: "Curious Construction"

Activity Highlights (Description for Marketing Purposes):
Students will examine specific architecture and landscape features of the Sable Island research station and create an art project to represent their chosen feature. Students will then share their art project and hypothesis what they can learn from that specific architectural feature.

Update description to reflect what students will be exploring at your site.

Activity Logistics

Update location using information from Program Outline.

Location	Time	Materials
Location with lots of artifacts, either in situ or on a display table, that students can examine. Can accommodate 1/3 of the group.	20 minutes	• 1 large archival photograph of building and landscape being examined The students will use the following items from their detective kit: * Clipboard * Notebook * Pencil * Binoculars (to be kept at the station)
Purpose of Activity:	Students will observe the house and landscape as a historical object and use art to communicate their observations.	
Curriculum Outcomes addressed by this activity:	**Social Studies Grade 5 Curriculum Outcomes** Students will develop an understanding of how we learn about the past with a focus on Acadians, African Nova Scotians, Gaels, Mi'kmaq and additional cultures. (Outcome 1) **Skills**: Citizenship, Communication, Critical Thinking	
Set-Up:	• Prepare a space outside for students to sit safely as a large group. (See Safety Considerations.) • Have large image available but hidden from students to be revealed when **final** clue is read from the mystery file.	

Procedure

Timing	Instruction	Possible Script
Mins. 1-2	1. **Welcome students to the activity and space**. Invite them to take a seat in a prepared area. Read the first section of the mystery file to explain that they will each be looking at the building and landscape as it stands today. Drawing and using historic buildings that still exist is one method used by	*"Please come and sit over here for a few minutes. You will be using these binoculars to examine and draw a feature of the building and landscape this but first I am going to give you some read the mystery file and give some instructions."* (Text for mystery file at end of activity procedure.)

Mins. 3-4	2. **Show and explain to students what they will be doing during this activity. (Set expectations.)**
	• Give step-by-step instructions for the activity:
	  • Students will be completing the training exercise called "Curious Construction." Show students which training exercise this is.
	  • Students will be working individually however they will have a chance to share their results with the rest of the group.
	  • Use an example of the "Curious Construction" training exercise and an easy architectural feature to demonstrate to students how to complete the form. Explain that you will do it quickly but they will have more time in order to go into greater detail.
	  • Remind students to only complete the training exercise up to the "Detective image."
	• Students will have 10 minutes to complete the activity.
		Please turn their detective notebook to the page called "Curious Construction." It is on the page with the notepad and pencil in the top corner.
		
		First you are going to look at the building and landscape. Silently, in your head, pick one thing that you think is really interesting about the building or landscape. You can use the binoculars to look at your chosen feature more closely.
		
		Once you have chosen your item you are going to draw it on your investigation form. Try to draw it with as much detail as possible. Don't worry about being a good artist. Focus on trying to capture lots of details.
		
		You are going to have ten minutes to complete your drawing. Work on your drawing independently and can sit in anywhere on the front lawn.
		
		Don't worry about the last question on your training exercise after the "Detective symbol." Once we are back together I am going to read you another clue that will help you answer that last question.

Timing	Instruction	Possible Script
Continued	• When they hear the noisemaker, it is time to return to where they are sitting. • Ask if anybody has any questions before starting.	*When I use the noisemaker you will know time is up and you will need to quickly come back here and sit down. Once we are all together we are going to look at and discuss each other's drawings.* *Does anybody have any questions before we start?"*
Mins. 5-14	3. **Students work independently or in small groups to complete the training exercise.** Allow students to work as independently as possible. Answer questions as needed. Supervise that they are staying safely with the group and not doing anything that might but the building, grounds, themselves or other students at risk. Encourage teachers and chaperones to aid you with this as well as assist students who are struggling. Once time is up, or most everyone is done, use the noisemaker to gather the group together.	None.
Mins. 15-17	4. **Invite** students **to share their drawings with the group.** Do not force students who do not want to speak publically to talk more than they are comfortable. If time allows ask students to add why they chose that feature to draw and what they found interesting about it.	*"Let's go around the group and each share what we draw. If you want you can tell the group why you chose to draw what you did or what interests you about that feature."* *(Continue discussion until all students who want to share have been given an opportunity or you are out of time.)*
Mins. 18-20	5. **Reveal the archival image in and read mystery envelope to provide final clue. Ask students to complete the last question on their training exercise (the one after the detective image).** Once students are done, prepare them to move to their next activity.	*"For the final question on your training exercise I have some additional information in this mystery envelope. Let me read to you the clue. [Read envelope.]* *Think about what you just heard and answer the question after the detective on your training exercise."*

Mystery Envelope – "Curious Construction"

At start of activity:

One way researchers learn about the past is by looking at buildings and landscapes created in the past. Buildings and landscapes are wonderful clues about the past because they sometimes look the same as they did when they were first built. This lets them act like a window to the past. We can also observe what has changed. Changes can show us new technologies, how lifestyle has changed and how communities have changed. The research station we are looking at right now is very similar to a research station on Sable Island.

At end of activity:

Look at this picture from the archives of what a building on Sable Island looked like about a hundred years ago. As you can see today it looks very similar to this picture. Even without this picture, just by looking at the building today we can imagine what this place looked like a hundred years ago. Look for the feature you drew in this picture. Can you find it?

What is similar or different about the research station today compared to the building from a hundred years ago? Considering these similarities or differences, what does looking at the research station from today tell us about life on Sable Island a hundred years ago?

Write text to provide students with some information about your site and to help them understand the artifacts they are exploring. The text should be short and vocabulary age appropriate. Each section of text should take less than 1 minute to read aloud and be no more than 150 words—less is better.

Additional Information

Possible Discussion Questions for Extension:	If time allows, considering extending the discussion in step 4. Some additional questions to those included in the above suggested script could include: • How does this building and yard compare to your home and yard? • How does this building compare with other buildings in the community? • What would have made this location a good location to build this building? • How many people do you think work/lived here? Why do you think that? • Where do you think the builders got the materials to build on Sable Island? How might this have influenced the construction?

Write questions specific to your site.

Suggestions for Modifications:	• This activity has been designed to be chaperone led. When possible, have a staff or volunteer person at this station to lead instead of the chaperone. • If chaperone numbers allow, consider asking one chaperone to spend the whole time at this station rather than rotating with the groups. Have a staff person give this chaperone a quick bit of training while the other staff leads the introduction. • If activity will regularly be chaperone led, and if technology allows, consider making a movie to play of a staff person explaining the instructions. The movie could have an on-screen
Safety Considerations:	• As there may not be a staff or volunteer person at this activity, ensure that it is held in a location of the museum that does not require supervision. • As this activity is outside, ensure the area is safe from any hazards such as broken glass, animal feces, poisonous plants, insect homes (for example, bee hives, wasp nests, ant hills). Also check any infrastructure the students may take use to make sure they are in good repair, such as picnic tables, tents or outdoor seating. This area should be check for these hazards every time it is used. Also be aware of the sitting students directly in the sun without shade, especially if they are not prepared with sun screen and hats. • When students are outside make sure the area they will be using is safely away from traffic and the parking lot.

Update to reflect the realities of your site.

Museum School Program Development Template

Activity Description Page

Update program title.

"History Detectives: *The Sable Island Case*"

Conclusion: "History Detective Graduation"

Activity Highlights (Description for Marketing Purposes):
The students will re-assemble as a large group and communicate what they have discovered during their investigations.

Activity Logistics

Update using information from Program Outline.

Location	Time	Materials
Central location that can accommodate the whole group. Possibly same space as introduction.	15 minutes	• Whiteboard with Marker • Official History Detective Badges • Copy of History Detective Pledge • Top Secret File: For Eyes of Official History Detectives Only (Official Pledge) The students will use the following items from their detective kit: * Completed Notebook

Template for Official History Detective Badges is available at the end of this appendix.

Purpose of Activity:	Students will share the observations they made during the program resulting in a deeper understanding not only about the site, but also how museums and archives can be used to learn about the past.
Curriculum Outcomes addressed by this activity:	**Social Studies Grade 5 Curriculum Outcomes** Students will develop an understanding of how we learn about the past with a focus on Acadians, African Nova Scotians, Gaels, Mi'kmaq and additional cultures. (Outcome 1) **Skills**: Citizenship, Communication, Critical Thinking
Set-Up:	• Re-Prepare a space for students to sit safely as a large group. (See Safety Considerations.) Consider providing chairs for teachers or chaperons to sit. If the area was used for the Clues from the Archives activity put away as much of this material as possible. • Clean whiteboard which was used to write the rules during the introduction. Set-up whiteboard so students can easily see it from where they will be sitting. • Be prepared to collect the detective kits from the students and the history detective supervisor badges from the teachers and

Procedure

Timing	Instruction	Possible Script
Mins. 1-3	1. **Welcome students back from their investigations.** As students return collect all the detective kits and badges. Don't forget to also collect the badges from the teachers and chaperones. Students should keep their completed notebook as they will need it for the discussion during the conclusion.	*"Welcome back history detectives. I hope you've had a good time and been able to find lots of clues. As you can see we've now exposed the inside of our research station. Take a look inside it as we collect everyone's detective kit, clipboards and training badge."*
Mins. 4-8	2. **Invite students to share what they learned during their investigations**. For each fact a student provides, follow up with questions for the group get evidence for the fact presented. Continue this discussion with the group until time is out. If students are not offering facts, try asking probing questions based on the activities they completed at each station. Try to ensure at least one fact/example is given from each station. For each "confirmed" fact, write them on the white board.	*"You have all been wonderful history detectives. We are looking forward to hearing what you might have discovered about the people who used to live on Sable Island. Use your notebook to remember some of your discoveries. Who would like to share one fact that they discovered during their investigation today? How did you discover this fact? What evidence did you find? Did anybody else find something similar?"*
Mins. 8-11	3. **Have a final discussion on how we learn about the past, and how what they did today could be useful skills in other projects t**hey might need to do for school or personal interest. Explain that there are many different jobs that could be considered history detectives – historians, museum staff, archives staff, archeologists, researchers, etc. Have a 1-2 minute discussion about the ways these people learn about the past, this discussion should reflect that the activities done by the students during the program are very similar to what these professionals do.	*"Now that we've been able to solve our mystery based on the evidence you found during your time here, how do you think real history detectives find out about the past? What kind of jobs do you think history detectives have? How is what they do similar to what you did here today? How could you use a museums and archives in other projects you are working on?"*

Timing	Instruction	Possible Script
Mins. 12-13	4. **Congratulate students on their hard work completing their training exercises and explain they are now ready to become official history detectives**. Have students repeat the history detective promise aloud which is kept in the top secret mystery file: for history detectives only.	*"Great job. You have all proven that you learned the skills you need to be a history detective. We have badges for all of you that we are going to send back to school for you with your teacher. But first, to make it official, you will need to say the history detective promise. Repeat after me:* I am a History Detective. I pledge to look at things carefully, ask questions, and try to make sense of the information I study. I will research in person or online, at museums, archives, libraries and historic places when I want to learn about the past."
Minute 14	5. **Thank students for coming and welcome them to come back another time.** Consider telling them about something exciting and relevant to them that they could experience at the museum if they return.	*"We really enjoyed having you come visit us today and we hope you will come back. We would love to help you with school projects you may be working on or to have you come and show your family everything you discovered during your visit today. Today you only got to see a small section of the museum but we hope you come back to visit us with your family."*
Minute 15	6. **End program, turning "control" back over to the teacher.** Be sure the teacher and chaperones understand the rules for your site re: lunch, post-visit exploration and visiting the gift shop. Provide the teacher with any evaluation forms you are asking them and/or the students to do. If possible have them completed the evaluation before leaving the museum.	*"I'm now going to ask your teacher to tell you what you will be doing now that the program is finished."*

Additional Information

Suggestions for Modifications:	• Provide teachers with a copy of the evaluation training exercise at the start of the conclusion so that they can complete it as students participate in the conclusion.
Safety Considerations:	• See Introduction

“History Detective Pledge”

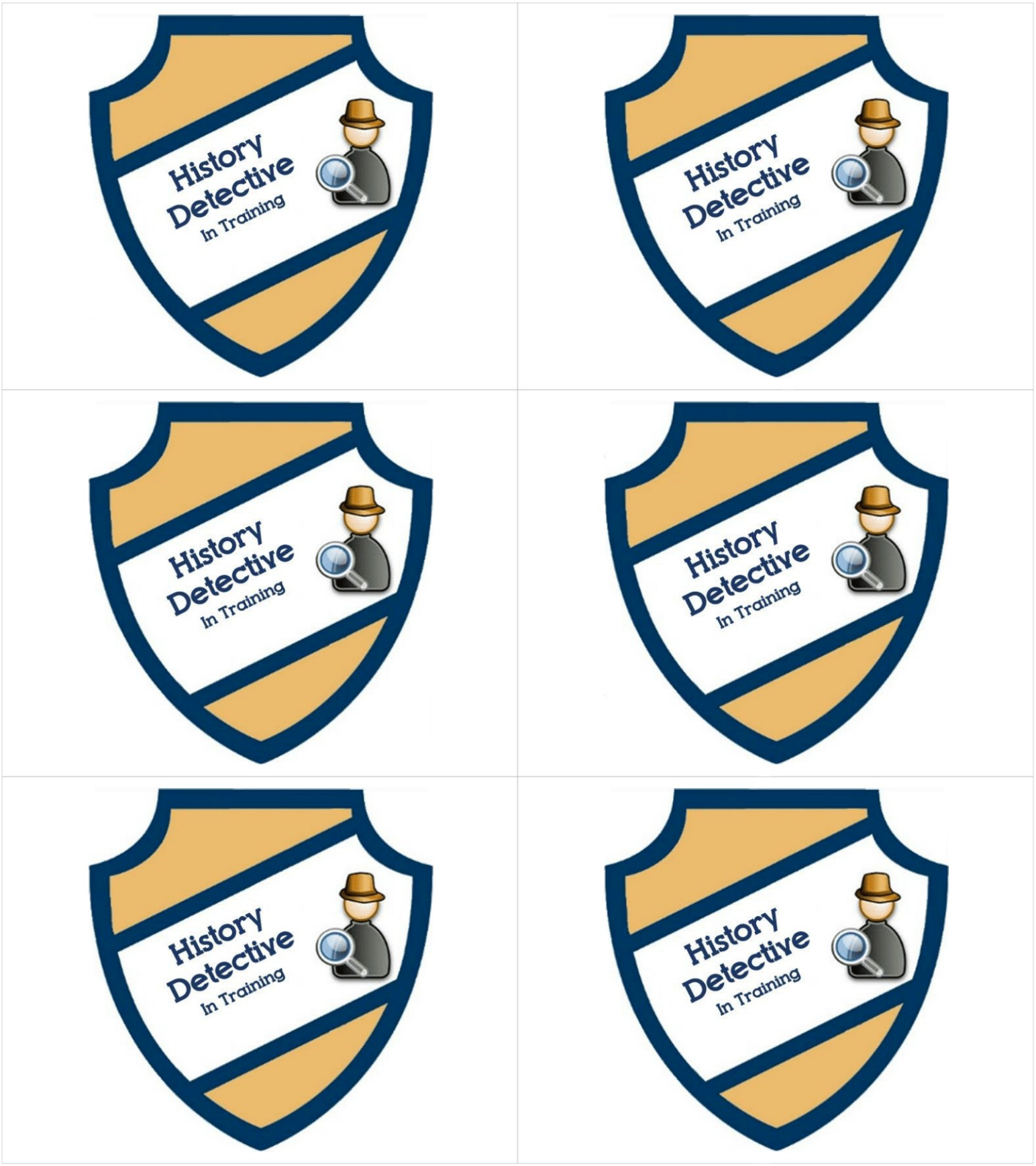
I am a History Detective.

I pledge to look at things carefully,
ask questions,
and try to make sense
of the information I study.

I will research in person or online,
at museums, archives, libraries and
historic places
when I want to learn about the past.

Museum Staff and Volunteer Badges
Designed to be printed on Avery Name Badge 78617

Student Badges
Designed to be printed on Avery Name Badge 78617



Front of Teacher/Chaperone Badges
Designed to be printed on Avery Name Badge 78617

Back of Teacher/Chaperone Badges
Designed to be printed on Avery Name Badge 78617

As a History Detective Supervisor you can help by…

- Helping the group stay together.
- Listening during instructions & group discussions.
- Assisting students with their notebook activities.
- Reminding students of behaviour expectations. Examples:
  - Listen when the noisemaker is sounded.
  - Wear gloves when touching artifacts or archival documents.

Thank you! We hope you have fun today and invite you to come back to the museum with your family.

As a History Detective Supervisor you can help by…

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- Listening during instructions & group discussions.
- Assisting students with their notebook activities.
- Reminding students of behaviour expectations. Examples:
  - Listen when the noisemaker is sounded.
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- Reminding students of behaviour expectations. Examples:
  - Listen when the noisemaker is sounded.
  - Wear gloves when touching artifacts or archival documents.

Thank you! We hope you have fun today and invite you to come back to the museum with your family.

TOP SECRET FILE

For History Detectives-in-Training

"The Case"

TOP SECRET FILE

For History Detectives-in-Training

"Modern Mysteries"

TOP SECRET FILE

For History Detectives-in-Training

"Object Investigation"

TOP SECRET FILE

For History Detectives-in-Training

"Clues from the Archives"

TOP SECRET FILE

For History Detectives-in-Training

"Curious Construction"

SUPER
TOP SECRET FILE

Only for the Eyes of

Official History Detectives

Print on acid-free cardstock and cut out. Attach with artifact safe (acid-free) string.

Artifact

Please wear gloves to touch artifact

Artifact

Please wear gloves to touch artifact

Artifact

Please wear gloves to touch artifact

Artifact

Please wear gloves to touch artifact

Artifact

Please wear gloves to touch artifact

Print on cardstock and cut out.

Print on cardstock and cut out.

By Authority of the Nova Scotia Museum

I am a History Detective.
I pledge to look at things carefully, ask questions, and try to make sense of the information I study.
I will research in person, or online, at museums, archives, libraries and historic places when I want to learn about the past.

Signature of History Detective

By Authority of the Nova Scotia Museum

I am a History Detective.
I pledge to look at things carefully, ask questions, and try to make sense of the information I study.
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Signature of History Detective

By Authority of the Nova Scotia Museum

I am a History Detective.
I pledge to look at things carefully, ask questions, and try to make sense of the information I study.
I will research in person, or online, at museums, archives, libraries and historic places when I want to learn about the past.

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NOVA SCOTIA
MUSEUM
THE FAMILY *of* PROVINCIAL MUSEUMS

This notebook belongs to

Detective _____

Training Exercise: Modern Mysteries

Modern Item	Artifact (Old)	What similarities do the modern items and artifacts share? How are they different?
Light Source 	2.	Different: *Lightbulb uses electricity.*
Razor 		Different:
Pen 		Different:
Lock 		Different:
Hot Water Heat Bag 		Different:
Entertainment 		Different:
Milk 		Different:
Hand Soap 		Different:
Google Map 		Different:

Listen to the final clue in the mystery envelope before answering this last question.

Life today is the same as 100 years ago because: _____

Life today is different than 100 years ago because:_____

Training Exercise: Object Investigations

List or draw at least ten things you notice about your object:

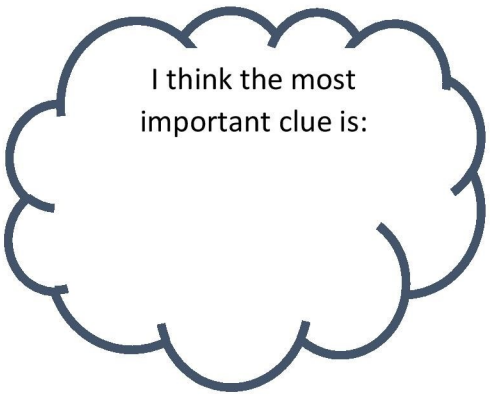
Listen to the final clue in the mystery envelope before answering this last question.

What can you infer about life in Sable Island by the observations you made about your chosen object?_____

_____

Training Exercise: Clues from the Archives

Brainstorm all the things you notice about your document. For each cloud you add, write or draw all the observations you have about that idea:



Listen to the final clue in the mystery envelope before answering this last question.

After making observations on your archival document, what is one new questions you have about life on Sable Island? _____

_____

Training Exercise: Curious Construction

Draw, in detail, one feature from the house or landscape that interests you.

Listen to the final clue in the mystery envelope before answering this last question.

What does looking at the research station from today tell us about life on Sable Island a hundred years ago?_____

_____