

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.

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.

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?"



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's 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 through 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.

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.

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 achieve 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.



"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"



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-dimensional spaces are depicted on 2-dimensional maps. It is common for visitors of all ages, preschool to seniors, to be seen playing here.

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)



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	

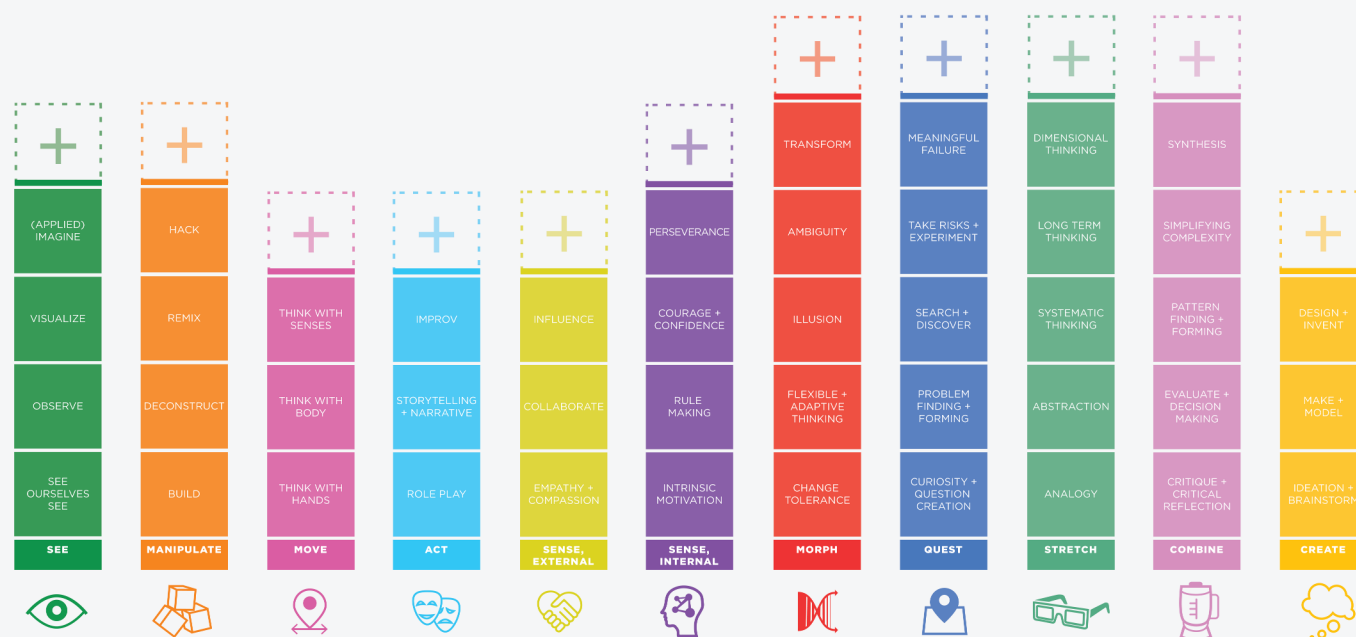
Tips on Play from High Five

- 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.

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

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.



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Poster Design by Troy Whittington



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.



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 be 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

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.

Characteristics



of Different Ages



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

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.

