MSSIC—Making Connections

Winter 2021 Volume 4, Issue 1

SPECIAL POINTS OF INTEREST:

- MSSIC continues its support of the expansion of science fairs in provincial schools via a virtual fairs approach
- MSSIC developing Maker Faire for Grades K-6
- MSSIC offers virtual learning opportunity for teachers interested in learning about Lab Pro

INSIDE THIS ISSUE:

PRESIDENT'S REPORT

Well, we are over half way through a unique and challenging school year. Working through a global pandemic has indeed been challenging for us all with the increased cleaning protocols, mask wearing, physical distancing, etc. Despite that, teachers are doing their best to educate students with a mind to the social and emotional health of those students.

The Math-Science Special Interest Council (MSSIC) is your council. Please feel free at anytime to contact us with questions, suggestions, or concerns. As your SIC we play two main roles. The first is to support and advocate for adequate Professional Learning opportunities. The second is to advocate for you when new policies, curriculum, and procedures are planned or implemented.

Despite the difficulties of this year, members of the MSSIC are continuing to fulfill its mandate. This past December and again in early February board member Patrick Wells offered PL sessions on using Lab Pro for high school science activities. These sessions were recorded and can be accessed via our page on the NLTA website, http://www.nlta.nl.ca/mathscience-sic/ under Conferences and PL opportunities.

Following on the success of the two virtual science fairs held last year, plans are in the works to host virtual science fairs this coming April. These are being organized by members of the Eastern Newfoundland Science Fairs Council Virtual Science Fairs Committee. Students in grades 7 to 12 are eligible to compete with either one - or two-person projects. The "How to" Guide has been updated and posted in the NLESD Collaborative Group for teachers of Science 7-12 and has been shared with all program specialist of both the English and French school boards. This guide serves as a template teachers can share with their students to use in carrying out a science fair project. If you would like to enter students in these fairs, please note the dates: The Virtual Science Fair for students in Labrador, Western and Central NL will be held on Saturday, April 17th. The Eastern NL Virtual Science Fair for students from schools on the Avalon Peninsula will be held on Friday, April 23rd. Registration will open in early March and remain open for about three weeks. The MSSIC will be sponsoring prizes for the top three projects in each fair as follows: $500, $300 and $200 for first, second and third, respectively. From each fair, six students will be selected to represent our province at the virtual Canada Wide Science fair in May.

Members of our council have been working on a new initiative this year; a Maker Faire for students in K-6. A subcommittee of MSSIC has teamed up with Brilliant Labs to plan and implement this event . More info will be shared once all plans are finalized, which should be soon. Stay tuned!

Best wishes for the remainder of this school year!

Yvonne

DEVELOPING CRITICAL THINKING SKILLS OF GRADE ONE STUDENTS: USING EVERYDAY OBJECTS TO HELP CHILDREN LEARN HOW TO CLASSIFY AND DESCRIBE USING BASIC PROPERTIES

Introduction:

From a very young age, children can differentiate objects based on properties. Typically, this begins with colour, and as they age, these skills are refined and children can classify objects using other properties, such as texture, size, and shape (Adams, 2007). It is important that children develop the skill of identifying these differences and be able to articulate these differences. These skills are used in everyday life and highlighted in the Newfoundland science curriculum for early grades. In this article, we present a lesson plan that can be implemented in a grade one classroom to foster the development of classification and description skills amongst students, with a specific focus on lustre, colour, size, shape, texture, and weight. This lesson draws upon the learning cycle and 5Es framework for inquiry science lessons (Bybee, 2014) to address the core science standards for grade one (E.E.C.D, 2015).

"It is important that children develop the skill of identifying these differences and be able to articulate these differences.

First, we will discuss a few misconceptions and alternative ideas that students may bring to the grade one classroom, hindering their learning about classification of objects. Second, we list the curriculum outcomes that will be addressed in this lesson and the materials required to implement this lesson. Third, we describe a 5E lesson plan, which includes a discussion on each one of the five stages of the learning cycle: (i) Engage, (ii) explore, (iii) explain, (iv) elaborate, and (v) evaluation. In the end, we discuss how we will address student diversity to include all learners in this lesson and provide a conclusion.

Common Misconceptions:

The following is a description of misconception and/or alternative ideas that may hinder students' learning. Teachers need to be aware of these before implementing this lesson so that they can address and modify these during their teaching of this lesson.

When young children learn to classify and describe objects, they may present the following alternative ideas:

1. They form "rules" that are too broad. For example, they may believe that every round object is a ball (Adams, 2007).

2. They form incomplete ideas about objects and their properties when teachers have not presented critical attributes through examples and non-examples. For example, if a student is only shown triangles that are equilateral, they may not understand that scalene, isosceles, etc. are also triangles (Adams, 2007).

3. They may not have a firm grasp of the term "property" as it relates to science. Carrier & Thomas (2008) found that many students believed "properties" referred to land. Thus, teachers must ensure students understand that "properties" of objects refer to an objects' characteristics, features, qualities, etc.

4. Students may be able to identify properties of materials or similarities and differences of objects; however, they are not equipped with the vocabulary to do so. Therefore, teachers need to expand students' previous knowledge and supply them with the terminology to classify objects.

5. At a young age, students may have the tendency to believe that there is only one way to describe an object. For example, if they classify an object as long, that may be the only way they believe they can describe it. Teachers should actively give examples to debunk this notion amongst students.

5E Lesson Plan

Curriculum Connections:

This lesson can be used to address the following Specific Curriculum Outcomes (SCOs) from NL Science Curriculum Guide for grade one:

GCO 3 (Knowledge): Students will construct knowledge and understandings of concepts in life science, physical science, and

DEVELOPING CRITICAL THINKING SKILLS OF GRADE ONE STUDENTS (CONTINUED FROM PAGE 2)

Earth and space science, and apply these understandings to interpret, integrate, and extend their knowledge.

SCO 27.0: compare and describe properties of objects and materials (GCO 3: Knowledge)

Skill Outcomes:

8.0 communicate while exploring and investigating

24.0 select and use materials to carry out their own explorations and investigations

Lesson Objective (s):

Students are expected to:

- Explore a variety of objects, using their five senses, finding ways to describe these objects and compare their properties. (Explore Stage)
- Recognize that all objects have unique qualities by which can be described and classified. (Explain Stage)
- Describe and compare objects using scientific qualities and terminology, such as: Lustre (shiny and dull), Colour, Size (big , small , wide , narrow , long , short), Shape (circular, rectangular, square , triangular), Texture (soft , hard , rough , smooth), Weight (heavy or light) (Elaborate Stage)

Materials Required:

For implementing this 5E lesson, we recommend creating the STEM kits beforehand. The teacher can use these kits for this lesson and future lessons. The objects that you can include in this STEM kit are at the discretion of the teacher and dependent upon available materials. These objects should be identifiable by some combination of their lustre, colour, size, shape, texture, and/or weight. Herein we describe a STEM Kit that we developed for this lesson, as a requirement for our science methods course during our B.Ed. Program.

Mathematics Connections:

This lesson has various connections to the Grade 1 Mathematics curriculum and can be integrated in a cross-curricular fashion to meet the following outcomes:

1SS2. Sort 3-D objects and 2-D shapes, using one attribute, and explain the sorting rule. [C, CN, R, V]

1SS4. Compare 2-D shapes to parts of 3-D objects in the environment. [C, CN, V]

The STEM Kit:
The STEM kit will contain various everyday materials that vary in their lustre (shiny and dull), colour, size (big, small, wide, narrow, long, short), shape (circular, rectangular, square, triangular), texture (soft, hard, rough, smooth), weight (heavy or light). We recommend no more than 10 objects, so as not to overwhelm students.
Our own STEM kit contained 8 objects:

I. cotton balls
II. a relatively small and well sanded piece of wood
III. ia coin (e.g., $0.25 piece)
IV. aluminum foil
V. wax paper
VI. two different rocks (one that was relatively small, white, shiny, and rough - labeled with a #1 sticker and one that was relatively small, grey, dull, and smooth - labeled with a #2 sticker
VII. A piece of silk fabric in a triangle shape

The Learning Cycle: 5 Es

1. Engage

The iSpy Game

At this stage, the goal is to draw students' attention and get them to think about objects and their properties, how they can be described, and how they are different and alike. To engage students' thinking, the teacher will introduce students with a game: "I Spy". Children tend to love this game, and therefore it will maximize student engagement with the lesson. The teacher will tell the students that they are about to play a game where the teacher will describe an object present in their classroom without naming the object, and will ask students to figure out what object is being described.

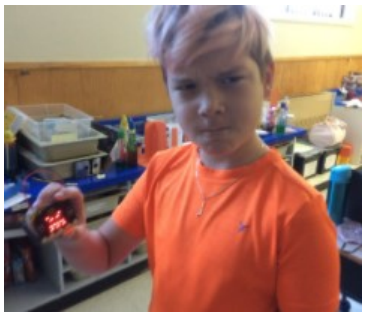
(continued page 6)

"Teachers will tell the students they are going to play a game: I spy"

MME WARREN'S CLASS IS CODING FOR CHANGE

In an integrated deep learning unit with curriculum outcomes related to science, health, religion, technology, math and language arts, this month Mme Warren's class explored computer programming using micro:bits. In order to allow her students more time to use these tiny programmable microcontrollers, Mme Warren borrowed micro:bits from the Brilliant Labs lending library in Corner Brook for a period of two weeks.

Beginning right after United Nations Day on October 24th, students thought and wrote about the biggest problems in the world, then looked at the Sustainable Development Goals (SDGs) of the United Nations which identify 17 world problems that countries around the world are trying to work together to solve. Students were introduced to some change-makers like Nelson Mandela, Rigoberta Menchu, Gandhi and Martin Luther King Jr., and were asked to think about how each of us can work for positive change in the world. Students worked on several projects to help them think of ways to implement positive change in their world. Under the SDG 3, Good Health and Well-Being, students worked together on social-emotional learning to program the micro:bit to express their emotions in a new way. Under the SDGs 13 and 15 of Climate Action and Life on Land, students created weather instruments, learned to code a thermometer, and were introduced to using block coding to create an automated watering system using sensors, a servo motor and micro:bits that would water the plant when the soil became dry. They used the iterative design process to come up with solutions to problems, such as changing the code to adjust the angle of the straw to allow the water to flow. Students displayed positive attitudes, increased motivation and good problem-solving skills during these activities.



Many thanks to Ms. Christine Elliott, (Maker Education and Coding Itinerant at the NLESD) and Brilliant Labs, who supplied the micro:bits. Thanks, too, to Let's Talk Science, Microsoft MakeCode, Fair Chance Learning, Teachers Learning Code, TIGed, Code to Learn and Brilliant Labs for supplying the teacher training that allowed this project to happen. Finally, thanks to the Exploits Lodge of the Independent Order of Oddfellows who, through their sponsorship of the United Nations Pilgrimage for Youth, inspired Mme Warren to help students look at world problems with innovation and hope.

Annette Warren teaches grade 5 French Immersion at Sprucehill Academy, Grand Falls-Windsor

TAKE THE LEARNING OUTSIDE!

Spending time outside has so many benefits! We all understand that kids need to release their energy and need fresh air. With recommendations to bring students outside as much as possible, how can we bring our outcomes out as well?

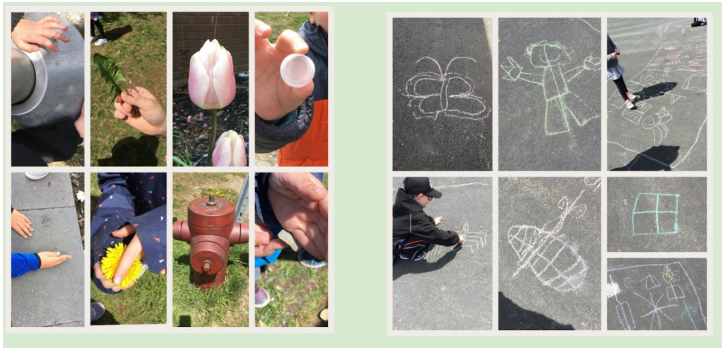
Here are a few ways that outside learning has worked in my classroom:

Student made hundreds chart! They created the chart with sidewalk chalk and worked together to fill in the numbers. We practiced skip counting, operations, and number patterns by jumping from number to number. As a bonus- we told the school about our creation and other classes used our chart until the rain washed it away.

Numeracy and Operations: With materials like large dice, bean bags, water bottles, hula hoops and chalk students can practice their skills.

Symmetry and Patterning: Why use videos or pictures to teach symmetry when you can use real life objects around the school? Students were so excited to point out symmetrical objects and draw a few of their own.

Data Management: Students use survey data to create graphs outside!

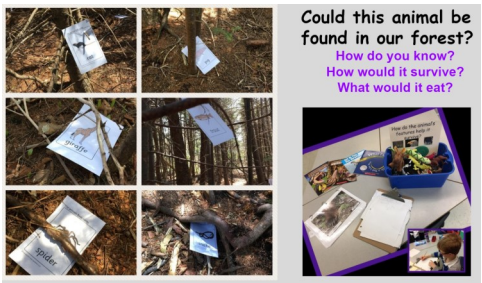


Soil and Plant Exploration: students collect, observe, sift and add water to soil. It's a messy unit, and we spent most of it outside! So many authentic learning experiences like finding living things in soil, noticing changing colours and consistencies.

Animal habitats and adaptations can be explored outside too! I placed animal cards in the outside area for students to find and then discuss if that animal could live in this habitat, and explain their reasoning.

Observations: to begin each year students learn about observation and practice this skill by observing things in their environment and recording observations through sketches and/or words. This practice is perfect for outside learning! Get those clipboards ready!

Structures: Nature offers building material! We have planned and built snow, rock and trig structures. Why not take your design and build STEM challenges outside?



There is always something new to explore and learn. Of course, there is nothing wrong with free play outside; kids need that too. There is so much to explore and learn and so much of our curriculum that can be brought outside! It's worth a try! I promise!

Jane Lloyd is a classroom teacher at Holy Trinity Elementary in Torbay. Follow the life of her classroom on Twitter @MrsLloydHTE

DEVELOPING CRITICAL THINKING SKILLS OF GRADE ONE STUDENTS (CONTINUED FROM PAGE 3)

The teacher will continue playing this game, and in each round, the teacher will describe an object found in the classroom using properties such as lustre, colour, size, shape, texture, and/or weight, and allow students to guess the object.

As students guess, and they suggest objects that do not fit with the criteria, the teacher should ask them whether the specific criteria are met. For example, if a student is asked to identify an object that is large, rectangular, and blue, but the student suggests a globe, the teacher might ask, "Hmm, is a globe rectangular?" and allow the students to reflect.

Note: Prior to beginning the lesson, the teacher should select numerous objects in the classroom and ensure that they are visible to all students. Examples may include the classroom door, the whiteboard, or any number of other objects. These objects should be identifiable by some combination of their lustre, colour, size, shape, texture, and/or weight.

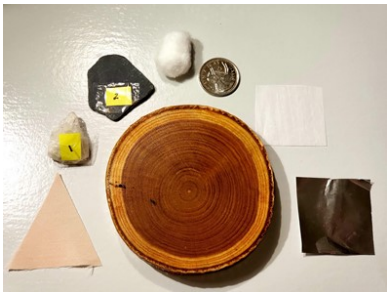
At the end of five rounds, the teacher may use a formative assessment probe to gauge knowledge. Ask students, "Now that we've found some objects in the classroom, I'd like you to tell me some ways to describe objects". Teacher will turn to page 4 of *Sorting* (Pluckrose, 2019), displaying the visual and ask students how they might describe the objects and group them based on how they are alike and different.

Example: While each classroom will differ, we offer the example of a whiteboard to illustrate the process. The teacher might say, "This object is white (show white coloured card), this object is big (use hand gestures to indicate largeness), and this object is rectangular (use hand gestures to indicate rectangular). What object might I be describing?". The teacher will then allow students to guess. For time conservation, if students have not identified the object in 5-7 guesses, the teacher may tell students which item they were referencing, and why (for example, the whiteboard because it is big, rectangular, and white) and move to the next round.

2. Explore

Describe and sort objects in STEM Kits based on observable properties and similarities and differences

At this stage, the goal is to have students explore objects in a hands-on fashion and think of the many ways they can describe, and sort objects based on their properties. The teacher will begin by quickly reviewing the prototype teacher STEM kit with students. Teaches should show each item in the STEM kit, and give students its name. The teacher should lay each item on a table visible to all students along with a sign showing the names in written form.



Then, the teacher will give small groups of students their own STEM kit, identical to the teacher's prototype. When students receive their STEM kit, the teacher should ask them to look at all the objects and talk with their group members about how they can describe each object. Students should be asked to think about how some of the objects are the same, and some are different. They should also think of ways they might group some objects together based on likeness and separate others based on differences. As students explore the STEM kits, teachers will circulate and engage with students. Teachers should ask questions to encourage deep thinking, the articulation of student reasoning, and to help gauge student ideas. Questions might include, but are not limited to, "What can you tell me about this object?", "How does it feel?", "What does it look like?", "Why did you group these objects together?", "How are these objects alike?", "How are these objects different?" The teacher should expect to see a variety of student ideas and encourage students to explain their reasoning and thoughts. For example, students might decide that aluminum foil and wax paper are the same because they are both square and light, but different because they have different lustre; foil is shiny while wax paper is not.

3. Explain

Discussing student findings & decisions using scientific vocabulary

During this stage, the goal is to synthesize student ideas as a class and supply students with necessary scientific vocabulary to describe the objects: lustre - shiny and dull; colour; size - big, small, wide, narrow, long, short; shape - circular, rectangular, square, triangular; texture - soft, hard, rough, smooth; and weight - heavy or light. The teacher will facilitate a student discussion regarding their findings & decisions concerning descriptions of objects in their STEM kits.

DEVELOPING CRITICAL THINKING SKILLS OF GRADE ONE STUDENTS (CONTINUED FROM PAGE 6)

They may do this by selecting two or three items from the STEM Kit and asking students what words they used to describe them. Objects should vary in their properties. For example, if you are using the exact same STEM kit as described above, we would suggest using objects such as the wood, which is circular, smooth, brown, big, dull, hard, heavy; the aluminum foil, which is soft, smooth, shiny, light, square, silver; and rock #1, which is small, white, rough, hard, heavy, circular.

The teacher should ask students what they can tell about each of the selected objects. Here, the teacher should take student ideas and record them on the whiteboard. After having completed the word list, the teacher should highlight correct terminology by telling students it is a descriptive, scientific word and circling it on the word list. For example, if students identify wood as hard, the teacher may praise their use of a word that describes *texture* and circle it.

In cases where students do not use correct terminology, for example, "not shiny" as opposed to dull, the teacher might say "Yes, sometimes objects are shiny, and sometimes they are not shiny. A more accurate word for not shiny is *dull*. *Shiny* and *dull* refer to *lustre*". The teacher will then write lustre, shiny, and dull on the board. By the end of this activity, all terms should be identified and written on the board.

4. Elaborate

Describing Objects: Using scientific terminology

Here, the goal is to elaborate on students' hands-on learning experience and observation skills and have them implement scientific terminology while describing different objects. Students will learn to use appropriate terminology to describe the objects that are found inside the STEM kit. The teacher will say, "Now that we've learned specific words, to describe objects, I would like you to complete the activity sheet to describe the objects in your STEM kits." The teacher will display the worksheet for students to see, and say, "Along the side is a list of the objects in your STEM kit. Across the top is a list of properties that can describe each object. Your job is to decide which of the words listed at the top describe your object and write them in the box for that object. Teacher will explain using an example to avoid any confusion in how to complete the activity sheet: "For example, if you think that wood is the colour brown, you will write "brown" in the colour column for wood." Then the teacher will give students an activity sheet and let them complete the activity sheet individually.

For students who are struggling with writing, a modified activity sheet will be implemented where students will be asked to put a checkmark in the corresponding boxes of properties that apply to each object. The teacher will circulate, observing student work,

providing clarification and aid where necessary, and noting student learning. Once the activity sheets are completed, the teacher could collect the activity sheets for closer review and feedback.

5. Evaluate

Describe a new object

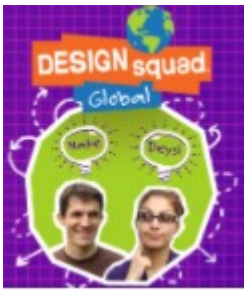
The teacher will then facilitate a final student-centered discussion to verify and solidify learning. The teacher will select one to two "new" objects with which the students are familiar but have not yet explored in a critical way. For example, the teacher may select the classroom clock, a book, a toy, etc. The teacher will present the object to the class and say, "Using the terms you just learned, please describe this object". The teacher should expect to receive responses that utilize the aforementioned vocabulary, referencing colour, size, shape, lustre, texture, and weight. This process can be continued for a couple of different objects until the teacher feels that students are comfortable with the process and vocabulary.

(continued page 10)

"If students identify wood as hard, the teacher may praise their use of a word that describes *texture* and circle it."

MATH AND SCIENCE LINKS FOR YOU AND YOUR STUDENTS

Zorbit's Math Adventure: Students learn math through play in this rich narrative math environment designed by Newfoundland-ers. Every K-3 NLESD teacher has free access to this program. Webinars on how to use the program are on the district PL site.



PBS Kids Design Squad- STEM Challenges : Engage kids in hands-on engineering with these lessons and videos designed for kids 10 - 13.

Frugal Fun for Girls and Boys - STEM Challenges (K-4) Check out this site for more than 30 STEM Challenges for kids made with inexpensive or recycled materials.

Hour of Code - (K-9+) Take a look at these activities, sorted by grade level, to introduce your students to computer coding during the "Hour of Code".

Curio.ca (K-12) This video site from the CBC offers access to thousands of videos from the CBC archives, including a section on Math and Science. Filters make the site easily searchable to find relevant video content to support and enrich lessons.

Prodigy (K-8) This curriculum-aligned math video game provides adaptive feedback and helps differentiate instruction. A teacher dashboard helps assess learning and identify needs. Teachers will need to create a class account that can help track student progress. Sign-up is always free.

Let's Talk Science (K-12) is committed to developing youth who are creative, critical thinkers and knowledgeable citizens prepared to participate and thrive in a complex global environment. For your curriculum, access free curriculum-aligned resources, activities and projects. For your students, access in-class and virtual workshops and special events. For yourself, access variety of professional learning activities. Resources and programs available in English and French, at no cost to you.

MATH AND SCIENCE LINKS FOR YOU AND YOUR STUDENTS

Math Learning Center This site contains 12 free math apps, including a number line, geoboard, number frames and others that allow students to visualize and explain their thinking about math concepts.

Braining Camp This site contains 16 virtual manipulatives such as algebra tiles and an x-y coordinate plane to help students visualize. This paid subscription service is available for free for a 30--day trial.

Toy Theater Virtual Manipulatives This excellent site contains a very wide variety of virtual manipulatives for grades K-12, including dice, a stopwatch and a classroom timer. Access is always free.

Didax Virtual Manipulatives
Teach a variety of math concepts K-8 with these virtual manipulatives. Includes prime factor tiles and algebra tiles. Free to use, but contains ads for educational products. Allows embedding within online learning platforms.

Geogebra This powerful site includes graphic, scientific and 3-D calculators as well as geometry tools to help students think of formulas visually. Appropriate for grades 4-12.

Perimeter Institute (5-12) provides an amazing collection of free resources that will build and grow your understanding of physics from muons to event horizons. Access downloadable posters, videos, lessons and more!

Explore Engineering (4-12) is a resource hub to help you take your first steps towards discovering a rewarding future in engineering. It's more than just math and science: engineering can take you anywhere!

DEVELOPING CRITICAL THINKING SKILLS OF GRADE ONE STUDENTS (CONTINUED FROM PAGE 7)

Student Diversity and Inclusion:

To engage all learners in this lesson, multiple strategies can and should be implemented to meet the learning needs of diverse learners. Here are a few possible strategies:

Visual Aids: For students who struggle with oral and/or language comprehension (such as ELL students), the teacher will provide a visual aid when referencing colour. This can be in the form of showing students a sheet of paper that is the same color as the object in question. The teacher may also use hand gestures in their description of objects. For example, when describing size, the teacher will use hand gestures to indicate big or small, wide, or narrow, etc. Similarly, when describing shapes, such as triangular, circular, square, or rectangular, the teacher could use their hands to indicate the shape.

"When describing shapes, such as triangular, circular, square, or rectangular, the teacher could use their hands to indicate the shape."

Written aids: As the teacher presents each item in the STEM Kit to the class, the teacher may also display a sign with the written name of each object. These signs should remain visible for the rest of the lesson, so that students may refer to these when discussing the items in their STEM Kit and when completing the activity sheet. This strategy may also serve to help with word recognition for students who are not familiar with the vocabulary or who require extra support with reading.

"This strategy may also serve to help with word recognition"

Adapted Activity Sheet: While the activity sheet described above is feasible for a first grader with typically developed writing abilities and motor skills, it may not be the case for all students. Therefore, an adapted activity worksheet (What Does It Look Like?) may be provided for students who struggle with writing. The original activity sheet requires students to write the properties of each object into a chart (however, all necessary vocabulary is already listed on the activity sheet). The adapted worksheet provides a checklist that eliminates the written component, but still allows students to document their knowledge.

Conclusion:

This lesson can help teachers address the curriculum outcomes listed above and help students to expand their scientific vocabulary while also illustrating that there are many ways to describe the same object, such as texture, size, and shape. Teachers can provide students hands-on and minds-on learning experiences following an inquiry approach to learning science. This lesson can aid teachers to foster and refine important skills highlighted in the new science curriculum in Newfoundland and Labrador. Teachers can help students build on their skills in identifying and articulating differences amongst materials. This lesson can be modified and expanded based on the teacher's preferences and classroom dynamics.

Acknowledgements:

We would like to acknowledge that this lesson was crafted in partial fulfillment of the course requirements of *ED 3273: Science in the Primary / Elementary Grades* at Memorial University of Newfoundland.

We would also like to thank our instructor, Dr. Saiqa Azam, for her guidance throughout the process of writing this paper and for her work in the editing process.

References:

Adams, B. (2007). Sort it out. *Science and Children, 45*(2), 52-54.

Bybee, R. (2014). The BSCS 5E instructional model: Personal reflections and contemporary implications. *Science and Children, 51*(8), 10-13.

Carrier, S., & Thomas, A. (2008). Button basics. *Science and Children, 45*(5), 21-23.

Department of Education and Early Childhood Development. (2016). *Mathematics 1*. https://www.gov.nl.ca/education/files/k12_curriculum_guides_mathematics_math_1_curriculum_guide.pdf

Department of Education and Early Childhood Development. (2015). *Science 1*. https://www.gov.nl.ca/education/files/k12_curriculum_guides_science_science_1_2015_final.pdf

Pluckrose, A. H. (2019). *Sorting*. Children's Press. [An imprint of Scholastic Inc.]

Carla M. Bartlett (cmb332@mun.ca) and Heather L. Hunt (u94hlf@mun.ca) are preservice teachers in the Primary-Elementary program at Memorial University

PROVOCATIONS TAKE YOU PLACES!

One afternoon in grade 1, I laid out a few science provocations. One was all about the sense of 'touch'. Students could touch and hold a number of objects. They could see some examples of describing words and could read a book about the sense of 'touch'.

I thought that most students would sort the objects by how they felt (e.g., rough, smooth, slippery). I also thought they would talk about the objects making connections to other objects they may have had experience with at home.

While these things did happen, I was pleasantly surprised to see some students taking some cardstock cards and writing more words! It started with one little boy, who was speaking about a piece of fabric. "Soft" his friend said, and so, the boy took a card, and wrote it down. They wrote down so many words together that they had to keep asking for more and more cardstock! More students got involved and a lot of words were written on cardstock. The next day, during exploration time, I placed the provocation out again. I was again surprised to find they were reading through all of the words trying to come up with more that were not already found!

Sometimes, it takes science for young children to find a love of vocabulary. We often think of writing as a skill that has to be taught in a formal fashion, at a desk. It's good for us to remember that writing can be taught at any time and any place. Even during play!

MEMBERSHIP IN MSSIC

... professional conversations... building connectivity... local content... address professional development needs... help shape our learning community...

The Math-Science Special Interest Council (MSSIC) of the Newfoundland and Labrador Teachers' Association (NLTA) exists to foster professional growth and development of its membership in the areas of math and science teaching and learning.

MSSIC also advocates for the special interests of teachers of math and science. MSSIC works to form partnerships with like-minded partners in the educational enterprise for the welfare of its membership as well as the development of students in the areas of math and science education.

Membership in MSSIC is open to all NLTA members and others interested in supporting the teaching and learning of math and science in Newfoundland and Labrador. Membership categories are as follows:

Full Member: a person who is currently a member of the NLTA. Membership fee included as an NLTA member.

Associate Member: a person who is Math and/or Science teacher or who is interested and involved in Math and/or Science education, and who is not an active member of NLTA. Membership fee $25/year.

Student Member: a person who is enrolled in full-time post-secondary studies in Math and/or Science and/or Math and/or Science education. No charge.

If you would like more information about becoming a member of MSSIC, please email yvonnedawe@nlesd.ca