

Explorations



THE CHALLENGE:

Meteorologists are predicting we will be having a mild winter this year, which usually means more precipitation, giving more opportunity to play and explore!

Your challenge is to bundle up and get outside! No matter the weather, no matter the season, getting outside is important to your health and happiness... and its fun! Try some of these explorations while you're out.

~ Cross-Curricular Team ~
Dream. Explore. Discover.

ASD-N Discover Monthly

@STEAM in ASD-N @STEMNorth

See STEM North and [MS Teams](#) for digital copies of current and past issues!
(<http://stemnorth.nbed.nb.ca/>)



Exploration 1

When the particles in a liquid are cooled, they slow down and huddle together, becoming a solid.



Task: Create a video of a soap bubble outside (-9°C or colder) or a time-lapse of water freezing. Click [here](#) for ideas if needed. After watching your video, ask yourself and journal the following questions:

What do I see? What do I know? What do I wonder?

Extension: Plan an investigation based on your answers and create a PowerPoint, Video or Sway to communicate your results!

Exploration 2

We are surrounded by forces everywhere we go. A force is a push or pull acting to move an object depending on the pressure. Gravity is a force that keeps us on earth and friction is a force that resists motion.



Task: In groups, create a large snowball by using the push and/or pull force. After your group can no longer push or pull, transform your large snowball into a regular 3D shape. Focus on the different faces of your shape. Can you find the angles that make up triangles and quadrilaterals or the area of a triangular face or the circumference of a circle? Could you create a net for your 3D object?

Take your Math class outside and have fun doing it!



Exploration 3

Close your eyes and imagine.....Trekking through 6 feet of snow, hunting and searching for food. Every step you sink deeper and deeper. How would you feel? How would you continue?

Task : Explore First Nations Innovations and create your own snowshoes using items from around your school (inside and out). Once you have them, take them outside and try them out. Did they work? What happened? What would you need to change to make them better?



More info on Mi'kmaq snowshoes

Check out these other fun Winter Phys.Ed. ideas:

[WINTER FUN OUTSIDE !](#)

Close-up Capture

Can you guess what this is a close-up picture of?

**Hint: It can weigh more than 10 times your weight*



Click [here](#) for some interesting facts about this picture and the photo credit.



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Explorations - Possible Outcomes & Extensions

Exploration 1

SCIENCE

All strands of skills can be met through a full investigation (Initiate & Plan, Perform & Record, Analyze & Interpret and Communication)

Society & Environment / Knowledge: Gr 6 (104-3), (104-5), (106-3), Gr 7 (109-7), (110-1), (111-5), (112-7), (307-1), (307-3), (308-2), (308-3), (308-4), Gr 8 (111-3), (307-6), (307-7), (307-9)

LITERACY

Speaking & Listening: 1.2

Reading & Viewing: 5.1

Writing & Representing: 10.1, 10.3

MSTE

Technological Operations: 1.1, 1.4

Critical Thinking & Problem Solving: 2.1, 2.3

Exploration 2

SCIENCE

Initiate & Plan: Propose Questions

Perform & Record: Record

Observations

Analyze & Interpret and

Communication: Identify new questions, Communicate results

Society & Environment /

Knowledge: Gr 8 (309-1), (309-2), (309-3)

LITERACY

Speaking & Listening Gr 6/7/8: 2.1, 2.3, 3.2

MATH

Shape & Space: - Gr 6: SS2 Gr 7:

SS1, SS2 Gr 8: SS2, SS5

Exploration 3

LITERACY

Speaking & Listening: 1.1, 1.2, 2.1, 2.3

Reading and Viewing : 7.3

SOCIAL STUDIES

Culture: (6.1.1), (6.1.3), (6.2.2), (6.2.3), (6.3.1)

Empowerment: (7.3.1), (7.4.3)

Atlantic Canada: (2.1), (2.3), (4.2)

PHYSICAL EDUCATION

Doing: SCOs 1, 6, 9

Knowing: SCO 4

Valuing: SCOs 1, 4, 6

MSTE

Technological Operations: 1.3

Critical Thinking & Problem Solving: 2.1, 2.2, 2.3

HEALTH

Caring for yourself / Personal Wellness

Gr 6 (A2, B1, B2, B3)

Gr 7 (B1)

Gr 8 (A2, B1, B2)

Additional Resources & Extensions

Learning for a Sustainable Future: <http://lsf-1st.ca/>

Resources 4 Rethinking: <http://resources4rethinking.ca/en/>

Take me Outside / Amene-moi dehors: <https://takemeoutside.ca/>

Sustainable Development Goals: <https://bit.ly/38bF6rT>

MS Teams: [6-8 Science/Cross-Curricular](#)

FNE Ecology & Technology (Lesson 7): <https://bit.ly/38Xd9n7>

Arduino Science Journal:

<https://www.arduino.cc/education/science-journal>