

**Pictou County Forest School - Primary Lesson Plans**

**Physical Science: Movement**

**Activity:** Movement Centres (45-60 minutes)

**Overall Curriculum Outcome:** *Learners will test movement of objects*

**Specific Curriculum connections:**

- *Properties of objects determine movement*
  - *How can I determine attributes that affect the movement of an object?*
  - *How can I predict how an object will move?*
- *Properties of ramps impact movement*
  - *How can I change the way an object moves down a ramp (faster, farther, etc.)?*
  - *How can I design a fair test to assess my ramp?*
  - *How can I determine whether different surfaces affect the way an object travels down a ramp?*

**Materials:**

- Various lengths of wood for ramps
- buckets/tubs for the water centre

**Intro/Activation:**

- Hold two objects in your hands (e.g., a feather and a pine cone) and ask the students to predict which object will fall to the ground first? Drop your objects and discuss the idea of attributes with the group and how this affects how things work in the world.
- Give students time and space to explore various objects around them (e.g., sticks, pinecones, branches, rocks) and invite them to bring their objects back to circle for a show and share. Adults facilitate a compare/contrast conversation about the found items (e.g., “this pine cone is light and flaky. This rock is heavy”)
- Divide into three groups and rotate students through the various centres.

<b>Ramp (off steps of main shelter)</b>	<b>Drop</b>	<b>Water</b>
<p>Ramps of various lengths and materials will be provided to use off of steps on the main shelter at base camp.</p> <p>Staff can introduce variables to push students' thinking in the following ways:</p> <ul style="list-style-type: none"> <li>- Covering various ramps with snow, mud, sand, wet/dry</li> <li>- Changing the angles of the ramps</li> <li>- Controlling the rolled items: pinecones vs rocks vs mud balls etc.</li> <li>- Push vs non-push</li> </ul>	<p>Students collect an assortment of items and bring them back to share with the group. Have conversations about the idea of attributes and have the group make predictions about how the various objects will perform when dropped.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>- Maple keys and acorns are both seeds but perform very differently when dropped</li> <li>- Feathers vs rocks</li> <li>- Birch bark vs hemlock bark</li> </ul> <p>Students pair up and test drop their items.</p>	<p>Students collect an assortment of items and bring them back to share with the group. Have conversations about the idea of attributes and have the group make predictions about how the various objects will perform when dropped into water.</p> <p>For example:</p> <ul style="list-style-type: none"> <li>- Feathers vs rocks</li> <li>- Sticks of various decomposition</li> <li>- Logs vs sticks</li> </ul> <p>Students pair up and test drop their items.</p>