

**Pictou County Forest School - Grade 2 Lesson Plans**  
**Earth and Space Science: Air and Water in the Environment**

**Activity:** A River Ran Wild (suggested time 90 - 120 minutes)

**Overall Curriculum Outcome:** Learners will analyse the interconnectiveness of air and water in the environment, inclusive of a Mi'kmaw perspective.

**Specific Curriculum connections:**

- Interconnective relationship of Mi'kmaw people with air and water
  - How are air and water important to Mi'kmaw people?
  - How can we keep water clean?
- Personal actions can contribute to a healthy environment
  - How is water important to me?
  - How can I keep the environment healthy?

**Materials:**

- A River Ran Wild, Lynn Cherry
- Clear plastic totes for creating topographical watershed environments
- Sand, gravel, shovels, found objects for terraforming watershed totes.
- Water totes for water storage and jugs for pouring
- Food colouring

**Intro/Activation:**

- Guided Read: Read the story book, A River Ran Wild and have a discussion around how human behaviour (both big and small) has an effect on the natural world.
- Focus attention on rivers: how pollution or environmental degradation upstream affects everything downstream.
- Focus on local issues of human interaction impacting local watersheds (pulp mills, clear cutting of forests)
- Garner student understanding of erosion and how it plays a major role in water moving through landscapes.

**Instructions/Activity:**

<b>Totes</b>	<b>Natural gradient</b>
Provide each group a plastic tote. Each group is responsible for 'terraforming' their tote to look like the Earth's surface. It is beneficial for students to create a gradient from one side of the tote to the other so that they create a river effect. Students pour water from the top of their watershed and observe where the water goes. Add food colouring to water if needed to help students see the water in action.	Find a suitable gradient for students to observe water running downhill. The experiment runs similar to the tote experiment, having kids add rocks, stones and organic materials to their water courses and observing the results.

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- Does the water run fast? Does it take lots of sediment with it?
- What could be done to slow down the moving water and slow

Ask students how adding rocks, sticks, moss, leaves etc to their totes would change the flow and colour of water? Retry the experiment with their added features.

**Reflection/further wonderings:**

Ask students what happened to their rivers when they added obstacles to their water courses? How did it effect the course and speed of water movement? (You can make the comparison of trying to walk through the hallway at school during busy times and quiet times. Which is easier and faster?)

Permaculture: "Where water runs, make it walk; where water walks, make it crawl; where water crawls, make it seep and sleep."