

Lesson Plan - The Perfect Weather

Grade Level: Grade Five

Learning Objectives:

- to learn about the perfect weather conditions for maple syrup production
- to have the opportunity to practice graphing

Expectations: Earth and Space Systems - Weather

- describe ways in which weather conditions affect the activities of humans and other animals
- compile data gathered through investigation in order to record and present data
- understand and explain the importance of weather forecasts for people in certain occupations (e.g. farmers , pilots)

Materials:

- current newspapers
- chart paper
- large permanent marker
- graph paper

Procedure/activities:

1. Ask the students what they know about maple syrup and the production of maple syrup.
2. Ask students to brainstorm what factors affect the production and amount of sap that will flow in a maple tree. (Make sure they include weather as being a factor)
3. Explain to the students that to produce the best sap flow, you need a hot sunny summer with a good amount of precipitation. As well you need a winter where the ground is not too deeply frozen and warms up gradually as spring draws near. The most important time however is the springtime. Ideal weather conditions include cold nights, just below freezing and warm days with temperatures around 5-8 degrees Celsius.
4. Pick up a newspaper every morning for a week
5. At the beginning of the week, have the students make a prediction of what the weather will be like for the week. Have them record their predictions in their book.
6. First thing in the morning record the daytime and nighttime temperatures of that day. Record it on the graph that they have set up in their book using the graph paper provided. Ask students if today is a good for sap flow. Repeat each morning of that week
7. At the end of the week, look at the classroom graph and draw conclusions. Ask the students questions such as; was the week an optimal one for sap flow? What are the differences between your predicted forecast and the actual forecast? How important is the weather forecast for a person in the maple syrup production business? Have the students record their answers in their science workbooks or science journals

Assessment:

- Assess their graph and answers to the questions in their science book
- Assess classroom participation

Extension Activities:

- If the weather is good for sap flow, and there is a maple tree in your schoolyard, tap a tree with your class and keep a sap collection chart in the class.
- Bring the students on a field trip to a nearby sugar bush to observe sap collection first-hand.