



Altering Water

Suggested Grade Level: Third Grade

Materials:

- *The Little Acorn* by Christa Kauble
- Water
- Popsicle cups, ice cube trays, ice holders
- Set of burners
- Two pans
- One lid
- Start of a bar graph for display
- Paper
- Pencil
- Markers
- Computer access
- Rulers

GLEs

1. Investigate that water can freeze into a solid, melt into a liquid, evaporate into a gas, and condense into a liquid again.
2. Recognize the importance of water to living organisms.
3. Gather information, interpret, construct, solve problems with graphs, tables, charts, and maps.

Measurable Objectives

- Students will create a bar graph of plants needing water to survive; they will list six North American plants, research how much water is used each year, and graph the results.

Anticipatory Set

- Have students get into groups of four and brainstorm a K-W-L chart about the different forms of water and what plants use different water forms.



- After the students have completed their K-W-L chart, have a person from each group state what they knew and wanted to know. As they are saying these things, write down each student's idea on a class wide K-W-L chart.
- Have three stations set up to explore: ice water, room temperature water, and hot water.

Instructional Point

- Read the story *The Little Acorn*.
- Ask the children how many different forms of water they heard throughout the story.
- Give each student an ice cube holder/tray/popsicle cup
- Have students fill with water and put in freezer. Check every 30 minutes for water form status.
- Have two burners set up in front of the class. Put two pans of water to boil, one with a lid and one without. Boil the water until the pan without a lid no longer has any water to boil.
- Discuss with students why the pan without a lid dried faster than the pan with the lid.
- Reflect back on the story of *The Little Acorn*, and discuss what water form would best help the plants to live and survive.
- At each 30 minutes, have a student record the findings of what the water was doing-cooling or thawing, by drawing a bar graph.
- The graph should show the freezer with how many solid ice cube trays, and the pans of water will show how much water has evaporated by putting a ruler in the pan to measure what is left.

Modeling

- Show the students how to fill the ice tray with water and carefully put in the refrigerator.
- Demonstrate how to draw a bar graph.



Check for Understanding

- Listen to the student's interactions with each other, asking questions as, "Has anyone found a plant that does not require at least a little bit of water to survive? Who has found the plant with the most water, or the least water for survival?"

Guided Practice

- Have students form a circle and discuss what types of things need water to survive. Have students make a list of the things that need water to survive.
- After the plants are discussed, give each student a North American plant to find the amount of water needed for survival.
- Once the students find the water amount, tell the students to add their plant to the class bar graph.

Independent Practice

- Students will work individually on creating a bar graph using North American plants talked about during the lesson. Students will find six plants and make their own bar graph according to the amount of what they need for survival.
- In small groups have the students find pictures of water in magazines to have them cut them out and sort into common water characteristics.

Closure

- When you go outside, look at the roots and see if they are above ground or underground.
- Every living creature needs water and therefore rainy and cloudy days are important to the seed growing adventure.
- Return to the K-W-L chart and previous groups and add the last column once all the groups have completed their Learned column. After writing down the Learned column, choose another person from the group to state for the class their Learned column, while the educator compiles the groups responses.



Evaluation

- Check to see if the students have completed their bar graph accurately using six different North American plants.

Lesson plan compiled by Misty Rowe, an Earth Team Volunteer and Early Childhood Education student at Missouri State University, Springfield, MO

May 2010