Pond Ecology

Puddle Puzzles

Pre-visit activity, grades K-3

Adapted from Instructor: "Explore Our Watery World," April 1992, Lynne Kepler

Objective

Students will learn about the process of evaporation.

Materials

- Drawing paper
- 2 glass jars of same size
- Chalk
- Markers and/or crayons
- Rubber band
- Plastic wrap

Procedure

1. Take your class on a field trip after a rain shower. Give the students time to explore the puddles left from the storm. If no rain is predicted during the time frame you have to conduct this activity, create your own puddles with a garden hose or buckets of water. If students have appropriate shoes or boots, have them walk carefully through the puddles. Ask, "What happens to the water as you move through it? What do you notice as you walk away from the puddle? (footprints) Will your footprints last forever?"

2. Encourage students to describe the colors, sizes, and shapes of the different puddles. Can they find life in the puddles? Trace around the

perimeter of several puddles with chalk or mark the border with rocks you find nearby. Have students draw a picture of a puddle and one of what they think the puddle will look like after a few hours or the next day.

3. Check your puddle sites after the specified amount of time has passed. Ask students, what happened to the puddle? Where did the water come from? Where does the water go? Will that water become rain again someday? If you found insects or other life in the puddle, ask what happened to those animals, did they die, find a new place to live?

4. Bring two jars of equal amounts of puddle water into the classroom. Or use tap water if puddle water isn't available. Cover one with plastic wrap secured with a rubber band. Mark the level of water in both cups. Place both jars where they can be easily observed by the students, such as a windowsill that receives sunlight. Have students guess what will happen to the water in both jars over the next few days.

5. After sufficient time has passed, ask your students what happened to the water in the jar without a cover. (It evaporated) What do they notice about the jar that is covered? (There will be water droplets on the plastic wrap) Tap lightly on the wrap and point out that the drops on the wrap are like rain.

6. Draw a picture of the water cycle on the board, having the students help you as you draw. Make sure to include evaporation, transpiration, precipitation, run-off, infiltration, etc. Use vocabulary words and concepts appropriate for the grade level you teach.

7. Discuss how puddles are an important water source for many animals, especially in an arid area like Utah. Oftentimes in the desert, a puddle may be the only source of water. Compare wetlands to puddles. Wetlands are like large puddles with plant and animal life around and in them. Wetlands are different from ponds in that they can dry up during part of the year.