

# Puddle Science: Watch Evaporation in Action

The water cycle is a second grade science concept with some challenging elements: evaporation, condensation, and precipitation. While precipitation (rain, snow, and hail, for example) and condensation (water droplets collecting on a cold beverage glass, for example) can be seen with the human eye, evaporation is much less visible a process. So how can you make this challenging science concept more visible to your second grader? Try this activity, in which your budding scientist collects information about a puddle that seems to disappear before his very eyes!

## What You Need:

- Sidewalk chalk, in various colors
- An outdoor puddle on a paved surface, such as a sidewalk (Important! Choose a puddle that is in a location where it is not likely to be disturbed.)
- A sunny day
- Clipboard
- Paper
- Colored pencils
- Pencil
- Watch

## What You Do:

1. Find (or create) a puddle of water on the sidewalk on a sunny day. Have your child use sidewalk chalk to trace the outline of the puddle on the sidewalk.
2. Tell your child that you are going to be checking the puddle every hour to see if it has changed in any way. Ask your child: to predict what will happen to the puddle in one hour, and explain his prediction to think about a way that he could keep track of his observations
3. Give your child a clipboard with paper, and have him create a T-chart (one horizontal line across the top, and a vertical line going down the center). Have him label the left side of the chart "TIME," and the right side of the chart "OBSERVATIONS."
4. On the chart, record information about the initial puddle observation. Have your child write the time that the first puddle outline was created. Then have your child use a colored pencil the same color as the sidewalk chalk outline to draw an illustration of the outline on the right side of the chart.
5. In one hour, come back for another puddle observation. Ask your child: Has the puddle changed? How? Why has the puddle changed?
6. Have your child use a different color chalk to trace the new outline of the puddle. Then have him record the time and, using a colored pencil that matches the new chalk outline, draw a new illustration of the puddle on the chart. (Note: Explain that he should try to record the information as accurately as possible. If the puddle on the sidewalk is smaller, the illustration on the paper should look smaller, too.)
7. Repeat at hourly intervals until the puddle has disappeared.
8. Have your child look over the information on his chart, and explain what he notices about the information he has collected. In general, he should notice that over time, the puddle got smaller and smaller, but basically stayed the same shape. Ask him to consider where the water went.
9. Explain the science behind your child's observations: With the sun's heat, water turns from a liquid to a gas. The water in the puddle turned into tiny droplets of water called water vapor. It evaporated, and is now in the air. To challenge your child further, ask him to consider how puddle will be become filled with water again. (It will refill when it rains. This is called precipitation, and it happens when water vapor condenses in clouds and forms water droplets again.)

