

## LEARN ABOUT OUR WATER CYCLE DURING A WORKING MODEL ACTIVITY FROM THE PERSPECTIVE OF A WATER MOLECULE

### 3<sup>rd</sup> Grade NGSS DCI Addressed:

[ESS2.D](#) Weather and Climate

### Pre-Trip Information/Activities:

- [Water Cycle Video](#)
- [The Water Cycle NewsELA Article \(3<sup>rd</sup> grade\)](#)
- [Water Cycle Vocabulary Word Search](#)

### Materials:

- Spinners (9)
- Bins of Colored Beads (9)
  - Glacier – Clear or Pearly Green
  - Lake – Dark Blue
  - River – Teal
  - Clouds - White
  - Soil - Brown
  - Ground Water - Purple
  - Plants - Green
  - Animals - Black
  - Ocean – Light Blue
- String
- Labels (9)
- Documentation paper

### Objectives:

- Learn about the Water cycle and how humans impact it.

### Set Up:

- Spread out the 9 dice/spinners
- Place feature label cards with the appropriate die/spinner
- Place a container of colored beads at each station (all colors except for yellow should be used at a station; you can match the colors with the station e.g. white as cloud, green as plant)

Each strand starts with a YELLOW bead to represent the sun, as it takes the energy from the sun to move water around the earth.

## Introduction:

- What is the water cycle?

Water cycle- the cycle of processes by which water circulates between the earth's oceans, atmosphere, and land, involving precipitation as rain and snow, drainage in streams and rivers, and return to the atmosphere by evaporation and transpiration.

- Can you name all the different places we find water on the earth?

In this activity we will use:

- Glacier
- Lake
- River
- Clouds
- Soil
- Ground
- Plants
- Animals
- Ocean

## Activity:

- 1) Spread participants evenly amongst stations and give each participant a blank worksheet
- 2) Have each participant take a string and a yellow bead; tie the string around the yellow bead to form the beginning of the bracelet. The yellow bead represents the sun, which provides us energy
- 3) Have participants take a bead from their first station and slide it onto their string, then write the name of their station in the first blank space on the worksheet
- 4) Have participants roll their dice/spin the spinner (make sure the dice stays at its designated station!)
- 5) If dice/spinner reads "STAY," then the participant grabs another bead and repeats process, writing down the name of their station in the next blank space
- 6) If dice shows a different water feature, the participant travels to that features station, takes a bead from that station and writes down the name of that station on their worksheet
- 7) Repeat the process until bracelet is formed (max 15 beads)
- 8) Once completed, tie off the end of the string to secure the beads

## Final Discussion:

At the end of the game have students sit down and talk about where they went, why they ended up spending a lot of time in one area and not others. The ideas below include a few discussion points

*\*In the event the group is not in a discussing mood you can have them see how many different 'water' places they have been or experienced\**

- Where does water spend most of its time?
  - Students might spend a lot of time in the ocean or clouds because most of the earth's water is found in those two places
- Why did they spend most of their time there? OR why did they follow the path they did
  - This will require them to think about the connection between each place they visited.
- Find out how many students got to spend time in a plant or animal (it should be very little)
- Where are places we share water with animals?
- How much water is available to humans?
- How does water get polluted?
- How can we clean up our water?
- Are there ways we can conserve water during a drought?

## Post-Trip Activity (to be done in class after trip)

- Have students write their story as a water molecule, using their imagination of how they traveled from one place to another (what kind of animal or plant?, the name of the lake or ocean, how far did the cloud travel?) (RI.3.3, SL.3.4)
- Tally how many times the students visited each of the 9 categories and graph the results to see where the water molecules spent the most or least amount of time. Discuss and compare this to real life events. (CCC-1: [Patterns](#), [3.MD.3](#), [SEP-6](#), [SEP-8](#))

Have students label HOW they were able to move from one place to another using water cycle vocabulary (condensation, transpiration, precipitation, consumption, evaporation...)

