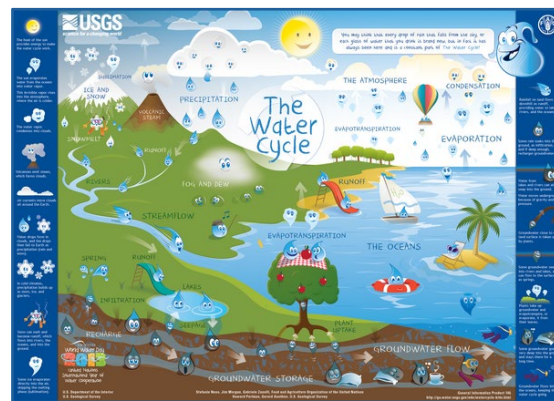
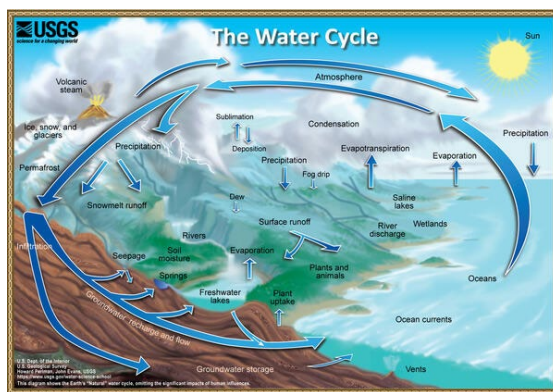


Water Cycle Bracelet Activity

Objective: Discuss the water cycle and review it by assembling bracelets using color beads that represent each stage of the water cycle.

Important Concepts - Earth's Water:

Earth is the only planet we know of that has water, a water cycle, and can sustain life.



The water cycle describes water's continuous journey: Evaporation, Transpiration, Condensation, Precipitation, Infiltration, Runoff, and Collection (or Accumulation), driven by the sun, moving water from Earth's surface to the atmosphere and back, changing states from liquid to vapor and back again.

Evaporation - Evaporation by the sun is the process where solar heat warms liquid water and turns it into a gas called water vapor.

Transpiration - Transpiration is the process where plants release water vapor into the atmosphere. Transpiration has three main steps. Plant roots uptake water from the soil. This water moves through plant tissues serving critical biological functions in the plant. This water is then released water vapor into the air through the plants stomata (pores).

Condensation - Condensation is the process where water vapor (gas) in the air cools down and changes back into liquid water droplets.

Precipitation - Precipitation is the process where water, in liquid or solid form (rain, snow, sleet, hail), falls from clouds to Earth's surface

Infiltration - Infiltration is the process where water on the ground surface (from rain or snowmelt) seeps downward into the soil and rock.

Runoff - Runoff is the movement of excess water from rain or snowmelt on the Earth's surface when the ground is saturated or impervious. Instead of soaking into the soil or evaporating, this water flows downhill into streams, rivers, and oceans.

Collection (or Accumulation) - Accumulation is the gathering of water in large bodies—oceans, lakes, rivers, and glaciers.

Did You Know?

- That all of the water that is on the Earth now is all that we will ever have...
- The same water we drink was around during the time of dinosaurs.
- That the water we have is limited.
- That the Earth will never run out of it because it is consistently recycled through the water cycle.

Materials:

- Water Cycle diagrams <https://www.usgs.gov/water-science-school/water-cycle-diagrams>
 - **NEW! The Water Cycle**
 - **The Natural Water Cycle**
 - **The Water Cycle for Kids**

The above diagrams are available as free download files in a variety of formats (PDF, PNG, JPG) and languages.

- Color beads
- Each color represents a different stage of the water cycle (see figure 1)
- String for bracelets (or necklaces) that have been cut to appropriate lengths.
 - A chenille stem/pipe cleaner can also be used to make bracelets
- Reusable cups to organize the beads. One cup of beads per student.
 -



Figure 1 – Bead Color Scheme

Instructions:

1. Review the water cycle poster and how water molecules change form to move through the cycle and prepare the students for the quiz. Ask students to name the three forms of water as a quick check-for-understanding.
2. Review the color bead key with students. Each color represents a different repeating phase of the water cycle.
3. Students tie a knot at one end of the bracelet. (Think about the order of the water cycle wheel).
4. String two or three beads of each color together to represent the phases of the water cycle in order.
5. Repeat 2 or 3 times to complete bracelet.
6. Tie bracelet off for bracelet, necklace or lanyard when done stringing beads.
7. Review the water cycle with bead bracelets!
 - a. Use the beads to show that the cycle goes around and around. It is continuously occurring. The water on earth today is the same water that existed billions of years ago.

Quiz

- Quiz Questions
 1. What are the three different types of precipitation?

2. For water to evaporate, it must change forms. In what form must water molecules be to evaporate?
 3. What makes water molecules change form?
 4. Can you name all three forms of water?
 5. What force pulls precipitation back down to Earth's surface?
- Quiz Answers
1. What are the three different types of precipitation? **Rain, snow, and hail.**
 2. For water to evaporate, it must change forms. What form must water be so it can evaporate? **It must be a gas.**
 3. What makes water change forms? **It is controlled by temperature. As water heats and cools, it changes form.**
 4. Can you name all three forms of water? **Water can be a solid, liquid or gas!**
 5. What force pulls precipitation down to Earth's surface? **Gravity**

Sample Bracelet

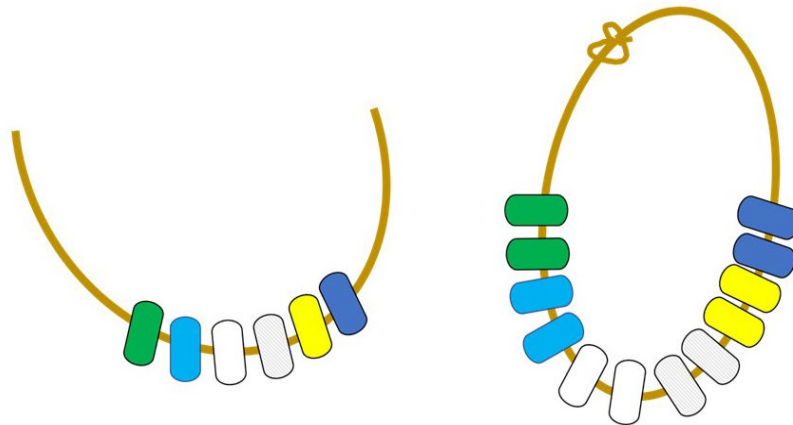


Figure 2 – Watershed Beaded Bracelets

Clean Water Team

https://www.waterboards.ca.gov/water_issues/programs/swamp/clean_water_team

