

Water Cycle Bracelet

LESSON SUMMARY

This lesson is an easy way for students to learn and remember the steps in the water cycle and see how water moves through it.

LESSON OBJECTIVE(S)

- Students will observe that water can travel different paths in the water cycle.
- Students access prior knowledge about the water cycle to build a model.

FOCUS QUESTION

How does water move through the water cycle?

LEARNING TARGET (I CAN STATEMENT)

I can create a model of the water cycle.

STANDARDS ADDRESSED

TN: 3.ESS2.1

MS: E.4.9A.1

AR: ESS2.C

MATERIALS

- Plastic pony beads in 10 different colors, sorted
- Leather stripes/hemp/twine/string/ pipe cleaners. Go ahead and add a bead for the sun and secure it
- “Water Cycle Definitions and Bead Colors” sheet (below) You can have 1 at each station or project for class. Fill in the colors you have available.
- “Water Cycle Direction” sheet (below) 1 at each station. Fill the sheet in with what each step color bead is before making copies.
- “The Water Cycle” model (below) You can have 1 at each station or project for class
- Dice at least 1 per station
- Scissors

PROCEDURES

1. Remind students of the water cycle by telling them that water never stays in one place on our planet. It changes form (liquid, solid, vapor) and locations. This process is called the water cycle.
2. Go over the vocabulary terms.
3. Give each student a piece of twine (or other material)
4. Ask students to imagine that they are a molecule of water and that they are going to go on a journey through the water cycle. As they move through the water cycle, they are going to add a single bead to their string to mark the journey. When they are done, they will have a piece of jewelry.

Water Cycle Bracelet

5. Tell them their string already has the sun on it because the energy from the sun powers the water cycle. Ask what state of matter they will be in if the sun has warmed them up. Prompt till water vapor/gas answer is given.
6. Tell them as they have risen in the sky that the air is colder so they will condensed. “Let’s add our condensation bead on our bracelet.”
7. Ask students what would happen if enough of them started to stick together as water droplets. Prompt till you get the answer precipitation. If they say a type of precipitation redirect explaining that their answer is a type of precipitation ex. “Yes, it could be rain because rain is a type of precipitation. In the water cycle we say precipitation since the water falling to the ground be different types of precipitation like rain, snow, sleet, or ice.” Tell them to add their precipitation bead to their string.
8. Tell students that here is where everyone’s jewelry is going to look different. Explain that water does not move through the water the same way every single time. To show this they are going to roll a die. Depending on the number they roll chooses the path they go. At each step, they will add that step’s color bead.
9. Depending on your students, you may want to model the first few together and then let them finish.
10. Once the string is full, tie off the end and cut off the excess.

Closure

Once everyone’s bracelets are done point out how everyone’s bracelets are a little different from one another. Remind them that water is constantly moving around the planet, but it is not the same way every time.

Resources and Credit

The Groundwater Foundation: www.groundwater.org

Project WET: www.projectwetusa.org

Adopt-A-Stream Mississippi: <https://mswildlife.org/adopt-a-stream/>

WATER CYCLE DEFINITIONS AND BEAD COLORS

(The bracelet configuration can be adjusted for your particular grade. If you do not teach all the definitions they can be left out, adjusting die numbers to fit your new configuration)

Evaporation: The sun shines and warms water and turns it back into gas that goes into the air. During this process, water turns from a liquid into a vapor.

Evaporation is represented by a _____ bead.

Condensation: When enough vaporized moisture gathers high in the sky, forming clouds. Water begins to change from a vapor into a liquid during the condensation phase.

Condensation is represented by a _____ bead.

Precipitation: When moisture molecules in the clouds get colder, the molecules bump into one another and begin to grow in size. As the drops get larger and larger they become too heavy to float in the sky, thus the water falls to the ground. Precipitation is simply rain, snow and sleet.

Precipitation is represented by a _____ bead.

Runoff: After rain and snow fall to the ground, the moisture can collect on the surface of the ground (it does not soak in). This water can run on top of the ground to flow into rivers and streams that eventually flow to ponds, lakes and oceans. Runoff is a major source of nonpoint source pollution.

Runoff is represented by a _____ bead.

Surface Water: Surface water is any water that is stored on the surface of the ground. Examples include ponds, lakes, rivers, streams and oceans.

Surface water is represented by a _____ bead.

Groundwater (unconfined aquifer): Water that is stored underground in the cracks and spaces between sand and soil is called groundwater. This water can be used by plants and also can supply rivers, ponds, lakes and the ocean. It could also be a supply of drinking water if the well is not dug very deep.

Groundwater (unconfined aquifer) is represented by an _____ bead.

Transpiration: Once plants use all the water they need, they give it off through their leaves as water vapor or gas. This process is called transpiration.

Transpiration is represented by an _____ bead.

Plants: Once water has infiltrated into the soil it is soaked up by plants to use and keep them alive.

Plants are represented by an _____ bead.

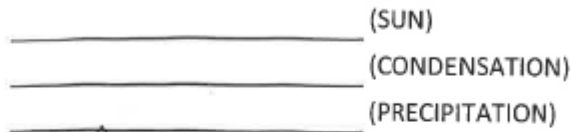
Infiltration: Infiltration happens when water infiltrates the soil and fills the pore spaces between individual soil particles.

Infiltration is represented by an _____ bead.

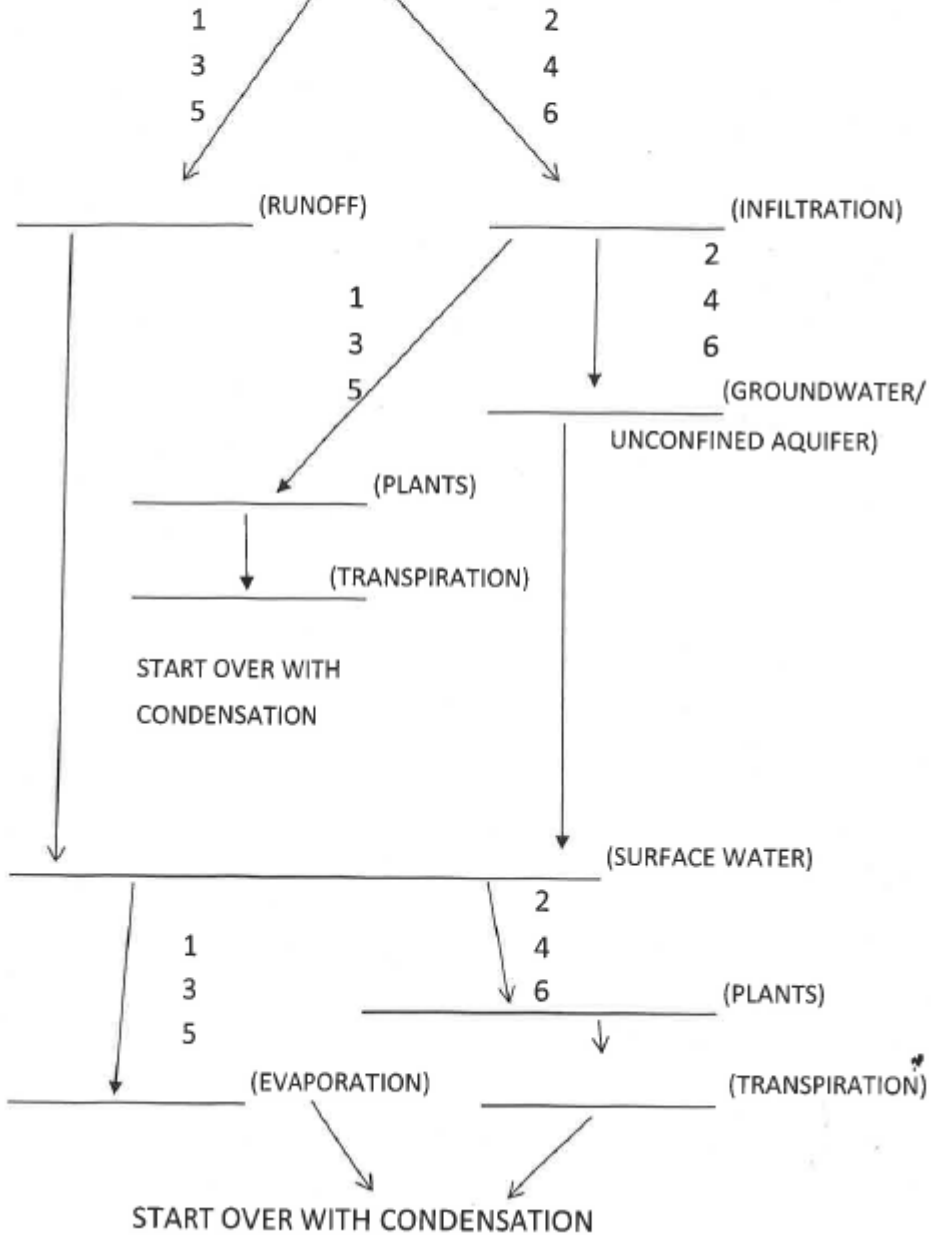
WATER CYCLE BRACELET

(Color of beads and die #'s can be altered depending on what is available)

Start with beads:



Roll Die:



The Water Cycle

