



Water Cycle Model

Description

Learn about the water cycle and create a model to observe the phenomenon of evaporation, condensation and precipitation.

Background

The water cycle is the process by which water is moved around the Earth. Water within our lakes, oceans, and streams evaporates into the atmosphere due to the heat from the Sun. Once in the atmosphere the water molecules cool and condense, forming clouds that are moved by wind. Eventually the water molecules in the cloud become so tightly packed and heavy that they fall from the sky in the form of precipitation. This water drains from the Earth's surface into our lakes, rivers, streams and oceans and the process begins all over again.

A model is an important tool that scientists use to better visualize a process or phenomenon. Models link ideas to experimental results. Scientists form predictions and can test those predictions using models. In this activity children will predict how water moves around our planet and observe three steps within the water cycle.

Materials

- Any sealable, clear container- you can repurpose an old mason jar, Tupperware, or even a Ziplock bag.
- Markers
- Water Cycle Template



Procedure

1. Decorate and color the outside of the container to have an outdoor environment. Be sure to include a body of water, some plants and animals.
2. Fill container with about half an inch of water and seal container with the lid.
3. Place container in a sunny spot outside or in a sunny window.
4. Have students create a prediction about what will happen inside the container.
 - The water in the container will begin to evaporate and condense at the top of the container. Eventually the water collected at the top of the container will become so heavy it drips down the side and precipitates back to the bottom of the container.
5. Discuss the water cycle and the processes involved within it.

Question

Grades PreK-1st Grade

- Where have you seen water outside before?
- What do we use water for?
- Where does the water go when it evaporates?
- What are clouds made of?
- What does the sky look like on a rainy day? What does it look like on a sunny day?

Grades 2-nd-3rd

- What are some sources of water on the Earth?
- How do you think water moves around the world?
- Why is water important to plants and animals?
- What happens to an environment if it has a drought?

Grades 4th-5th

- What role does the Sun play in the water cycle?
- What are some changes to the Earth's surface that occur due to water (erosion, weathering, etc.)
- Described the steps in the water cycle and explain what they mean.

References

- NASA: Precipitation Education: <https://pmm.nasa.gov/education/water-cycle>
- Scientific Modeling: <https://www.sciencelearn.org.nz/resources/575-scientific-modelling>

TEKS

Kindergarten:

(2): (A) (B) (C) (D) (E)

(8): (A) (B) (C)

1st Grade:

(2): (A) (B) (C) (D) (E)

(3): (A) (B)

(4): (A) (B)

(9): (A) (B) (C)

2nd Grade:

(2): (A) (B) (C) (D) (E) (F)

(3): (A) (B)

(7): (B)

(8): (A)

3rd Grade:

(2): (A) (B) (C) (D) (E) (F)

(3): (A) (B)

(8): (A)

4th grade:

(2): (A) (B) (C) (D) (E) (F)

(3): (A) (B)

(8): (A) (B)

5th Grade:

(2): (A) (B) (C) (D) (E) (F)

(3): (A) (B)

(8): (A) (B)

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