H_2O FACTOID MATCH

A program by Oklahoma 4-H Youth Development & Oklahoma Water Resources Center

SKILL: SCIENCE TIME: 20-30 MIN

OBJECTIVES:

- Students will use their knowledge about water to match questions with the correct answer.

LESSON ACTIVITY:

How many of you have played the game, Memory Match, where you match up cards of the same picture to make a pair?

The game we are about to play is just that; a memory match game and all the cards relate to water. Half of the cards have a question about water and the other half have the answers. You will use all the things you have learned in the water fair to play the game and match up all the questions with the answers.

Instructions

1. Shuffle all the cards and spread them out face down on the table.
2. The first person will turn over two cards and read them aloud.
3. If the question and correct answer match, they keep that set of cards. If they don't match, turn them back over in the same spot and the next person will repeat steps 2-3.
4. When a player makes a match, they get another turn.
5. Play continues until all questions and answers are matched correctly.
6. Continue play until groups finish the game or set a time limit for play and then conclude with wrap up.

MATERIALS

- H2O Factoid Question and Answer Cards
- Print cards on cardstock, cut apart and laminate to extend the use of the game! Make one set of cards per six students so that they all get to play and review the questions. The other option is to play as one large group and discuss the questions and answers after each match to review.

4H2O: H2O FACTOID MATCH

Let's Clean Up and Review

- What was a water fact that related to steps of the water cycle?
- What are the three forms of water?

  Solid, liquid, gas/vapor
- Tell me a fact about water and the human body.
- What is an example of a way to save water?

  Turn off the faucet while brushing your teeth.

  Take shorter showers.

  Water your lawn only when it needs it.

  Plant drought-resistant trees and plants.

Oklahoma Aqua Times Related Lessons:

- The Water Table
- Wells and the Water Table
- Groundwater Activity

Lessons can be found at: https://4h.okstate.edu/projects/science-and-technology/oklahoma-aqua-times/index.html

Lesson adapted from 4-H2O For You: Edible Aquifers Lesson, Texas A&M AgriLife Extension Service, Guadalupe County

OKLAHOMA WATER RESOURCES CENTER

www.water.okstate.edu www.4h.okstate.edu

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PASS Standards

Grade Level	Standard	Science and Engineering Practices	Cross Cutting Concepts
4th	**4.ESS2.1:** Plan and conduct investigations on the effects of water, ice, wind, and vegetation on the relative rate of weathering and erosion.	Planning and Carrying out Investigations	Cause and Effect
4th	**4.ESS2.2:** Analyze and interpret data from maps to describe patterns of Earth's features.	Anayllzing and Interpreting Data	Patterns
4th	**4.ESS3.2:** Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	Designing Solutions	Cause and Effect
5th	**5.ESS2.1:** Develop a model to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	Developing and Using Models	System and System Models
5th	**5.ESS2.2:** Describe and graph amounts of saltwater and freshwater in various reservoirs to provide evidence about the distribuion of water on Earth.	Using Mathematics and Computational Thinking	Scale, Proportion, and Quantity
5th	**5.ESS3.1:** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environments.	Obtaining, Evaluating, and Communicating Info.	System and System Models
6th	**6.ESS2.1:** Develop a model to describe the cycling of Earth's materials and the flow of energy that drives these processes within and among Earth's systems.	Developing and Using Models	Stability and Change
6th	**6.ESS2.2:** Construct an explation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.	Constructing Explanations	Scale, Proportion, and Quantity
6th	**6.ESS2.4:** Develop a model to describe the cycling of water through earth's systems driven by energy from the sun and force of gravity.	Developing and Using Models	Energy and Matter
6th	**6.ESS2.6:** Develop and use a model to describe how unequal heating and rotation of the Earth causes patterns of atmospheric and oceanic circulation that determine regional climates.	Developing and Using Models	System and System Models
7th	**7.ESS3.1:** Construct a scientific explanation based on evidence for how the uneven distrbutions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.	Constructing Explanations	Cause and Effect
7th	**7.ESS3.3:** Apply scientific principles to design a method for monitoring and minimizing human impact on the environment.	Constructing Explanations	Cause and Effect
7th	**7.ESS3.4:** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.	Engage in Argument from Evidence	Cause and Effect

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Instructions: Print the following pages for question-and-answer cards. Laminate if possible.

How much of the earth's surface is covered with water?	**Approximately 75%**
What is condensation?	**The process by which vapor becomes a liquid or a solid.**
What is the temperature when water changes from a liquid to a solid?	**32 degrees Farenheit**
How much water should a person drink each day?	**8 to 12 cups**
How much of our body is made up of water?	**About 60%**

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What molecules make up the compound of water?	Two molecules of hydrogen and one molecule of oxygen.
How much water can a leaky faucet waste each day?	100 gallons of water per day
What is an underwater cave called where we can get most of our water?	An aquifer
At what temperature does a liquid change to a gas or vapor?	At 212 degrees Farenheit
On average, how many gallons of water does each person use each day?	38-80 gallons

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What is evaporation?	When water is heated by the sun and turns to vapor.
What are three forms of precipitation?	Rain, snow and hail
What are three examples of surface water?	Lakes, rivers and oceans
What is a drought?	A long period of time without rain.
Watering the lawn early in the morning is an example of...	Conservation