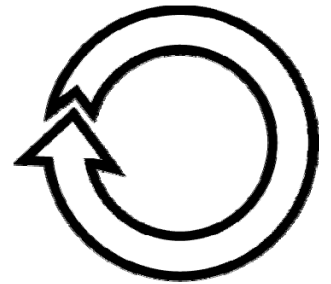


Name _____

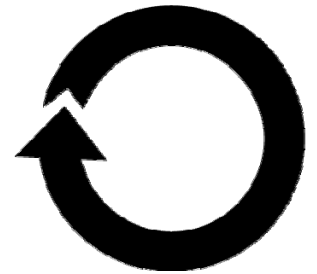
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Water & Solar Cycles



Certain phenomena reappear at regular intervals, often referred to as **cycles**. There are water, solar and lunar cycles in weather, earthquakes, and volcanic eruptions.

The **water cycle**, also known as the hydrologic cycle or the H₂O cycle, describes the continuous movement of water on, above and below the surface of the Earth. Although the balance of water on Earth remains fairly constant over time, individual water molecules can come and go, in and out of the atmosphere. For instance water moves from one body of water to another, such as from river to ocean, or from the ocean to the atmosphere, by the physical processes of evaporation, condensation, precipitation, infiltration, runoff, and subsurface flow. During this time, water goes through several phases: liquid, solid (ice), and gas (vapor).



The Water cycle also involves the interchanging of heat, which brings on temperature changes. When water evaporates, it takes up energy from its surroundings and cools the environment. When water condenses, it releases energy and warms the environment. These exchanges of heat influence the climate. By transferring water from one reservoir to another, the water cycle purifies the water and replenishes the land with freshwater, and transports minerals to different parts of the Earth. The water cycle also reshapes the geological features of the Earth, through the process of erosion and sedimentation. Finally yet importantly, the water cycle is a significant factor in the maintenance of ecosystems and life on the planet Earth.

The **Solar cycle** is the periodic change in the sun's activity. Solar cycles last around 11 years. Solar cycles have been observed for hundreds of years most notably by changes in the appearance of the sun and by flares and sunspots. New solar cycles occur approximately once every 10 1/2 years.

Name _____

Date _____

Water & Solar Cycles Multiple Choice Questions

1. The Water cycle is also known as _____
 - a) Hydrogen cycle
 - b) Hydro Cycle
 - c) Evaporation Cycle
 - d) Hydrologic Cycle

2. The Water cycle involves exchanges of _____
 - a) Heat
 - b) Water
 - c) Humidity
 - d) None of the above

3. Phenomenon that re-occurs after regular intervals are known as _____
 - a) Cycles
 - b) Circles
 - c) Cyclones
 - d) None of the above

4. How often do new solar cycles occur? _____
 - a) Every year
 - b) Once in a lifetime
 - c) Every 10 $\frac{1}{2}$ years
 - d) Never

5. The water cycle does NOT figure significantly in the maintenance of life and ecosystems on Earth. Identify if the statement is True or False?
 - a) True
 - b) False

Name _____

Date _____

Water & Solar Cycles

Answer Key

1. d
2. a
3. a
4. c
5. b

Explanation of Answers

1. **The water cycle**, also known as the hydrologic cycle or the H₂O cycle, describes the continuous movement of water on, above and below the surface of the Earth.
2. The water cycle involves the exchange of heat, which leads to temperature changes
3. Certain phenomena recur at regular intervals, often referred to as **cycles**.
4. Solar cycles occur once every 10 $\frac{1}{2}$ years.
5. The water cycle figures significantly in the maintenance of life and ecosystems on Earth

Name _____

Date _____

Water & Solar Cycles Writing Activity

1. What is a Water cycle?

2. Explain the relationship between change in temperature and water cycle?

3. What happens when water evaporates?

4. What happens to the sun during a solar cycle?
