

Water Unit Study Guide

Structure or Term	√	Definition
Water Section		
Water Cycle		The cycle in which water circulates between the earth's oceans, atmosphere, and land.
Evaporation		Water changing from a liquid to a gas.
Condensation		Water vapor in the air is changed into liquid water and is responsible for the formation of clouds.
Precipitation		Releasing water in the form of rain, sleet, snow, hail.
Infiltration		Water on the ground surface soaks into the soil/rocks below ground to recharge groundwater aquifers.
Groundwater		Water held underground in the soil or pores and crevices of rock.
Watershed		The area of land that drains to a common body of water like a river
Aquifer		Water stored underground in permeable rock.
Water table		The highest level of water in an aquifer underground.
Permeable		Allows water or other liquids to move through.
Impermeable		Does not allow liquids to move through.
Transpiration		The process of water evaporating from the stomata.
Dams		A structure that holds back and controls the flow of water in a river or other bodies of water.
Reservoir		Natural or artificial lake used as a source of water supply, often created by the construction of a dam.
Well		Device for pumping water from an aquifer or underground storage.
Atmosphere Section		
Troposphere		The troposphere starts at the Earth's surface and where air is most dense. Weather is in this region. Temperature gets lower the higher in the layer.
Stratosphere		The stratosphere starts just above the troposphere. The ozone layer is in this layer and causes the temperature to rise.
Mesosphere		The mesosphere starts just above the stratosphere and meteors burn up in this layer. Temperature is lower in this region of the atmosphere.
Thermosphere		The thermosphere starts just above the mesosphere. Auroras and satellites occur in this layer and temperatures rise.
Exosphere		This is the upper limit of our atmosphere. It extends from the top of the thermosphere and is where space and our atmosphere meet.
Ozone		Protects life on Earth from the Sun's UV radiation.
Weather		The temporary state of the atmosphere at a place and time such as heat, dryness, sunshine, wind, rain, etc.
Climate		Describes weather conditions over a long period of time and over a region.

Meteorology		Branch of science concerned with the atmosphere, especially as a means of forecasting the weather.
Greenhouse Effect		Heat from the Earth is radiated outward and absorbed by the greenhouse gases in the atmosphere. This process prevents heat from disappearing into space.
Ocean Section		
Sunlight Zone		It is in this zone where most visible light exists and most life exists. Temperature is the highest of the ocean zones and pressure is the lowest of the ocean zones.
Twilight Zone		Sunlight is very faint. The temperature is getting colder and pressure continues to increase.
Midnight Zone		The only light at this depth (and lower) comes from bioluminescence. The temperature continues to decrease while the pressures increases.
Abyss Zone		The water temperature is constantly near freezing and only a few creatures can be found at these crushing depths. Pressure is extremely high.
Trenches Zone		The deepest zone of the ocean like a crack on the bottom of the ocean floor. The temperature is constant at just above freezing with pressure at its highest.
Mariana Trench		The Mariana Trench is off the coast of Japan and is the lowest point in the ocean.
Bioluminescence		The production and emission of light by a living organism.
Oceanographer		Scientist who studies the ocean structures, and floor.
Marine Biologist		Scientist who studies the variety of life forms in the ocean.
Sonar		This emits a sound wave into the water and the sound bounces off the object and returns an "echo".
Submarine		A watercraft capable of independent operation underwater. This is larger, holds more people, and can stay underwater longer than a submersible.
Submersible		An underwater vehicle that is useful in ocean exploration.

Review Questions

1. Describe how water moves through the water cycle.
2. Explain how our watershed supplies us with water in our community.
3. How does people's use of water impact or pollute aquifers underground?
4. Why is it difficult to gain access to clean water around the world?
5. Describe the difference between weather and climate.
6. How has the greenhouse effect affected climate?
7. Describe the ozone layer and why it is important.
8. Describe two things about each layer of the atmosphere as you go up.
9. Explain the differences between an oceanographer and a marine biologist.
10. Why is bioluminescence a critical part of life in certain parts of the ocean?
11. Describe the tools and vehicles used to study the shape of the ocean floor.
12. List and describe three ocean floor features.