

Topic 2 Review – Matter and it's Properties.

Matter - Anything that has mass and takes up space.

Mass - the amount of matter in an object.

Weight - A measure of the force of gravity on an object

Solid - A form of matter that has a definite shape and volume.

Liquid - A state of matter that has no definite shape but has a definite volume.

Gas - A state of matter with no definite shape or volume.

Plasma - the fourth state of matter: a very hot gas that has a lot more energy than the other three states. Essentially the most abundant form of matter in the universe; stars are made of it.

Volume - The amount of space an object takes up.

Temperature - A measure of how hot or cold something is.

Density - the measurement of how tightly a material is packed together.

Magnetism - The force of attraction or repulsion of magnetic materials. If an object is attracted by a magnet, then it has magnetism.

Solubility - A measure of how much solute can dissolve in a given solvent at a given temperature.

Physical Properties- can be observed or measured without changing what the matter is made of. Ex. color, texture, mass, weight, volume and density.

Chemical Properties - can be observed only when the type of matter changes. Ex. ability to burn, reaction with air or water.

Boiling - The temperature at which a liquid changes to a gas.

Melting - The change in state from a solid to a liquid.

Freezing - The change of state from a liquid to a solid.

Changing States of Water

What are the major 4 steps in the water cycle?

The major 4 steps are evaporation of water, then condensation, precipitation and collection. The sun evaporates water sources and contributes to the formation of water vapor. These water vapor accumulate in the atmosphere as clouds. The vapors condense into water droplets and when enough droplets merge, it falls out of the clouds as rain.

Step 1: Evaporation

Evaporation happens when a liquid turns into a gas. It can be easily visualized when rain puddles "disappear" on a hot day or when wet clothes dry in the sun. In these examples, the liquid water is not actually vanishing—it is evaporating into a gas, called water vapor.

Step 2: Condensation

Condensation is the process where water vapor becomes liquid. It is the reverse action of evaporation, where liquid water becomes a vapor.

Step 3: Precipitation

Precipitation forms in the clouds when water vapor condenses into bigger and bigger droplets of water. When the drops are heavy enough, they fall to the earth. If a cloud is colder, like it would be at higher altitudes, the water droplets may freeze to form ice.

Step 4: Collection

When water that falls from the clouds as rain, snow, hail or sleet, collects in the oceans, rivers, lakes, streams. Most will infiltrate (soak into) the ground and will collect as underground water. The water cycle is powered by the sun's energy and by gravity.

Videos:

<https://www.youtube.com/watch?v=s0bS-SBAgJI>

<https://www.youtube.com/watch?v=tuE1LePDZ4Y>