STATES OF MATTER & WEATHER

SCIENCE VOCABULARY
Name: _____ Grade: _____ Date: _____

FOUNDATIONS: STATES OF MATTER

Matter — Anything that has mass and takes up space.
Mass — The amount of matter in an object.
Volume — The amount of space an object takes up.
Solid — Matter with a definite shape and volume; its particles vibrate in place.
Liquid — Matter with a definite volume but no definite shape; it flows and takes the shape of its container.
Gas — Matter with no definite shape or volume; it spreads to fill its container.
Particle — A tiny piece of matter, such as an atom or molecule.
Atom — The smallest unit of an element that keeps that element's identity.
Molecule — Two or more atoms chemically bonded together.
Density — The amount of mass in a given volume.
Physical property — A characteristic observed or measured without changing a substance's identity.

CHANGES IN MATTER

Temperature — A measure of how hot or cold something is, related to average particle kinetic energy.
Thermal energy — Energy associated with the motion and interactions of particles.
Phase change — A change from one state of matter to another.
Melting — A solid changing into a liquid.
Freezing — A liquid changing into a solid.
Evaporation — Liquid changing to gas at its surface, below the boiling point as well as at higher temperatures.
Boiling — Liquid changing to gas throughout the liquid at its boiling point.
Condensation — Gas changing into liquid.
Sublimation — Solid changing directly into gas.
Deposition — Gas changing directly into solid.
Water vapor — Water in its gaseous state; it is invisible.

WEATHER AND THE WATER CYCLE

Weather — The condition of the atmosphere at a particular place and time.
Atmosphere — The layer of gases surrounding Earth.
Humidity — The amount of water vapor in the air.
Relative humidity — How much water vapor air contains compared with the maximum it can hold at that temperature, expressed as a percentage.
Precipitation — Water that falls from clouds, such as rain, snow, sleet, or hail.
Cloud — A visible collection of tiny liquid water droplets or ice crystals suspended in the air.
Water cycle — The continuous movement of water through Earth's surface, atmosphere, and underground.
Transpiration — Water vapor released by plants, mainly through their leaves.
Runoff — Water that flows over land into rivers, lakes, or oceans.
Infiltration — Water soaking into the ground.
Air pressure — The force per unit area exerted by air.
Wind — Air moving from one location to another, mainly because of air-pressure differences.
Front — A boundary between air masses with different temperatures and moisture.
Forecast — A prediction of future weather based on observations and data.

HOW THESE TOPICS CONNECT

The Sun heats liquid water, causing evaporation. Water vapor rises and cools, leading to condensation into tiny droplets or ice crystals that form clouds. When droplets or crystals grow large enough, precipitation returns water to Earth's surface. Temperature determines whether precipitation falls as rain, snow, or another form.