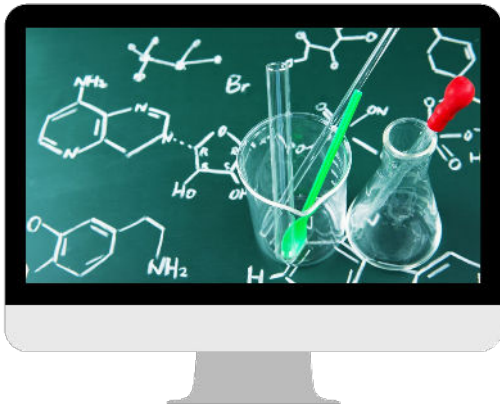


Intro to Physical Science

Section I: The Scope of Physical Science



Physical science is the study of matter and energy, which includes everything around you—even things you cannot see. Matter is anything that has mass and takes up space, while energy is the ability to do work or cause change. Physical science combines two major branches of science: chemistry and physics.

Chemistry is the study of matter and energy at the molecular scale. It focuses on substances, their properties, and how they change during chemical reactions. Everything you taste, touch, and even smell is made of chemicals. When leaves change color in the fall, metal rusts, or ingredients bake into a cake, chemical changes occur. Chemists study how atoms and molecules interact to create the materials and reactions found in everyday life.

Physics studies matter and energy at all scales, from tiny particles smaller than atoms to objects as large as galaxies. It explores motion, forces, sound, light, electricity, and different forms of energy. Physics helps explain how objects move, why mirrors create reflections, how airplanes fly, and why different sounds have different pitches and volumes. It also helps scientists understand natural phenomena such as lightning, gravity, and ocean waves.



Physical science is part of everyday life and helps explain many of the things people experience. Riding a bicycle involves forces, motion, and friction, while turning on a flashlight demonstrates the transfer of electrical energy into light energy. Even heating food in a microwave shows how energy can be transferred to matter. By studying physical science, scientists gain a deeper understanding of how the world works and use that knowledge to develop new technologies that improve transportation, communication, medicine, and everyday life.

Review:

1. What is physical science a combination of?
2. What are two examples of chemical changes?
3. What is physics?