

Explain how observable characteristics of plants and animals allow them to survive in their environments.

- Describe the functions of various plant parts (roots, stems, leaves and flowers) and classify plants based on their observable characteristics.
- Relate characteristics and functions of observable parts in a variety of plants that allow them to live in their environment (leaf shape, thorns, odor, color).
- Classify animals on the basis of observable physical characteristics (backbone, body coverings, limbs).
- Identify and compare structures in animals used for support, movement, getting food, controlling body temperature, and protection (fur, wings, teeth, scales).
- Relate characteristics and functions of observable body parts to the ability of animals to live in their environment (sharp teeth, claws, color, body coverings).

Explain the various ways we use natural resources (renewable and non-renewable) and describe harmful and helpful effects of humans on the environment.

- Identify natural resources (metals, fuels, fresh water, fertile soil, and forests).
- Classify renewable (fresh water, fertile soil, forests) and non-renewable (fuels, metals) resources.
- Describe ways humans are protecting, extending, and restoring resources (recycle, reuse, reduce, renewal).
- Describe ways humans are dependent on the natural environment (forests, water, clean air, earth materials) and constructed environments (homes, neighborhoods, shopping malls, factories, and industry).
- Identify earth materials used to construct some common objects (bricks, buildings, roads, glass).
- Describe helpful or harmful effects of humans on the environment (garbage, habitat destruction, land management, renewable and non-renewable resources.)
- Explain ways that we can conserve natural resources.
- List some common products that can be recycled, and explain why it is important to recycle.

Identify and describe natural causes of change in the earth's surface (erosion, glaciers, volcanoes, landslides and earthquakes).

- Recognize and describe different types of earth materials (mineral, rock, clay, boulder, gravel, sand, soil, water, and air). Recognize that rocks are made up of minerals.
- Understand that changes in the earth's surface are caused by rapid and slow processes.

Relate changes in the motion of an object to forces acting on the object.

- Identify gravity and pushes/pulls as forces.
- Understand that an object changes motion when a force acts upon it.
- Demonstrate how the strength of the force and the weight of the object affect the motion of an object.
- Understand that when an object does not move there are equal forces acting upon the object.
- Describe the motion of objects in terms of the path and direction. Identify changes in motion (change direction, speeding up, slowing down).
- Relate the speed of an object to the distance it travels in a standard amount of time.

Explain how light interacts with objects and how sounds are produced.

- Explain how light is needed to see objects: light from a source reflects off objects and enters our eyes.
- Demonstrate that light travels in a straight path and that shadows are made by placing an object in a path of light.
- Observe what happens to light when it travels from air to water (a straw half in the water and half in the air looks bent).

- Demonstrate how dark colored materials are heated more than light colored materials by light that shines on them.
- Understand that vibrating objects produce sound.
- Understand that the rate of vibration determines the pitch of the sound.