predict, observe, and record changes in the state of matter caused by heating or cooling.[3.5C]

demonstrate and observe how position and motion can be changed by pushing and pulling objects to show work being done such as swings, balls, pulleys, and wagons.[3.6B]

investigate rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides. [3.7B]

identify the planets in Earth's solar system and their position in relation to the Sun.[3.8D]

observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem.[3.9A]

investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs, and lady bugs.[3.10C]

examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants.[4.7A]

observe and identify slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice.[4.7B]

identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation.[4.7C]

describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process.[4.8B]

collect and analyze data to identify sequences and predict patterns of change in shadows, tides, seasons, and the observable appearance of the Moon over time.[4.8C]

classify matter based on physical properties, including mass, magnetism, physical state (solid, liquid, and gas), relative density (sinking and floating), solubility in water, and the ability to conduct or insulate thermal energy or electric energy.[5.5A]

identify the boiling and freezing / melting points of water on the Celsius scale.[5.5B]

demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand.[5.5C]

identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water.[5.5D]

explore the uses of energy, including mechanical, light, thermal, electrical, and sound energy.[5.6A]

demonstrate that the flow of electricity in circuits requires a complete path through which an electric current can pass and can produce light, heat, and sound.[5.6B]

demonstrate that light travels in a straight line until it strikes an object or travels through one medium to another and demonstrate that light can be reflected such as the use of mirrors or other shiny surfaces and refracted such as the appearance of an object when observed through water.[5.6C]

design an experiment that tests the effect of force on an object.[5.6D]

explore the processes that led to the formation of sedimentary rocks and fossil fuels.[5.7A]

recognize how landforms such as deltas, canyons, and sand dunes are the result of changes to Earth's surface by wind, water, and ice.[5.7B]

identify alternative energy resources such as wind, solar, hydroelectric, geothermal, and biofuels.[5.7C]

identify fossils as evidence of past living organisms and the nature of the environments at the time using models.[5.7D]

differentiate between weather and climate.[5.8A]

explain how the Sun and the ocean interact in the water cycle.[5.8B]

demonstrate that Earth rotates on its axis once approximately every 24 hours causing the day / night cycle and the apparent movement of the Sun across the sky.[5.8C]

dentify and compare the physical characteristics of the Sun, Earth, and Moon.[5.8D]

observe the way organisms live and survive in their ecosystem by interacting with the living and non-living elements.[5.9A]

describe how the flow of energy derived from the Sun, used by producers to create their own food, is transferred through a food chain and food web to consumers and decomposers.[5.9B]

predict the effects of changes in ecosystems caused by living organisms, including humans, such as the overpopulation of grazers or the building of highways.[5.9C]

identify the significance of the carbon dioxide-oxygen cycle to the survival of plants and animals.[5.9D]

compare the structures and functions of different species that help them live and survive such as hooves on prairie animals or webbed feet in aquatic animals.[5.10A]

differentiate between inherited traits of plants and animals such as spines on a cactus or shape of a beak and learned behaviors such as an animal learning tricks or a child riding a bicycle.[5.10B]

describe the differences between complete and incomplete metamorphosis of insects.[5.10C]

know that an element is a pure substance represented by chemical symbols.[6.5A]

recognize that a limited number of the many known elements comprise the largest portion of solid Earth, living matter, oceans, and the atmosphere.[6.5B]

compare metals, nonmetals, and metalloids using physical properties such as luster, conductivity, or malleability.[6.6A]

differentiate between elements and compounds on the most basic level.[6.5C]