



**Dover Area School District Curriculum K-U-D
Grade 1 Science**

	Know	Understand	Do
3.1.1.A1. Categorize living and non-living things by external characteristics	Living, nonliving, magnifying glass; living and nonliving things are different	Living and nonliving things look different on the outside.	Grouping living and nonliving things
3.1.1.A2. Investigate the dependence of living things on the sun's energy, water, food/nutrients, air, living space, and shelter	Energy; living things need energy	Living things need 6 things to survive.	Identify the 6 basic needs of living things (sun's energy, water, food, air, shelter, living space).
3.1.1.A5. Identify and describe plant parts and their function.	stem, roots, leaves, pollen, nectar, petals, fruits, seeds	Plant parts perform different jobs to survive.	Label the parts of a plant. Explain the functions of plant parts.
3.1.1.B1. Grow plants from seed and describe how they grow and change. Compare to adult plants.	seed, sprout, vine, flower, adult, life cycle	Plants grow from seed to adult (life cycle).	Label the life cycle of a plant.
3.1.1.C3. CONSTANCY AND CHANGE Describe changes that occur as a result of habitat.	habitat, Autumn, chlorophyll, pigment, temperature, winter, tannin, foliage	Habitats change due to seasons.	Illustrate a tree in the 4 different seasons.
3.2.1.A1. Observe and describe the properties of liquids and solids. Investigate what happens when solids are mixed with water and other liquids are mixed with water.	Matter, solid, liquid, gas, water vapors	Solids and liquids are 2 different states of matter.	Compare and contrast solids and liquids.
3.2.1.A3. Identify how heating, melting, cooling, etc., may cause changes in properties of materials.	Heating, cooling, melting, matter, solid, liquid, gas, water vapors	Matter can change.	Observe the affects heating, melting, and cooling have on properties of matter.
3.2.1.A4. Observe and describe what happens when substances are heated or cooled. Distinguish between changes that are reversible (melting, freezing) and not reversible (e.g. baking a cake, burning fuel).	Heating, cooling, melting, matter, solid, liquid, gas, water vapors	Some matter can be changed and some cannot be changed.	Observe the affects heating, melting, and cooling have on properties of matter.
3.2.1.A5. CONSTANCY AND CHANGE Recognize that everything is made of matter.	Matter, solid, liquid, gas, water vapors	Everything is made of matter.	Identify and sort different properties of matter.
3.2.1.B1. Demonstrate various types of motion. Observe and describe how pushes and pulls change the motion of objects.	Energy, motion, force, friction, gravity	Objects move.	Observe changes in motion through experiments/demonstrations.
3.2.1.B3. Observe and record daily temperatures. Draw conclusions from daily temperature records as related to heating and cooling	Temperatures change daily.	Matter changes with temperature.	Track and record daily temperatures during Morning Meeting/Math. Make observations of the affects different temperatures have of matter.
3.2.1.B5. Compare and contrast how light travels through different materials. Explore how mirrors and prisms can be used to redirect a light beam	Prism, light, shadows, refraction, reflection	Light travels.	Track and trace the length of shadows throughout the day with partners. Use mirrors to reflect/redirect light beam
3.2.1.B6. ENERGY Recognize that light from the sun is an important source of energy for living and nonliving systems and some source of energy is needed for all organisms to stay alive and grow.	energy, light, living, nonliving, growth	The sun is important to the Earth.	Sort living and nonliving things. Create a food chain to show the energy needed to sustain living things.
3.3.1.A1. Observe, describe, and sort earth materials. Compare the composition of different soils.	Soil types (clay, dirt, sand, rock, sediment, mud, minerals, nutrients)	Soil has minerals and nutrients.	High School Agriculture Department will share resources and create activities to compare/contrast soil types.
3.3.1.A4. Identify and describe types of fresh and salt-water bodies (ocean, rivers, lakes, ponds).	Ponds, lakes, rivers, oceans, creeks, seas	Fresh and salt water make up different bodies of water.	High School Agriculture Department will share resources and create activities to compare/contrast fresh water and salt water.
3.3.1.A5. Become familiar with weather instruments. Collect, describe, and record basic information about weather over time	Wind vane, rain guage, meteorologist, tornado, hurricane, forecast, floods, hail, snow, thunderstorm, wind	Weather can be measured.	Track and record daily temperatures during Morning Meeting/Math. Create a wind vane to measure wind. Observe and discuss different types of weather.



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3.3.1.B1. Explain why shadows fall in different places at different times of the day.	Prism, light, shadows, refraction, reflection	The sun changes shadows.	Track and trace the length of shadows throughout the day
4.1.1.A Identify and describe the basic needs of living things in a terrestrial habitat.	Living, nonliving, terrestrial, habitat, basic needs	Living things need 6 things to survive.	Identify the 6 basic needs of living things (sun's energy, water, food, air, shelter, living space).
4.1.1.C Describe a simple food chain within a terrestrial habitat.	Habitat, food chain, energy, source	The sun is the beginning of the food chain.	Create a food chain
4.1.1.D Identify living things that are threatened, endangered, or extinct.	Endangered, threatened, extinct, rare, poachers, scavengers	Living things can be threatened, endangered, or extinct.	Classify animals into each category. Discuss extinct animals (ie - Dinosaurs), endangered (ie - Monarch), and threatened (ie - Elephants). Discuss ways species populations are impacted.
4.1.1.E Describe the seasons and describe how the change of the season affects living things.	Seasons, climate, temperature	There are four different seasons in a year.	Illustrate a tree in the 4 different seasons.
4.2.1.A Explain the path water takes as it moves through the water cycle.	water cycle, evaporation, condensation, collection, precipitation	There are four parts of a water cycle.	Create a diagram of a water cycle. Sing the Water Cycle song, and listen to/perform GoNoodle Water Cycle. Complete the wind sock activity.
4.3.1.A Identify some renewable resources used in the community.	Renewable resources, nonrenewable resources, community	We use resources from where we live.	High School Agriculture Department will share resources and create activities to identify local resources.
4.3.1.B Recognize the difference between renewable and nonrenewable resources.	Renewable resources, nonrenewable resources, community	Some resources are renewable and others will be gone when they are all used up.	High School Agriculture Department will share resources and create activities to identify local resources.
4.4.1.A Describe the role of soil in agricultural systems.	Soil types (clay, dirt, sand, rock, sediment, mud, minerals, nutrients), agriculture	Soil helps things grow.	High School Agriculture Department will share resources and create activities to identify different soils.
4.4.1.B Identify products and by- products of the agricultural system.	products, by-products, agriculture	Many things come from a farm.	High School Agriculture Department will share resources and create activities to identify resources that come from a farm.
4.4.1.C Describe the life cycles of different plants and animals in a terrestrial habitat.	Life cycle, growth, plants, animals, change	Living things change and grow through a life cycle.	Observe and track the life cycle of a butterfly. Create a model life cycle of butterflies/bees.
4.4.1.D Identify tools used by native Americans and early settlers in agriculture.	Farming tools (digging stick, hoe, rake)	Native Americans and early settlers used tools to farm.	High School Agriculture Department will share resources and create activities to identify and compare/contrast past and present farming tools.
4.5.1.A Identify resources humans use from the environment.	Resources, environment, food, reduce, reuse, recycle	There are many things humans use from their environment.	Complete a recycle sort (discuss and place objects into different categories - reuse, reduce, recycle)
4.5.1.B Describe why people consider some insects, plants and other living things to be pests, and ways to control their population numbers.	Pests, helpful, population	Living things can be helpful or harmful to our environment.	High School Agriculture Department will share resources and create activities to identify different types of "pests" and how they can be helpful/harmful/controlled.
4.5.1.C Describe how pollution affects the health of a habitat.	Pollution, trash, landfill, hazardous, recycled	Pollution is bad for the health of our environment.	High School Agriculture Department will share resources and create activities to identify the ways pollution is harmful.
4.5.1.D Identify where waste from the home, school and community goes for disposal.	Dump, trash, landfill, compactors, incinerators	Our trash goes many places.	Read "What Happens to our Trash?"; complete a recycle sort (discuss and place objects into different categories - reuse, reduce, recycle)