



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

Standards	Know	Understand	Do
3.1.3.A1. Describe the characteristics of living things that help to identify and classify them.	Living, Non-Living, Classify living and nonliving, Identify vertebrate and invertebrate animals, Inherited traits, Acquired traits	All living things share common characteristics	Classify living things by their characteristics.
3.1.3.A2. Describe the basic needs of living things and their dependence on light, food, air, water, and shelter.	Shelter, oxygen, adaptations important for survival, habitats, Changes in habitats affect an organism, Human interactions with the environment impact an ecosystem	Animals change and grow to meet their basic needs.	Choose an animal and make a life cycle. Make a diagram of a plant.
3.1.3.A3. Identify differences in the life cycles of plants and animals.	Life cycle, metamorphosis, food chain, food web, germinate, seed, seedling, adult plant, seed dispersal, eggs, larva, pupa, life cycle is a pattern that appears in both parents and offspring	Plants and animals go through life cycles.	Make a life cycle of a plant and an animal.
3.1.3.A5 Identify the structures in plants that are responsible for food, production, support, water transport, reproduction, growth production	Roots, Stems, Leaves, Photosynthesis, Carbon Dioxide, Oxygen, Life Cycle, Seed, Spore, Germinate, Flowering Plant, Pollination, Coniferous, Deciduous, Dormancy, Classify, Nutrient, Fibrous root, Taproot, Germinate, Reproduce, Adaptation	Plants have different parts that allow them to grow.	Make a diagram of a plant, label the parts, and describe each part's function.
3.1.3.B1. Understand that plants and animals closely resemble their parents.	Adaptations that are important for survival, Inherited, Traits, Offspring	Offspring inherit traits from their parents.	Compare/contrast characteristics of parents and their offspring.
3.1.3.B5. PATTERNS Identify characteristics that appear in both parents and offspring	Adaptations, Inherited, Traits, Offspring, instincts, learned behavior	Both parents and offspring have similar characteristics.	Compare/contrast characteristics of parents and their offspring.
3.1.3.C1. Recognize that plants survive through adaptations, such as stem growth towards light and root growth downward in response to gravity. Recognize that many plants and animals can survive harsh environments because of seasonal behaviors (e.g. hibernation, migration, trees shedding leaves)	Hibernation, migration, adaptations, some animals characteristics are necessary for survival in different environments (desert, forest, ocean)	Living things have adaptations that help them to survive.	Describe adaptations that plants need in order to survive.
3.1.3.C2. Describe animal characteristics that are necessary for survival.	Characteristics necessary for survival, the environment's role in the animals survival, some animal characteristics are necessary for survival in different environments (desert, forest, ocean, adaptations)	Identify and explain how adaptations help an animal survive.	Identify characteristics of animals that are necessary for survival.



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3.2.3.A1. Differentiate between properties of objects such as size, shape, weight and properties of materials that make up the objects such as color, texture, and hardness. Differentiate between the three states of matter, classifying a substance as a solid, liquid, or gas.	Matter, Solid, Liquid, Gas, Property, Texture, Mass, Phases, Evaporation, Condensation, Freezing, Boiling, Melting	There are different types of matter and some matter can change from one form to another.	Observe and identify the three states of matter.
3.2.3.A2. Recognize that all objects and materials in the world are made of matter.	Matter, Solid, Liquid, Gas, Property, Texture, Mass, Phases, Evaporation, Condensation, Freezing, Boiling, Melting	All objects and material is made up of matter.	Categorize objects based upon what they are made of.
3.2.3.A3. Demonstrate how heating and cooling may cause changes in the properties of materials including phase changes.	Matter, Solid, Liquid, Gas, Property, Texture, Mass, Phases, Evaporation, Condensation, Freezing, Boiling, Melting, Water Phases: Evaporation, Condensation, Freezing, Boiling, Melting	Heating or cooling can cause a change in a material	Observe different objects being heated and cooled.
3.2.3.A4. Use basic reactions to demonstrate observable changes in properties of matter (e.g., burning, cooking).	Matter, Solid, Liquid, Gas, Property, Texture, Mass, Water Phases: Evaporation, Condensation, Freezing, Boiling, Melting	There are different states of matter.	Classify objects as solids, liquids, or gases.
3.2.3.A5. <b>CONSTANCY AND CHANGE</b> Recognize that everything is made of matter	Matter, Solid, Liquid, Gas, Property, Texture, Mass, Phases, Evaporation, Condensation, Freezing, Boiling, Melting	Everything is made of matter.	Categorize objects based upon what they are made of.
3.2.3.B1. Explain how movement can be described in many ways	Energy, Light Energy, Wave, Sound Energy, Thermal Energy, Electrical Energy	Movement can be described in different ways.	Demonstrate different ways objects can move.
3.2.3.B2. Explore energy's ability to cause motion or create change. Explore how energy can be found in moving objects, light, sound, and heat.	Energy, Light Energy, Wave, Sound Energy, Thermal Energy, Electrical Energy, Kinetic Energy, Potential Energy, Changes in motion can be observed and measured, Push/pull, Start/Stop	Explain how objects move.	Classify objects as either light energy, sound energy, or heat energy.
3.2.3.B3. Explore temperature changes that result from the addition or removal of heat.	Energy, Light Energy, Wave, Sound Energy, Thermal Energy, Electrical Energy	Temperature can change when heat is added or removed.	Observe and describe objects when heat is added or removed.
3.2.3.B4. Identify and classify objects and materials that are conductors or insulators of electricity. Identify and classify objects and materials as magnetic or non-magnetic.	Energy, Light Energy, Wave, Sound Energy, Thermal Energy, Electrical Energy	There are different types of energy sources and energy can change forms.	Classify objects as either a conductor or insulator. Classify objects as either magnetic or non-magnetic.
3.2.3.B5. Recognize that light travels in a straight line until it strikes an object or travels from one material to another	Refract, Absorb Reflect, Light Energy	Light and matter interact in different ways.	Describe how light travels.
3.2.3.B6. <b>ENERGY</b> 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	Light energy, heat energy, the sun is the greatest natural source of energy that plants and animals need to live.	The sun is our main source of energy.	Explain the importance of the sun.



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3.3.3.A1. Explain and give examples of the ways in which soil is formed.	Soil, Erosion, Weathering, Landforms, Mineral, Igneous Rock, Sedimentary Rock, Metamorphic Rock	Earth is made up of various materials that are constantly changing.	Identify different types of soil and discuss what it is made of.
3.3.3.A2. Identify the physical properties of minerals and demonstrate how minerals can be tested for these different physical properties.	Hardness	Minerals have physical properties.	Investigate different minerals. Describe their properties.
3.3.3.A4. Connect the various forms of precipitation to the weather in a particular place and time	Precipitation, Water Cycle, Precipitation changes based on the environment	Weather and precipitation are connected.	Discuss weather in different places.
3.3.3.A5. Explain how air temperature, moisture, wind speed and direction, and precipitation make up the weather in a particular place and time	Evaporation, Condensation, Precipitation, Water Cycle, Weather, Climate, Atmosphere, Humidity, Clouds, Weather Vain, Barometer, Anemometer, Rain Gauge, Wind Vane, Clouds	There are various forms of precipitation related to weather.	Explain how precipitation is related to weather.
3.3.3.B1. Relate the rotation of the earth and day/night, to the apparent movement of the sun, moon, and stars across the sky. Describe the changes that occur in the observable shape of the moon over the course of a month.	Solar System, Star, Planet, Axis, Rotation, Revolution, Moon, Moon Phases are how the moon changes over time, Earth rotates on its axis once every 24 hours which creates a cycle of night and day, Solar System is comprised of various planets, the sun, many moons, and galaxies	The moon phases are how the moon changes over time. The Earth rotates on its axis, creating night and day. Understand what a solar system is comprised of.	Illustrate the position of the Earth, sun, and moon in relation to day/night. Construct a model of the moon phases.
3.4.4.A1. Understand that tools, materials, and skills are used to make things and carry out tasks.	Design process, research, purpose of a prototype	Understand and explain the design process. Identify skills and materials that will support that process.	Distinguish between different tools and the task they carry out.
3.4.4.A2. Understand that systems have parts and components that work together.	Categorize systems as either natural or man-made	Man-made and natural systems work together.	Categorize systems as natural or man-made.
3.4.4.B1. Describe how technology affects humans in various ways.	Technology Design Process, ways technology impacts humans	Technology can directly influence human experience.	Discuss the connection between humans and technology.
3.4.4.B2. Explain how the use of technology affects the environment in good and bad ways.	Technology, good examples of technology and bad examples of technology.	Technology can have both a positive and negative affect on our environment.	Compare and contrast the positive and negative effects of technology on our environment.
3.4.4.B3. Explain why new technologies are developed and old ones are improved in terms of needs and wants.	Technology, old technology that has been developed	Technology is constantly approving as time goes on to better meet our wants and needs.	Examine how technology has progressed over time to meet the needs of humans.
4.1.3.A Differentiate between the living and nonliving components in an environment	How plants and animals interact with each other and the environment, Recognize examples of living and nonliving organisms in an environment	Animals depend on their environment and each other for survival.	Differentiate between living and nonliving organisms in an environment.
4.1.3.C Identify sources of energy.	Differentiate between renewable energy and nonrenewable energy	There are various forms of energy that can be both renewable and non-renewable.	Identify the different sources of energy.



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4.1.3.D Identify organisms that are dependent on one another in a given ecosystem. · Define habitat and explain how a change in habitat affects an organism.	Ecosystems include living and nonliving components, all organisms have a habitat, changes in habitats affect an organism.	Changes in an environment can affect the organisms that live there.	Examine the changes in the environment and how they affect the organisms that live there.
4.1.3.E Identify changes in the environment over time.	Human interactions with the environment impact an ecosystem, Natural changes (fire, floods) affect organisms	Human interactions and natural changes can affect an ecosystem and its organisms.	Explain changes in the environment over time.