Virginia Science - VAAP

Grade 5

Living Systems and Ecosystem Interactions

1 Recognize that plants need light, air, and water to grow. S-5.1

CC. Using simple pictures, diagrams, or representations, concepts could range from: recognizing plants (e.g., plants, trees, and flowers) need light, air, and water to grow to, identifying simple parts (e.g., roots, stems, leaves, flower, fruit) of plants that help them get light, air, and water to, comparing growth of plants when given appropriate or inappropriate amounts of light, air, and water. S-5.1.CC

2 Recognize that living organisms have unique structures that help them obtain what they need to grow and survive. S-5.2

CC. Using simple pictures, diagrams, or representations, concepts could range from: recognizing animals and plants using common terminology to, recognizing that animals need food, air, and water and that plants use soil, air, water, and light to, identifying and connecting unique structures of plants and animals that help them obtain what they need to grow and survive. S-5.2.CC

3 Recognize ways in which living organisms interact with other living organisms and non-living parts of an ecosystem. S-5.3

CC. Using simple pictures, diagrams, or representations, concepts could range from: recognizing living and non-living parts of an environment or ecosystem to, recognizing interactions between living and non-living parts (e.g., water, habitat, shelter) of an ecosystem to, identifying simple interactions between living organisms or among groups of living organisms (e.g., predator-prey, competitive, mutually beneficial). S-5.3.CC

8 Recognize oceans and identify the organisms that live in them. S-5.8

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing oceans as compared to common non-water objects or features (e.g., rocks, mountains, forests) to • recognizing oceans as compared to other common water features (e.g., lakes, rivers, streams) to • identifying common organisms that live in oceans. S-5.8.CC

Earth/Space Systems and Earth Resources

4 Recognize different types of weather conditions and their characteristics. S-5.4

CC Using simple pictures, diagrams, or representations, concepts could range from: • recognizing simple weather conditions (rainy, cloudy, sunny, foggy, thunder and lightning) to • connecting physical conditions to weather conditions (e.g., wet to rain, dry or hot to sunny, lightning to thunderstorm) to • identifying more complex storm conditions (e.g., hurricane, tornado, blizzard) and their physical conditions. S-5.4.CC

5 Recognize and compare objects in the solar system and their features. S-5.5

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing the sun and Earth as compared to common unrelated objects on Earth to • recognizing the sun and Earth as compared to other objects in the solar system to • comparing simple physical characteristics (e.g., size, shape) of objects in the solar system. S-5.5.CC

6 Recognize the relationships between Earth, the moon, and the sun. S-5.6

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing Earth and the moon, including its phases, compared to other common, unrelated objects on Earth to • recognizing Earth, the sun, and the moon using their relative sizes and positions to • understanding the concept and terminology of orbit and revolution. S-5.6.CC

7 Recognize that the sun provides Earth with light and energy. S-5.7

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing the difference between day and night (e.g., daylight and the sun versus darkness, the moon, and stars) to • recognizing that the sun provides the vast majority of light and heat energy to Earth (compared to the moon and other objects in the solar system) to • understanding that the sun gives light and heat energy to Earth and its organisms and influences the four major seasons. S-5.7.CC

9 Recognize natural resources, including those important in Virginia, in connection with their common use and origin. S-5.9

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing living and non-living natural resources used in everyday life as compared to other unrelated items or objects to • distinguishing between living and non-living natural resources that are important to Virginia to • connecting living and non-living natural resources to their common use and where they come from (e.g., wood is burned for fire; sources of drinking water; paper comes from trees or forests). S-5.9.CC

17 Recognize common features of Earth's systems, simple interactions between those features, and the processes that shape Earth. S-5.17

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing common non-living features of Earth (e.g., lakes, rivers, streams, and oceans; rocks, mountains, volcanoes, and canyons; air and clouds) to • recognizing simple interactions among non-living and living features within common systems (e.g., clouds providing water/rain to lakes, rivers, and oceans; lakes, rivers, and oceans providing water to humans, plants, and animals) to • identifying processes that lead to erosion, weathering, and deposition linked to non-living features (e.g., mountains, rivers, streams, volcanoes). S-5.17.CC

18 **Recognize ways in which people and communities protect Earth's environment and conserve natural resources.** S-5.18

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing activities that harm Earth to • recognizing simple and common choices that help protect the environment or conserve natural resources (e.g., picking up trash, recycling materials, turning off lights) as compared to common unrelated activities (e.g., playing outside, eating a meal) to • identifying simple and common choices that help protect the environment or conserve natural resources as compared to common activities that harm or pollute Earth (e.g., pollution from a factory, littering in streams or oceans). S-5.18.CC

Force, Motion, Energy, and Matter

10 **Recognize objects in motion and changes in motion due to force.** S-5.10

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing objects that are at rest or in motion while using common terminology (e.g., sitting, still, moving) to • recognizing objects that are at rest or in motion by incorporating the concept of force and common terminology (e.g., push, pull) to • identifying objects that are at rest or in motion by incorporating use of the term “force” and changes in motion (e.g., direction, from motion to rest, from rest to motion) through common examples. S-5.10.CC

11 **Recognize electricity as a form of energy with everyday uses, applications, and sources.** S-5.11

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing objects that require electricity as compared to common unrelated objects that do not without referring to the term “electricity” to • recognizing objects that require electricity as compared to common unrelated objects that do not while incorporating the concept and term “electricity” to • identifying basic forms of electricity based on common everyday uses or sources and incorporating the term “energy.” S-5.11.CC

12 **Recognize sound as a form of energy with everyday uses, applications, and sources.** S-5.12

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing objects that make noise or sound without referring to the concept or term “sound” to • recognizing objects that make or produce sound from those that do not while incorporating and referring to the concept and term “sound” to • identifying basic forms of sound based on common everyday uses or sources and incorporating the term “energy.” S-5.12.CC

13 **Recognize light as a form of energy with everyday uses, applications, and sources.** S-5.13

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing objects that make light without referring to the concept or term "light" to • recognizing objects that make or produce light from those that do not while incorporating and referring to the concept and term "light" to • identifying basic forms of light based on common everyday uses or sources and incorporating the term "energy." S-5.13.CC

14 **Recognize that objects, animals, and plants are made of smaller parts and identify various parts visible to the naked eye.** S-5.14

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing the smaller parts of large common objects (e.g., cars, trucks, buses - wheels; houses - doors and windows; building blocks - smaller blocks; computers and tablets - screen and keyboard) to • recognizing the parts of common living organisms (e.g., dogs, cats, birds - legs, eyes, ears, wings; plants, trees - leaves, flowers, trunk) to • identifying more complex parts of common objects, living organisms, and Earth systems (e.g., atmosphere – clouds, fog; solar system – planets, moons, comets) including parts that are very small. S-5.14.CC

15 **Recognize when substances are mixed.** S-5.15

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing two solids mixed that do not form a new substance (e.g., rocks and soil, objects in sand, trail mix, marbles in playdough) to • recognizing solid and liquid mixtures that do not form a new substance (sand and water) to • identifying more complex mixtures that may form a new substance (e.g., one solid and one liquid - salt water, fruit punch; two liquids - paint, lemonade; two gases - air in a balloon, air in the atmosphere; one liquid and one gas – carbonation in soda, air bubbles in water). S-5.15.CC

16 **Recognize and compare the physical properties of matter in different phases.** S-5.16

CC. Using simple pictures, diagrams, or representations, concepts could range from: • recognizing physical properties of common objects including size and shape to • recognizing additional physical properties including hardness/softness and weight/mass of common objects (e.g., a rock is harder than an egg; a balloon weighs less than a basketball) to • recognizing additional physical properties including volume and other representations of matter as a solid, liquid, and a gas/vapor. S-5.16.CC