|  |  |
| --- | --- |
| **4th Grade Science** | |
| **SES Standard** | **State Standard** |
| **Strand**: Plant Structure and Function |  |
| * Describe two groups in which plants can be grouped * Find out two groups: one that makes seeds; the other which does not make seeds * Learn four parts of a flower and how flowers with less than four parts produce seeds * Learn how pollination and fertilization occur * Explore how seeds and fruits form * Learn how plants grow from seeds * Find out about the mature state of a flowering plant’s lifecycle | S:LS1:4:1.1  S:LS1:4.2.2  S:LS1:4:2.3  S:LS1:4:2.4  S:LS1:4:3.1  S:LS1:4:3.2  S:LS1:4:3.3  S:LS1:4-3.4 |
| **Strand**: Animal Structure and Function |  |
| * Explore ways animals are similar and different * Find out how animals without backbones vary * Discover how insects compare to other animals with jointed legs * Learn what characteristics of fish and amphibians are the same * Learn how birds are alike and different * Learn how characteristics and life cycles of mammals are alike * Learn how animals are similar and different from their parents * Discover what behavior animals get from their parents * Study what animal behaviors are learned | S:LS1:4:2.1  S:LS1:4:2.3  S:LS1:4:2.4  S:LS1:4:3.1  S:LS1:4:3.2  S:LS1:4-3.4  S:LS2:4:1.1 |
| **Strand**: Energy in Ecosystems |  |
| * Learn how living and non-living things make up an ecosystem * Find out what a habitat is * Find out how plants get sunlight, water, and air * Find how plants make sugar * Find how animals get energy * Explore the role of scavengers and decomposers * Explore what a food chain is * Discover what a food web is * Discover some causes of changes in food webs | S:LS1:4:1.2  S:LS2:4:1.2  S:LS2:4:2.1  S:LS2:4:2.2 |
| **Strand**: Surviving in the Environment |  |
| * Learn how plant structures are important for survival * Explore how camouflage helps animals survive * Learn how living groups can be important for survival * Learn how adult animals care for their young * Learn how migration and hibernation help animals survive * Learn how animals live together in special ways * Learn how changes in the air, land, and water can affect plants and animals * Explore how people can help to protect the environment * Learn how some living things become endangered and extinct * Learn how fossils provide evidence of plants and animals that lived long ago | S:ESS1:4:3.1  S:LS2:4:1.1  S:LS2:4:3.1  S:LS2:4:3.2  S:LS3:4:1.1  S:LS3:4:1.2  S:LS3:4:1.3  S:LS3:4:2.1  S:LS3:4:3.1  S:LS3:4:3.2  S:LS4:4:1.2 |
| **Strand**: Measuring Matter |  |
| * Explore how mass and volume are different * Learn what physical properties of matter are * Learn what mixture and solutions are * Learn how to measure length and volume * Learn to measure mass of an object * Learn the difference between mass and density * Learn some physical changes in matter * Learn how heating and cooling cause physical change in matter * Learn about chemical changes in matter * Discover how rusting, tarnishing, and burning are chemical changes | S:PS1:4:1.2  S:PS1:4:2.1  S:PS1:4:2.2  S:PS1:4:2.3  S:PS1:4:2.4  S:PS1:4:2.5  S:PS2:4:1.1  S:PS2:4:3.8 |
| **Strand**: Force and Motion |  |
| * Determine what makes an object move * Learn how gravity affects motion * Learn how friction affects motion * Learn what potential kinetic energy is * Find out about other forms of energy that affect motion * Learn what work is * Explore how simple machines affect motion * Discover what compound and complex machines are | S:LS5:4:2.1  S:PS3:4:2.1  S:PS4:4:1.1  S:PS4:4:1.2  S:PS4:4:2.1  S:PS4:4:2.2  S:PS4:4:3.1  S:PS4:4:3.2  S:PS4:4:3.3  S:PS4:4:4.1 |
| **Strand**: Electricity and Magnetism |  |
| * Discover how objects get an electric charge * Learn how electric currents flow * Learn about two types of circuits * Learn how electricity can be used safely * Investigate how magnets act * Learn how earth is like a magnet * Discover how a magnet can make electricity * Explore how electricity can make a magnet * Learn how electromagnets are useful | S:PS1:4:1.1  S:PS2:4:3.2  S:PS2:4:3.3  S:PS2:4:3.4  S:PS2:4:3.6  S:PS3:4:1.1  S:PS3:4:1.2  S:PS3:4:1.3  S:PS3:4:1.4  S:PS3:4:1.5 |
| **Strand**: Light and Sound |  |
| * Learn what visible light is and what some of its sources are * Discover how light waves act * Find out how light acts when it hits different materials * Find out how flat and curved mirrors reflect light * Discover how light bends * Find out how sound is made * Learn some properties of sound * Discover how sound waves travel * Learn how your ears work * Determine how sounds can be made louder | S:LS5:4:2.2  S:PS2:4:3.1  S:PS2:4:3.5  S:PS2:4:3.7 |
| **Strand**: Measuring Weather |  |
| * Learn what causes change in temperature * Determine how different surfaces on earth affect air temperature * Find out how to measure air temperature * Learn how air temperature causes change in air pressure and wind * Find out how air pressure is measured * Learn how to measure wind direction and speed * Learn how clouds form and how clouds are different * Learn how there is different forms of precipitation and humidity * Explain how water moves through a cycle * Learn what air masses and weather fronts are * Learn how meteorologist track and predict weather * Learn how the national weather service helps to keep people safe | S:ESS1:4:1.1  S:ESS1:4:1.2  S:ESS1:4:1.4  S:ESS4:4:2.1  S:ESS1:8:1.1  S:ESS1:8:1.2 |
| **Strand**: The Makeup of Earth |  |
| * Learn what landforms are found on earth * Discover how volcanoes change earth * Find how earthquakes change earth * Learn how weathering affects earth’s features * Explore ways people can control erosion * Learn what some properties of minerals are * Discover how rocks form * Learn what makes up soil * Learn what natural resources are found on earth * Learn how to conserve natural resources | S:ESS1:4:2.1  S:ESS1:4:2.2  S:ESS1:4:2.4  S:ESS1:4:5.1  S:ESS1:4:5.2  S:ESS1:4:6.1  S:ESS1:4:6.2  S:ESS1:4:6.3  S:ESS1:4:6.4  S:ESS1:4:7.1  S:ESS1:4:7.2  S:ESS4:4:3.1  S:ESS4:4:3.2  S:ESS4:4:3.3  S:ESS4:4:3.3  S:ESS4:4:3.4  S:ESS4:4:4.1 |
| **Strand**: Exploring the Oceans |  |
| * Learn how mapping technology has changed * Discover what the ocean floor looks like * Discover who some ocean explorers are * Find out how vessels of ocean explorations have changed * Learn about some ocean exploration projects * Investigate motions of current and waves in water * Discover how ocean currents affect earth * Learn what causes tides * Explain how waves affect shorelines * Learn what salt water habitats are * Learn how coral reefs can be affected by human activity |  |
| **Strand**: Movement in the Solar System |  |
| * Learn effects of earth’s rotation and revolution * Learn the effects of earth’s tilt * Learn what causes the phases of the moon * Discover how eclipses of the moon and sun occur * Learn how earth is similar and different than the other planets * Discover what orbits of the planets are like * Discover what scientists have learned about earth’s neighboring planets * Learn about Jupiter, Saturn, Uranus, Neptune, and Pluto * Learn about asteroids and meteors * Explore why orbits of comets differ from plant’s orbits * Explore how stars are like the sun | S:ESS1:4:4.1  S:ESS2:4:1.1  S:ESS2:4:1.2  S:ESS2:4:2.1  S:ESS2:4:3.1  S:ESS2:4:4.1  S:ESS2:4:4.2  S:ESS3:4:1.1  S:ESS3:4:1.2  S:ESS3:4:2.1  S:ESS3:4:2.2  S:ESS4:4:1.1 |
| **Strand**: Digestive, Circulatory, Nervous Systems |  |
| * Learn about the job of the digestive system * Learn the steps in the digestive system * Find out the parts of blood and what they do * Learn three kinds of blood vessels * Determine what path blood takes through the heart * Learn about the nervous system * Discover the role nerve endings in your skin play * Find out how eyes work * Find out how the tongue and nose gather information | S:LS4:4:3.1  S:LS4:4:3.2  S:LS5:4:3.1 |
| **Strand**: Keeping your body systems healthy |  |
| * Learn about some problems of the digestive system * Explore some ways to prevent digestive system problems * Explore how to prevent head and spinal cord injuries * Discover how to prevent injuries to your eyes and ears * Explain how to avoid being harmed by drugs | S:LS4:4:1.3  S:LS4:4:2.1  S:LS4:4:2.2  S:LS4:4:2.3 |