1st Grade Science

Science 1st	September	October	November	December
Topics	○ Insects	○	○ Life Science	○ Earth Science
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ I - Identify the parts of an insect ➢ I – Identify characteristics of an insect ➢ I - Demonstrate knowledge of butterflies as insects ➢ I - Compare and contrast butterflies and moths ➢ I - Observe and record stages of the life cycle of a butterfly and moth	The Students Will… ➢ I - Identify habitats of butterflies ➢ I - Demonstrate knowledge of migration of butterflies ➢ I – Explore migration of other animals ➢ I - Compare and contrast life changes in people ➢ I - Examine feelings associated with life changes	The Students Will… ➢ I - Observe animal behaviors. ➢ I - Observe how animal behaviors are influenced by environment ➢ I - Describe how animals interact with each other and their environment. ➢ I - Recognize that different animals inhabit the earth. ➢ I - Observe that animals meet their needs in different ways. ➢ I - Observe that animals resemble their parents.	The Students Will… ➢ I - Understand that matter can undergo a variety of changes. ➢ I - Recognize that water, rocks and soil are found on the Earth's surface. ➢ I - Recognize that living organisms are found on the Earth's surface. ➢ I - Show an awareness that changes occur in their environment. ➢ I - Recognize that materials come in different forms.

Science 1st	January	February	March	April
Topics	○ Matter	○ Dental Health ○ Germs	○ 5 Senses ○ Body	○ Nutrition
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ I - Recognize everything is matter ➢ I - Recognize and list the properties of solid. Everything is matter ➢ I - Recognize and list the properties of liquid ➢ I - Recognize and list the properties of gas ➢ I - Compare and contrast solid, liquid and gas ➢ I - Recognize that liquid will take on the shape of any container ➢ I - Recognize that gas will take on the shape of any container ➢ I - Observe that a solid can change its' properties ➢ I - Observe matter that can float. ➢ I - Observe that matter can sink	The Students Will… ➢ I - Understand the importance of dental health. ➢ I - Understand the components of dental health. ➢ I - Demonstrate ways we can help keep our teeth healthy. ➢ I - Understand the importance of healthy habits. ➢ I - Demonstrate ways we can keep germs from spreading. ➢ I - Demonstrate knowledge of healthy habits.	The Students Will… ➢ I - Explore the 5 senses. ➢ I - Understand the different senses ➢ I - Understand how eyesight helps us daily. ➢ I - Understand how we use the sense of touch. ➢ I - Understand the importance of smell. ➢ I - Understand our sense of taste. ➢ I - Understand how hearing helps us daily.	The Students Will… ➢ I - Understand the need for nutrition for development ➢ I - Identify the food groups ➢ I - Recognize the food pyramid ➢ I - Understand how each food group helps us grow ➢ I - Recognize the importance of a healthy diet ➢ I - Recognize the importance of nutrition labels ➢ I - Understand that exercise is important ➢ I - Recognize that nutrition and exercise work together

Science 1st	May	June
Topics	○ Seasons ○ Animals	○
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ I - Identify the 4 seasons. ➢ I - Compare and contrast the seasons. ➢ I - Identify the characteristics of each season. ➢ I - Identify the time of the year of each season. ➢ I - Identify different ways to group animals. ➢ I - Compare and contrast animals to people. ➢ I - Recognize ways animals take care of their young. ➢ I - Recognize the varied needs of animals. ➢ I - Recognize the life cycles of animals.	The Students Will… ➢

2nd Grade Science

Science 2nd	September	October	November	December
Topics	○ Plants	○ Animals	○ Human Body	○ Matter
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Identify leaves, needles, flowers, fruit ➢ Recognize that a plant needs water, sun, dirt ➢ Label parts of plants: root, stem, leaves, flowers ➢ Understand how seeds are transferred ➢ Recognize how plants change from seed to plant ➢ Identify use of plants: oxygen, medicine, food, materials	The Students Will… ➢ Learn about different kinds of animals: mammals, reptiles, amphibians, pets, wild, endangered, protected ➢ Understand changes in animals ➢ Learn how animals protect self: camouflage and body ➢ Know what animals eat, where they live ➢ Understand habitats and reasons for recreations in zoos	The Students Will… ➢ describe the functions of the brain, heart and lungs ➢ predict and measure their lung capacity ➢ determine heart rates, and understand how it reacts to activity level ➢ demonstrate the control the brain has on their body ➢ identify the components of a well-balanced diet ➢ recognize health benefits and problems caused by certain foods ➢ describe the digestive system ➢ determine the health benefits of exercise ➢ demonstrate the importance of good hygiene in staying healthy	The Students Will… ➢ state the properties of objects ➢ define matter ➢ describe the properties of solids, liquids, and gases ➢ identify mixtures and solutions ➢ tell how matter can be changed ➢ identify ways that heat can change the state of matter

Science 2nd	January	February	March	April
Topics	○ Sound ○ Heat ○ Light	○ Force ○ Magnets ○ Electricity	○ Earth	○ Dinosaurs ○ Fossils
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ learn how to make sounds and change volume ➢ learn that sound is produced when objects vibrate ➢ learn to identify high and low sounds and ways to change pitch ➢ identify sources of heat and the materials that conduct heat ➢ determine that some materials conduct heat better than others ➢ learn and identify sources of light that often give off heat ➢ lean that light travels in a straight line and what happens when light strikes an object	The Students Will… ➢ experiment to find out how the surface of a ramp changes the way things slide ➢ discover cause-and-effect relationships ➢ identify ways to make objects move ➢ describe how gravity affects objects ➢ identify when magnets attract and repel each other ➢ identify some objects a magnet will attract ➢ explain how electricity moves ➢ name some ways to use electricity safely and uses of electricity	The Students Will… ➢ identify features of the earth such as mountains and lakes ➢ identify types of rocks ➢ identify ways rocks and soil can be changed ➢ identify ways that volcanoes and earthquakes change the earth ➢ identify natural resources and their uses ➢ identify some effects of pollution and ways people can protect natural resources ➢ identify some items that can be recycled	The Students Will… ➢ explain what fossils are and how they are formed ➢ explain that fossils provide evidence about dinosaurs ➢ identify some dinosaurs and their characteristics ➢ measure the length of a dinosaur ➢ identify some events that may have caused the extinction of dinosaurs ➢ define the following vocabulary words: fossils, extinct, paleontologists

Science 2nd	May	June
Topics	○ The Solar System	○
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ observe how the rotation of the earth causes day and night ➢ describe features and phases of the moon ➢ observe and record phases of the moon ➢ identify the sun and the planets in our solar system ➢ The students will identify space exploration as a way we have learned about the solar system ➢ define the following vocabulary words: craters, phases, orbit, and telescope	The Students Will… ➢

3rd Grade Science

Science 3rd	September	October	November	December
Topics	○ Food	○ habitats	○ Human and environment interaction	○
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ understand food choices (M) ➢ observe fruits and seeds (D) ➢ sequencing (M)	The Students Will… ➢ explore habitats ➢ make predictions ➢ understand people affect plants and animals	The Students Will… ➢ learn about human and environment interaction	The Students Will… ➢ Continued from November

Science 3rd	January	February	March	April
Topics	○ Electricity ○ Magnets	○	○ Rainforests ○ Equator ○ Latitude ○ longitude	○ Earth's Surface
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Learn about electricity ➢ Explore properties of magnets	The Students Will… ➢ Continued from January	The Students Will… ➢ Identify layers of the rainforest ➢ Locate equator, latitude, longitude ➢ Learn about temperate and tropical rainforests	The Students Will… ➢ understand soil ➢ understand changes in the earth's surface ➢ understand the water cycle

Science 3rd	May	June
Topics	○ Fossils ○ Rocks ○ Natural Resources	○ End of the year "warp-up"
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ understand protecting natural resources ➢ understand how rocks are formed ➢ understand fossils	The Students Will… ➢ Continued from May

4th Grade Science

Science 4th	September	October	November	December
Topics	○ Earth Science: Measuring Weather	○ Earth Science: Measuring Weather continued ○ Science Court: Seasons (SmartBoard Unit)	○ Science Court: Seasons (SmartBoard Unit) cont. ○ National Geographic Explorer Magazine	○ MyPyramid for Kids-Nutrition Unit
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ investigate how sunlight affects air temperature ➢ investigate how temperature affects air movement ➢ study causes of clouds and precipitation ➢ identify types of clouds and what weather they bring	The Students Will… ➢ identify kinds of precipitation ➢ study how we measure precipitation and humidity ➢ study the water cycle ➢ study air masses and front ➢ learn how meteorologists track/predict weather ➢ discuss safety and weather ➢ view a cartoon humorous court room trial, review the facts, complete hands on activities, and predict what will happen next. ➢ At the end of the trial, students predict how the jury will vote. ➢ learn about Earth's elliptical orbit around the Sun ➢ learn the difference between weather and climate ➢ become member of an interdependent group ➢ Listen and talk with others regarding the case ➢ Share a common goal with group members	The Students Will… View a cartoon humorous court room trial, review the facts, complete hands on activities, and predict what will happen next. ➢ At the end of the trial, students predict how the jury will vote. ➢ learn about Earth's elliptical orbit around the Sun ➢ learn the difference between weather and climate ➢ become member of an interdependent group ➢ Listen and talk with others regarding the case ➢ Share a common goal with group members ➢ Identify science vocabulary words prior to reading ➢ Read articles with classmates ➢ Discuss what was read with classmates	The Students Will… ➢ learn that foods are divided into food groups ➢ learn the colors that represent the food groups ➢ participate in physical activity while learning about the importance of daily activity as part of good health ➢ identify food groups and how to get the right amount each day ➢ discuss the importance of eating fruits and vegetables, set goals to do so ➢ create a daily menu based on the MyPyramid for Kids recommendations

Science 4th	January	February	March	April
Topics	○ Astronomy and Space Unit	➢ Astronomy and Space Unit cont.	○ National Geographic Explorer Magazine	○ The Makeup of the Earth
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will... ➢ learn that the Earth is part of a solar system in the Milky Way galaxy ➢ learn the 8 planets and where they are located in the solar system ➢ learn about other objects that orbit the sun ➢ learn that stars are huge balls of hot, glowing gases ➢ Watch "The Magic School Bus: Adventures in Space" ➢ learn that our sun is a star ➢ learn that groups of stars seen together are called constellations ➢ become an expert on a planet and do a project about that planet	The Students Will... ➢ become an expert on a planet and do a project about that planet ➢ present project to the class and answer student questions	The Students Will... ➢ Identify science vocabulary words prior to reading ➢ Read articles with classmates ➢ Discuss what was read with classmates	The Students Will... ➢ Learn what landforms are found on the earth ➢ Discover how volcanoes change the earth ➢ Find out how earthquakes change the earth ➢ Discover how weathering affects the earth's features ➢ Learn how erosion affects the earth's features ➢ Explore ways people can control erosion ➢ Learn what some properties of minerals are ➢ Discover how rocks form ➢ Find out what makes up soil ➢ Discover what natural resources are found on the earth ➢ Learn how to conserve natural resources

Science 4th	May	June
Topics	○ National Geographic Explorer Magazine	○ See May
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Identify science vocabulary words prior to reading ➢ Read articles with classmates ➢ Discuss what was read with classmates	The Students Will… ➢

5th Grade Science

Science 5th	September	October	November	December
Topics	○ Classifying matter ○ Investigating motion ○ Forms of energy	○ Classifying matter ○ Investigating motion ○ Forms of energy	○ Comparing Living Things	○ Reproduction and Change
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Explain the difference between elements, compounds, mixtures and solutions ➢ Descr5ibe substances and how they interact ➢ Investigate laws of motion ➢ Calculate speed and velocity ➢ Investigate the effect of gravity and friction ➢ Describe and distinguish the difference between kinetic and potential energy	The Students Will… ➢ Explain the difference between elements, compounds, mixtures and solutions ➢ Descr5ibe substances and how they interact ➢ Investigate laws of motion ➢ Calculate speed and velocity ➢ Investigate the effect of gravity and friction ➢ Describe and distinguish the difference between kinetic and potential energy	The Students Will… ➢ Learn what the life processes are ➢ Discover what tissues, organs, and systems are ➢ Learn what the five kingdoms are ➢ Explore how scientists classify plants	The Students Will… ➢ Learn how cells divide ➢ Understand how cells produce new individuals. ➢ Discover how offspring inherit traits ➢ Understand what dominant and recessive genes are ➢ Learn how scientists studies genes and chromosomes

Science 5th	January	February	March	April
Topics	○ Adaptations	○ Ecology	○ The Human Body	○ The Human Body
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Explore how adaptations help organisms ➢ Learn what structural adaptations are ➢ Discover what behavioral adaptations are ➢ Lean about adaptations for living in water and on land ➢ Discover how adaptations help organisms survive in cold and hot climates ➢ Learn what causes variations to occur within a species ➢ Determine how environmental changes affect species	The Students Will… ➢ Find out about the parts of an ecosystem ➢ Learn how habitats and niches are related ➢ Learn how populations and communities are related ➢ Learn the role of producers in an ecosystem ➢ Describe how consumers get the energy and nutrients they need ➢ Learn what food chains and energy pyramids show about energy flow ➢ Learn about the carbon dioxide-oxygen cycle ➢ Find out how nitrogen cycles through an ecosystem	The Students Will… ➢ Learn how your nose prepares air for your lungs ➢ Discover how oxygen is exchanged for carbon dioxide in your lungs ➢ Determine how oxygen gets to body cells from your lungs ➢ Learn how cells use oxygen to release energy from food ➢ Learn how your cells produce and get rid of wastes ➢ Learn about the causes of communicable diseases and how they spread ➢ Learn about noncommunicable diseases and how they are treated and controlled ➢ Determine how you can get the nutrients your body needs	The Students Will… ➢ Learn how your nose prepares air for your lungs ➢ Discover how oxygen is exchanged for carbon dioxide in your lungs ➢ Determine how oxygen gets to body cells from your lungs ➢ Learn how cells use oxygen to release energy from food ➢ Learn how your cells produce and get rid of wastes ➢ Learn about the causes of communicable diseases and how they spread ➢ Learn about noncommunicable diseases and how they are treated and controlled ➢ Determine how you can get the nutrients your body needs

Science 5th	May	June
Topics	○ The Earth's Resources	○
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Learn what renewable resources are ➢ Discover how water resources are used ➢ Learn how water can be conserved and water pollution reduced ➢ Learn how land resources are used, and how they can be preserved ➢ Discover what the sources, and effects of air pollution are ➢ Explain how air quality can be protected	The Students Will… ➢

6th Grade Science

Sc 6th	September	October	November	December
Topics	○ What is Science ○ Science in Action ○ Models in Science ○ Measurement ○ Metric System ○ Tables and Graphs	○ Structure of Matter ○ Compounds and Mixtures ○ States of Matter	○ Properties and Changes in Matter ○ Motion and Momentum	○ Forces and Newton's Laws ○ Energy
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Compare and contrast theories and laws (i) ➢ Define 3 main branches of science ➢ Define Scientific Method ➢ Describe various types of scientific models ➢ Make a weather related map with computers and Smartboards ➢ Use various tools to measure objects ➢ Understand the purpose of the metric system. ➢ Develop three types of graphs. ➢ Develop three types of tables. ➢ Measure various objects using the metric system.	The Students Will… ➢ Describe matter. ➢ Identify the parts of an atom. ➢ Explain the meaning of atomic mass and number. ➢ Identify the characteristic of a compound. ➢ Compare and contrast different types of mixtures. ➢ Make cookie atoms and isotopes. ➢ Name the three states of matter ➢ Explain why some items sink and others float.	The Students Will… ➢ Describe the physical properties of matter. ➢ Compare and contrast the properties of acids an dbases. ➢ Define physical and chemical changes. ➢ Define speed and distance ➢ Define motion. ➢ Explain the difference between mass and inertia. ➢ Define momentum.	The Students Will… ➢ Identify forces at work. ➢ Demonstrate Newton's Firs t Law of Motion. ➢ Explain Newton's Second Law of Motion. ➢ Demonstrate Newton's Third Law of Motion. ➢ Explain what energy is. ➢ Distinguish between potential and kinetic energy. ➢ Explain how energy changes form. ➢ Describe how electric power plants produce energy. ➢ Explain renewable resources.

Sc 6th	January	February	March	April
Topics	○ Work and Simple Machines ○ Thermal Energy	○ Waves ○ Sound	○ Electromagnetic Waves ○ Light, Mirrors, Lenses	○ Electricity
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Explain the relationship between work &power ➢ Explain how machines make work easier. ➢ Understand how friction reduces efficiency. ➢ Demonstrate different simple machines. ➢ Build various simple machines. ➢ Define thermal energy. ➢ Describe kinetic energy. ➢ Describe three ways heat is transferred. ➢ Identify materials that are insulators and conductors. ➢ Identify what an engine does. ➢ Describe how an internal combustion engine works.	The Students Will… ➢ Explain the relationship between waves & energy. ➢ Show how waves travel at different speeds. ➢ Explain how waves reflect. ➢ Explain how sound travels. ➢ Explain the Doppler Effect. ➢ Explain the difference between music & noise. ➢ Understand how you hear. ➢ Identify the parts of the ear.	The Students Will… ➢ Explain how waves are produced. ➢ Describe he properties of waves ➢ Explain the different kinds of waves. ➢ Compare and contrast AM & FM waves. ➢ Describe the nature of light. ➢ Describe how light interacts with various materials. ➢ Explain how an image forms on a mirror. ➢ Describe how concave and convex mirrors work.	The Students Will… ➢ Describe how objects become charged. ➢ Distinguish between insulators and conductors. ➢ Describe how a battery works. ➢ Investigate series and parallel circuits. ➢ Explain voltage and current.

Sc 6th	May	June
Topics	○ Magnetism ○ Rockets	○
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Explain the source of all magnetic fields. ➢ Describe the behavior of magnets. ➢ Describe the relationship between electricity and magnets ➢ Understand how electricity can produce motion. ➢ Explain Newton's Laws of Motion ➢ Build level 1 rockets. ➢ Explain how paper airplanes work.	The Students Will… ➢

7th Grade Science

Sc 7th	September	October	November	December
Topics	○ Science All Around Us ○ Science in Action ○ Matter	○ Minerals ○ Rocks	○ Earth's Energy ○ Land Forms	○ Erosional Forces
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ describe the parts of the scientific method (D) ➢ distinguish between variables in a lab setting (I) ➢ use the scientific method to solve everyday problems ➢ research science related ➢ articles to compare and contrast laws and theories (I) ➢ identify the states of matter ➢ describe the internal structure of the atom (M) ➢ compare the isotopes of elements ➢ describe ways compounds are ➢ formed (D) ➢ list differences between mixtures and compounds. (D)	The Students Will… ➢ explain how minerals are formed (I) ➢ describe the physical properties of minerals (I) ➢ identify elements that are in minerals. (I) ➢ describe the rock cycle (I) ➢ explain the difference between extrusive & intrusive rocks. (I) ➢ identify the conditions to develop metamorphic rocks (I) ➢ explain how sedimentary rocks are formed (I) ➢ make salt crystals (I)	The Students Will… ➢ identify nonrenewable energy resources (D) ➢ describe the advantages and disadvantages of using fossil fuels. (D) ➢ explain the advantages and disadvantages of using nuclear energy. (D) ➢ identify renewable energy resources. (D) ➢ discuss the differences between plains & plateaus. (I) ➢ describe folded, upwarped, and fault-block mountains, & volcanic mountains. (I) ➢ define latitude and longitude. (D) ➢ determine the date and time in different time zones. (I). ➢ define contour lines, map scales and map legend. (D)	The Students Will… ➢ compare & contrast rock slides, rock falls, & mudslides. (I) ➢ explain why building on a steep slope might not be wise. (I) ➢ explain how glaciers move. (I) ➢ explain how dunes are formed (I) ➢ identify causes of runoff. (I) ➢ identify 3 stages of a river. (I) ➢]recognize the importance of groundwater. (I) ➢ list the different causes of shoreline erosion. (I) ➢ describe some origins of sand. (I)

Sc 7th	January	February	March	April
Topics	○ Plate Tectonics ○ Earth Quakes	○ Volcanoes ○ Clues to Earth's Past	○ Atmosphere ○ Weather	○ Climate ○ Oceans
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Describe continental drift (I) ➢ Identify evidence supporting continental drift. (I) ➢ Explain seafloor spreading (I) ➢ Explain how heat moves the plates (I) ➢ Explain how earthquakes results from inside energy. (I) ➢ Explain how energy moves in waves. (I) ➢ Describe the earth's interior (I) ➢ Describe how earthquakes are measured. (I) ➢ Explain where most earth-quakes take place. (I)	The Students Will… ➢ Describe how volcanoes can affect people. ➢ Identify the relationship between volcanoes and the earth's plates. ➢ List three forms of volcanoes ➢ Explain how a volcanic neck and caldera forms. ➢ List conditions for fossils to form. ➢ Describe methods for determining age of rocks. ➢ Identify how absolute age differs from relative age.	The Students Will… ➢ Identify gases in the atmosphere. ➢ Describe the structure of the atmosphere. ➢ Explain air pressure. ➢ Explain the water cycle. ➢ Compare and contrast conduction and radiation. ➢ Describe wind patterns. ➢ Explain how solar heating affects weather. ➢ Describe how hail, snow, rain and sleet develop. ➢ Describe the symbols used on weather maps.	The Students Will… ➢ Describe what determines climate. ➢ Explain other factors that affect climate. ➢ Understand how organisms adapt. ➢ Explain what causes seasons. ➢ Explain the origin of water in the oceans. ➢ Explain how El Niño affects climate. ➢ Describe the composition of seawater. ➢ Describe wave formation. Explain ocean tides.

Sc 7th	May	June
Topics	○ Oceanography ○ Impact on the Land	○
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Describe the mid-ocean ridge. ➢ Describe mineral resources found on the continental shelf. ➢ Compare and contrast ocean margin habitats. ➢ List five types of ocean pollution. ➢ Describe how to control pollution. Describe how fast the population is growing. ➢ List ways how people impact the earth. ➢ Indentify ways that land is used. ➢ Identify three ways to conserve our resources. ➢ Explain the advantages of recycling.	The Students Will… ➢

8th Grade Science

Sc 8th	September	October	November	December
Topics	○ What is Science ○ Living Things & nonliving ○ Cells - Structure & Function	○ Cell Processes ○ Cell Reproduction	○ Heredity ○ Adaptions Over Time	○ Human Body ○ Structure & Movement ○ Research Paper
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ apply scientific methods (M) ➢ demonstrate how to measure ➢ using scientific units (M) ➢ distinguish between living and nonliving things. (D) ➢ identify what living things need to survive. (D) ➢ compare and contrast biogenesis & spontaneous generation ➢ identify the names & functions of each part of the cell (M) ➢ explain the importance of the nucleus(M) ➢ compare tissues, organs, and organ systems (D)	The Students Will… ➢ list differences between atoms, elements & compounds. (M) ➢ explain the difference between organic and inorganic. (I) ➢ describe the processes of osmosis & diffusion. (I) ➢ explain the difference between active & passive transport. (I) ➢ list the differences between producers & consumers (D) ➢ explain why mitosis is important. (D) ➢ explain the difference between asexual & sexual reproduction. (I) ➢ name the cells in fertilization. (I).	The Students Will… ➢ explain how traits are inherited (I) ➢ use a Punnett square to predict the results of crosses. ➢ explain the difference between genotypes & phenotypes. (I) ➢ describe two human genetic disorders. (I) ➢ name two advances in genetic engineering. (I) ➢ explain Darwin's Theory of Evolution (I) ➢ explain the importance of using fossils as evidence (I). ➢ list five examples of evidence of evolution. (I)	The Students Will… ➢ identify 5 functions of the skeletal system (I) ➢ compare & contrast movable & immovable joints (I) ➢ list the major functions of the muscular system (I) ➢ compare & contrast three types of muscles. (I) ➢ identify a research topic (I) ➢ locate 5 resources. (I) ➢ submit an outline (I)

Sc 8th	January	February	March	April
Topics	○ Nutrition and Digestion ○ Circulatory System	○ Respiration ○ Nervous System	○ Endocrine System ○ Reproduction	○ Immunity and Disease ○ Introduction to Animals
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Identify the six classes of nutrients. ➢ Explain the relationship between diet and health. ➢ Identify the parts of the digestive system. ➢ Explain how homeostasis is maintained in digestion. ➢ Compare and contrast veins, arteries, and capillaries. ➢ Explain how blood moves through the body. ➢ Identify the parts and functions of blood.	The Students Will… ➢ Describe the parts and functions. ➢ Identify the pathway of oxygen. ➢ Identify the effects of smoking on the lungs. ➢ Describe the basic structure of the neuron. ➢ Compare the central and peripheral nervous system. ➢ Explain how drugs affect the body ➢ Explain why healthy senses are needed.	The Students Will… ➢ Define how hormones function. ➢ Describe the structures and functions of the glands. ➢ Describe the structures and functions of the reproductive system. ➢ Describe the fertilization process of a human egg. ➢ Describe developmental process of a child.	The Students Will… ➢ Describe how the body protects itself. ➢ Compare and contrast passive and active immunity. ➢ List STD's. ➢ Explain how HIV affects the body. ➢ Describe cancer. ➢ Compare an contrast non-infectious diseases. ➢ Compare and contrast vertebrates and invertebrates. ➢ Describe sponges. ➢ Compare and contrast non-round and flat worms.

Sc 8th	May	June
Topics	○ Mollusks ○ Fish, Amphibians, Reptiles	○ Birds ○ Mammals
Skills **I-Introduce** **D-Develop** **M-Master** **R-Reinforce**	The Students Will… ➢ Describe various mollusks. ➢ Explain the exoskeleton. ➢ Explain the three classes of fish. ➢ Explain how fish obtain food an oxygen. ➢ List the various kinds of amphibians. ➢ List the characteristics of reptiles.	The Students Will… ➢ Identify the parts of a bird. ➢ Explain the adaptations of a bird for flight. ➢ Explain the characteristics of various mammals. ➢ Explain the significance of endangered species.