

**COURSE: Science**  
**Grade Level: Third**

MAIN/ GENERAL TOPIC	SUB-TOPIC:	ESSENTIAL QUESTIONS:	WHAT THE STUDENTS WILL KNOW:	WHAT THE STUDENT WILL BE ABLE TO DO:	Assessments:	WHEN STUDENT DOES IT:
Solar System	Planets Gravity Orbits Revolution vs. Rotation	What are planets? What keeps planets in place? Why do the planets orbit around the sun? What is the difference between revolution and rotation? What is an axis?	The names of the planets Pluto is a dwarf planet The reason planets stay in place The difference between revolution and rotation. The earth is tilted on an axis.	Name and or draw a diagram of the planets in order Explain why Pluto is a dwarf planet Explain what gravity is Make a PPT showing a planet and its characteristics. Explore Enchanted Learning website Watch Ed Video on Solar System Read Scholastic News articles and various trade books. Learn the planet song	Observations Written Test PPT Rubrics	May
Solar System	Moon	What are the phases of the moon? What are craters? What is a natural satellite? Does the moon have water?	The phases of the moon Characteristics of the moon: ex: Lack of oxygen and gravity Know the difference between a natural and an artificial satellite.	Draw a diagram of the phases of the moon Observe the phases of the moon at home and share with class Make a model of the moon out of clay dough and drop various objects to form craters in the moon. Have a debate/discussion about whether the moon has water. List 10 things you would have to take to the moon to survive: air, water ... Explain the difference between natural and artificial satellites. Read Scholastic News articles and various trade books.	Observations Written Test PPT Rubrics	May
Solar System	Sun Seasons	What are solar flares? Why are there different colors on the sun? Why does the sun look so big when it is smaller than other stars? How does the sun affect the seasons?	What solar flares are. The characteristics of the sun. How the sun affects the seasons/ day and night That the sun is a star.	Demonstrate revolution and rotation using kinesthetic activity (globe, flashlight, student etc...)  Read Scholastic News articles and various trade books.	Observation Written Test PPT Rubrics	May
Solar System	Eclipses	What is an Eclipse? What is a Solar Eclipse? What is a Lunar Eclipse?	The difference between a Solar Eclipse and a Lunar Eclipse as well as the causes of each.	Kinesthetic activity  Read Scholastic News articles and various trade books.	Observation Written Test	May

Solar System	Stars/ Constellations Comets Meteors/ Meteorites	What is a star? What is a constellation? What do scientists use to study objects far away? Why can't you see the stars during the daytime? What is the difference between comets, meteors, and meteorites?	How stars are formed. What makes a group of stars a constellation. Understand the characteristics of comets, meteors, and meteorites. Understand that constellations change with the seasons	Students make constellation tubes Students observe constellations at home and report back Use website to observe and explore constellations. Read Scholastic News and various trade books	Observation Written Test	May
Matter	Solids Liquids Gases	What is matter? What is mass? What are the three states of matter? How are solids, liquids and gases different?	The difference between the three states of matter.  The proximity of molecules in each state of matter.  Air has mass.	Give examples of solids, liquids, and gases in their environment. Various experiments to represent the three states of matter (see Bill's packet of activities) Science journal Learn matter song. Enchanted Learning sites	Observation Science Journals Written Test	Jan.
Matter	Physical/ Chemical Changes Freezing/Boiling Point of water	What is a physical change? What is a chemical change? What is the difference between a physical and a chemical change? What is the freezing point of water? What is the boiling point of water? Why do some bodies of water freeze while others do not?	The difference between physical and chemical changes.  Molecules speed up with heat and molecules slow down when the temperature drops.	Give examples of physical and chemical changes Various experiments Science Journal	Observation Science journals Written Test	Jan
Matter	Magnetism	What is magnetic force? What are the poles of a magnet? What types of materials are magnetically attracted?	Energy and matter interact through forces in nature through changes in motion Magnetism is a force that can attract or repel certain materials	Paperclip experiment- creating magnetism in a paper clip Make predictions and experiment with types of materials that are magnetically attracted. Science Journals Various experiments	Observation Science Journals Written Test	Jan
Matter	Water Cycle	What is evaporation? What is condensation? What is precipitation? What is accumulation?	The order of the water cycle. What the different stages of the water cycle are.	Make water cycle wheel Explain the water cycle Make poster of water cycle Sing the water cycle song	Observation Written Test Science Journals	Jan
Life Cycle	Butterflies	What is a life cycle? What are the stages in the life cycle of a butterfly? What is metamorphosis? What is migration/hibernation?	The stages in the life cycle of the butterfly: egg, larva, pupa/ chrysalis, and adult The difference between a moth and a butterfly. The anatomy of the butterfly The journey of the butterfly	Label diagram of butterfly Venn diagrams Raise live butterflies in the classroom Take a field to Magic Wings Butterfly Describe major changes in the life cycle Conservatory Science journals Read various trade books	Observation Exploration Written Test Diagrams Science Journals	Sept. or May

Living Environment	Animals: Polar Animals Whales Rainforest Animals Mammals Amphibians Insects Reptiles Fish Birds	What is migration? What is hibernation? Why do animals migrate and/or hibernate? What is a vertebrate vs. an invertebrate? What is instinct? What are the five categories of vertebrates? What is cold blooded vs. warm blooded?	What happens during hibernation. All animals carry out basic life functions to sustain life (ie: reproduction, elimination of waste etc...) The basic characteristics, needs, and common to all living things The difference between natural instinct and learned behavior. How animals affect their habitats. The difference between cold blooded and warm blooded. The difference between vertebrates and invertebrates.	PPT on an animal Internet research Enchanted learning sites Polar animal brochures using Microsoft Publisher Read various trade books Venn diagrams	Observation Exploration PPT Rubric Diagrams Written Test	Sept- Ongoing
Living Environment	Plants	What are the parts of a plant? What is the reproductive cycle? What is the difference between annuals vs. perennials? How do plants affect our living environment? What are the three main types of roots?	The different parts of a plant ( ovaries, stamen...) Plants and animals depend on each other and their physical environment Reproductive cycle of a plant The different ways seeds are dispersed. Annuals vs. Perennials The different types of seed plants Fruits vs. vegetables Greenhouse effect Global warming Oxygen vs. CO2 Know three types of roots: tap roots, prop root, and fibrous roots	Label diagram of plant Dissect lilies Planting plants Read various trade books Enchanted learning Use root viewer to view the three different types of roots.	Observation Exploration Science journals Diagrams Written Test	May/ June
Living Environment	Food Chain	What is a food chain? What is regurgitation? What is an owl pellet?	Know how animals depend upon other organisms in their environment to sustain life. How owls digest their food.	Dissect owl pellets Create a diagram of a food chain	Observation Exploration Science Journals Diagrams	June or October
The Changing Earth	Extreme Natural Events: Volcano Earthquakes	What is an earthquake? What is the cause of an earthquake? What is a volcano? Where are volcanoes located?	Extreme natural events have both positive and negative effects on living things. What causes earthquakes. The location of volcanoes.	Make a volcano out of paper mache Create a diagram of a volcano. Do an earthquake drill Read various trade books	Observation Exploration Science Journals Diagrams	Feb.
The Changing Earth	Weathering and Erosion	What is weathering? What is erosion? What are the causes of weathering? What are the causes of erosion?	The interaction between air and water breaks down the earths materials. Pieces of earth material can be moved by air, water, wind and gravity. Pieces of earth material will settle or deposit on land or in water in different places. Soil is composed of broken- down pieces of living and nonliving earth material.	Use a water/ sand table to model erosion Science experiments Various trade books Articles	Written Test Observation Science Journals Diagrams	Feb.