Subject: Science 5	Calendar: First 3 weeks	Timeframe: wks 1-3	Level/Grade: Elem

Unit I: Science Safety, Procedures and processes

Unit Objectives: During this unit, the student will:

Identify and use safe practices during field and laboratory investigations
Dispose or recycle materials appropriately
Use the scientific method to plan and implement an investigation
Collect information by observing and measuring and organize/ display the information in simple graphs or charts
Analyze and interpret information from an investigation and construct reasonable explanations
Communicate valid conclusions from investigations

Lessons:

1. The student will act out and safe lab procedures and identify lab hazards.
2. The students will play the Hazard and Precaution game
3. The students will discuss ways that materials can be conserved or recycled.
4. The students will design and conduct lab experiments following the scientific method guidelines.
5. The students will create data displays to support the conclusion of their experiments

Vocabulary:

recycle: reuse materials
conservation: the careful use and protection of natural resources
precaution: something done to prevent an accident
hazard: dangers one encounter in any investigation
assumption: a belief based on fact that has not been proven
scientific method: the process used to answer questions about the physical world
scientific process: the series of steps used to investigate the natural world
hypothesis: a predicted answer to a scientific question
testable: can be observed and measured
variable: anything that can change in an experiment
control: a feature that is not changed in an experiment
observation: information gathered using your senses
data: collected information
analyze: look at and study the data from an experiment
interpret: explain what you think the data means
trial: a single completed investigation
conclusion: a judgment supported by facts
theory: an explanation of why something happens in nature
inference: a decision based on observations and reasoning

Activity Type:	**TEKS:**
Labs: Exploratory/discovery Models Student presentations Research	5.1A demonstrate safe practices during any investigation 5.1B make good choices in the use and conservation of resources and the disposal or recycling of materials 5.2A plan and implement descriptive and simple experimental investigations including asking well defined questions, formulating testable hypotheses, and selecting and using equipment and technology 5.2B collect information by observing and measuring 5.2C analyze and interpret information to construct reasonable explanations from direct and indirect evidence 5.2D communicate valid conclusions 5.2 E construct simple graphs, tables, maps, and charts using tools including computers to organize, examine and evaluate information 5.3A analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information 5.3B draw inferences based on information related to promotional materials for products and services 5.3 C represent the natural world using models and identify their limitations 5.3 D evaluate the impact of research on scientific thought, society, and the environment 5.3 E connect Grade 5 science concepts with the history of science and contributions of scientists 5.4 A collect and analyze information using tools including calculators, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, compasses, balances, hot plates, meter sticks, timing devices, magnets, collecting nets and safety goggles 5.4B demonstrate that repeated investigations may increase the reliability of results.
Materials: Paper, pencils, map colors Measuring Up Science workbooks Various size and color balls Precaution and Hazard Game	

SE Modifications:	**Resources:**	**TA TEKS**
No modifications____ Leaves room for assistance __x__ Oral tests including TAKS __x__ Modified texts ____ Highlight texts __x__ Use colored overlays ____ (on texts and overhead) Needs note taking assistance __x__ Increase verbal response time ____ Shorten assignments __x__ Peer tutoring __x__ Give a hard copy of what is on the overhead to the child ____ Increase time on assignments __x__ Use alternative materials when needed __x__ Repeated drills when memorizing or reviewing ____ Give directions and have them repeat the directions __x__ Have them read things twice when necessary __x__ **Have them listen to someone reading everyday and/or stories on tapes**	Internet Gayle Fuller Tips for TAKS TAKS Buster TAKS Companion Science Book TAKS Toppers Measuring Up workbooks	5.4A, 5.4B, 5.5A, 5.6A, 5.8A, 5.8B, 5.8C,

GT Modifications:	**Evaluation Methods:**
Students may design own experiments, conduct group work, or do back up research for labs.	**Paper/pencil tests over TEKS/TAKS objectives** **Group lab presentations** **Question and answer session**

Subject: Science 5 **Calendar: Weeks 4-13** **Timeframe: 9 weeks** **Level/Grade: Elem**	**Calendar: Oct 18-Dec 17**	**Timeframe: wks 10-18**	**Level/ Grade: M.S.**
Unit II: Earth Science **Unit Objectives: During this unit, the student will:** Describe the processes and interactions responsible for the formation of natural resources, sedimentary rocks and fossils. Describe forces that create and destroy land forms. Describe the processes found in the water cycle. Investigate the significance of the carbon and nitrogen cycles. Describe and identify differences and commonalities of the surface of the Earth and moon Describe gravity as the force that keeps the planets in orbit Describe changes that occur over various time periods and in regular cycles Describe interactions in a simple system. Investigate the results of the Earth's rotation and revolution and the impact of the moon on tides. **Lessons:** 1. The students will investigate landforms and how weathering and erosion affect them. 2. The students will compare and contrast the characteristics of the Earth and the Moon. 3. The students will identify characteristics of the sun. 4. The student will identify renewable, nonrenewable and inexhaustible resources. 5. The students will diagram and label all parts of the water cycle and nitrogen cycle. 6. The students will investigate soil properties. 7. The students will diagram the rock cycle and identify rocks that are formed in each step. 8. The students will study changes in weather. 9. The student will identify the functions and features of the solar system. **Vocabulary:** weathering erosion deposition landform glacier fault earthquake volcano magma lava igneous rock metamorphic rock fossil natural resources fuels nonrenewable resources renewable resources inexhaustible resources inferring analyze interpret classify communicate trial conclusion soil humus loam			

Subject: Science 5	Calendar: Week 15-24	Timeframe: 8 weeks	Level/Grade: Elem

Unit III: Physical Science

Unit Objectives: During this unit, the student will:
Create simple electric circuits
Investigate the components in an electrical circuit.
Discover that sound is produced through vibration
Compare reflection and refraction of light.
Identify the differences between light, heat, electrical, and solar energy.
Recognize the physical properties of matter.
Identify properties of magnets.
Name and identify the states of matter.
Conduct test to determine the properties of matter
Identify the properties of a mixture and of a solution.
Identify physical and chemical changes in matter.

Lessons:

1. The student will identify the differences in mass, matter and weight.
2. The student will identify states of matter.
3. The student will manipulate physical properties of matter.
4. The students will determine if a substance is a mixture or a solution.
5. The students will determine what has an effect on motion.
6. The students will identify properties of light.
7. The students will investigate what causes sound.
8. The students will identify types of energy.
9. The students will form electrical circuits and make electromagnets.

Vocabulary:
matter: anything that has mass and takes up space
mass: the amount of matter an object has
weight: the measure of the amount of gravity acting on an object's mass
volume: the amount of space taken up by matter
density: the amount of mass an object has in a know volume
state: one of the three main forms of matter
solid: a state of matter that has a fixed shape and volume
liquid: a state of matter that has a fixed volume, but changes its shape
gas: a state of matter that does not have a fixed shape or volume
physical change: a change in appearance of matter without changing the matter itself
property: a characteristic used to describe matter
physical property: a characteristic that can be observed and measured
texture: how a substance looks or feels
odor: how a substance smells
conductor: a substance that allows electricity to travel through it
insulator: a substance that does not let electricity pass easily through it
magnetic: a description of substances attracted to a magnetic force
boiling point: temperature a substance changes from a liquid to a gas
melting point: the temperature at which a substance changes from a solid to a liquid
mixture: a combination of two or more substances that do not join together

Activity Type:	**TEKS:**
Labs: Exploratory/ discovery Models Student demonstrations Field trips Research	5.5A, 5.5B, 5.7A,5.7B, 5.7C, 5.7D, 5.8A, 5.8B, 5.8C, 5.8D
Materials: Paper, pencils, map colors Measuring Up Science workbooks Various size and color balls Precaution and Hazard Game	

SE Modifications:	**Resources:**	**TA TEKS:**
No modifications____ Leaves room for assistance __x__ Oral tests including TAKS __x__ Modified texts ____ Highlight texts __x__ Use colored overlays ____ (on texts and overhead) Needs note taking assistance __x__ Increase verbal response time ____ Shorten assignments __x__ Peer tutoring __x__ Give a hard copy of what is on the overhead to the child ____ Increase time on assignments __x__ Use alternative materials when needed __x__ Repeated drills when memorizing or reviewing ____ Give directions and have them repeat the directions __x__ Have them read things twice when necessary __x__ **Have them listen to someone reading everyday and/or stories on tapes**	Internet Gayle Fuller Tips for TAKS TAKS Buster TAKS Companion Science Book TAKS Toppers Measuring Up workbooks Forde-Ferrier Worksheets	Internet Gayle Fuller Tips for TAKS TAKS Buster TAKS Companion Science Book TAKS Toppers Measuring Up workbooks Forde-Ferrier Worksheets

GT Modifications:	Evaluation Methods:
1. Students will be encouraged to explore question they may have and present findings to class. 2. Peer leaders and teachers are encouraged 3. Students encouraged to find other ways to test the usual lab.	Lab participation—on task—answers questions Presentations of class material Models of current subject/must explain Paper and pencil tests In-group questioning with inquiry Benchmark testing

Unit Objectives: During this unit, the student will:
Identify learned and inherited traits of plants and animals
Describe and predict adaptive behaviors which would allow organisms to survive.
Identify characteristics that describe an organisms' niche in an ecosystem.
Compare and give examples of how an ecosystem interacts.
Students will identify and label the steps of photosynthesis.
Students will identify the parts of a life cycle.

Lessons:

1. The students will identify and diagram the process of photosynthesis.
2. The students will classify traits as learned, inherited, adaptive or instinctive.
3. The students will map an ecosystem, showing some habitats and climate conditions.
4. The student will diagram and label parts of various life cycles.
5. The student classify plants and animals as to how the get their food.

Vocabulary:
organisms: living things
chlorophyll: a green substance in plant leaves that captures energy from the sun
carbon dioxide: a gas in the atmosphere that plants use during the process of photosynthesis
stomata: tiny holes in the leaves of a plant that allow gases to enter or leave the plant
photosynthesis: the process in which plants use energy from the sun to make their own food
producer: an organism that makes its own food
traits: characteristics of an organism
inherited traits: characteristics passed down from parents to offspring
offspring: children
adapt: change
perish: die
adaption: a change an organism undergoes in order to survive
reproduce: to make offspring
instinctive behaviors: behaviors that are inherited
learned behaviors: behaviors that are learned
habitat: the specific environment where an organism lives
species: a group of organisms that produce offspring like themselves
population: all the organisms of the same species that live in the same area at the same time
community: populations of different species that live in the same area at the same time
ecosystem: all the populations of organisms and the nonliving things in an environment and the interaction between them
biome: one of the six major land areas of the world that is home to specific plant and animal populations and is defined by its climate
life cycle: the stages of development of an organism as it grows into an adult
thrive: to grow in a strong and healthy way
pollution: anything in the environment that can harm living organisms or damage natural resources
unique niche: an organism's role in an ecosystem based on how it gets its food
consumers: animals that eat other organisms
herbivores: animals that eat only plants
carnivores: animals that only eat other animals
omnivores: animals that eat both plants and animals

Activity Type:	**TEKS:**
Labs: Exploratory/discovery Models Student demonstrations Field trips Research	5.5A, 5.5B, ,5.6A, 5.6B, 5.6C, 5.9A, 5.9B, 5.9C, 5.10A, 5.10B,
Materials: Paper, pencils, map colors Measuring Up Science workbooks Various size and color balls Precaution and Hazard Game	

SE Modifications:	**Resources:**	**TA TEKS:**
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GT Modifications:	**Evaluation Methods:**
1. Students will be encouraged to explore question they may have and present findings to class. 2. Peer leaders and teachers are encouraged 3. Divergent labs	Lab participation—on task—answers questions Presentations of class material Models of current subject/must explain Paper and pencil tests In-group questioning with inquiry

Subject: Science 5	Calendar: Weeks 31-36	Timeframe: 6 weeks	Level/Grade: Elem

Unit V Health

Unit Objectives: During this unit, the student will:

The student will learn ways to enhance and maintain personal health.
The student will recognize behaviors that will prevent disease and reduce health risks.
The student will recognize the pro and cons of peer and media pressures.

Vocabulary:

Nutrition
Nutrients
Colories
Stress
Immunizations
Prevention
Viruses
Bacteria

Activity Type:

Labs: Exploratory/discovery
Models
Student demonstrations
Field trips
Research

Materials:

Paper, pencils, map colors
Measuring Up Science workbooks

TEKS:

5.1 a,b,c,d,e,f
5.2a,b
5.3 a,b
5.4 a,b,c,d,e
5.5 a,b,c,d,e,f, g, h, i
5.6 a,b,c,d,e,f, g
5.7 a,b
5.8 a,b,c,d
5.9 a,b,c,d,e,f

SE Modifications:	Resources:	TA TEKS:
No modifications____ Leaves room for assistance __x__ Oral tests including TAKS __x__ Modified texts ____ Highlight texts __x__ Use colored overlays ____ (on texts and overhead) Needs note taking assistance __x__ Increase verbal response time ____ Shorten assignments __x__ Peer tutoring __x__ Give a hard copy of what is on the overhead to the child ____ Increase time on assignments __x__ Use alternative materials when needed __x__ Repeated drills when memorizing or reviewing ____ Give directions and have them repeat the directions __x__ Have them read things twice when necessary __x__ **Have them listen to someone reading everyday and/or stories on tapes**	Internet Gayle Fuller Tips for TAKS TAKS Buster TAKS Companion Science Book TAKS Toppers Measuring Up workbooks Forde-Ferrier Worksheets	Internet Gayle Fuller Tips for TAKS TAKS Buster TAKS Companion Science Book TAKS Toppers Measuring Up workbooks Forde-Ferrier Worksheets

GT Modifications:	Evaluation Methods:
1. Students will be encouraged to explore question they may have and present findings to class. 2. Peer leaders and teachers are encouraged 3. Divergent labs	Lab participation—on task—answers questions Presentations of class material Models of current subject/must explain Paper and pencil tests In-group questioning with inquiry