Grade level: 5 **Course Title: Science** **Topic/Concept: Physical Science/Properties of Matter**

Time Allotment: **Unit Sequence: 1**

Major Concepts to be learned:

- Understand the different states of matter, and matter has different properties in each of these states
- Perform investigations that demostrate how properties of matter either change or remain the same after certain types of reactions

Expected Skills to be demonstrated:

- Students will discover what makes up the matter all around us.
- Students will observe and measure properties of matter.
- Students will explore the elements found in matter.
- Students will explain what matter is made of tiny particles too small to be seen.

PA Standards/Anchors:		Eligible Content:
3.2.5.A	3.2.5.D	
3.2.5.B	3.2.5.E	
3.2.4.C		

Instructional Strategies:	Assessments:
• Science Notebook/Consumable Textbook • Note-taking • Lecture • Demonstrations • Cooperative learning groups • Hand-on Activities and Experiments	• SAVVAS quiz • Lab Reports • Student Checklists • Posters

Grade level: 5 **Course Title: Science** **Topic/Concept: Physical Science/Changes in Matter**

Time Allotment: **Unit Sequence: 2**

Major Concepts to be learned:

- Identify chemical changes
- Investage the principle of matter conservation
- Discover that although mater might change, the amount of matter does not

Expected Skills to be demonstrated:

- Students will identify the differences amoung the three states of matter.
- Students will use evidence to show that matter is conserved during physical change.
- Students will explain how temperature can affet a physical change.
- Students will use evidence to show that matter is conserved during a chemical change.
- Students will explain what happens when different substances are mixed.
- Students will demostrate that mixtures of solids can be separated.

PA Standards/Anchors:	Eligible Content:
3.3.5.E	

Instructional Strategies:	Assessments:
• Science Notebook/Consumable Textbook • Note-taking • Lecture • Demonstrations • Cooperative learning groups • Hand-on Activities and Experiments	• SAVVAS quiz • Lab Reports • Student Checklists • Posters

Grade level: 5 **Course Title: Science** **Topic/Concept: Earth Science/Earth's Systems**

Time Allotment: **Unit Sequence: 3**

Major Concepts to be learned:

- Learn how patterns in the natural world contibute to the interactions of Earth's four spheres
- Conduct experiments that demostrate the principles of developing and using modes, construting explanations , and designing solutions

Expected Skills to be demonstrated:

- Students will describe what makes up the geophere.
- Students will describe what makes up the biosphere.
- Students will describe what makes up the atmosphere.
- Studetns will describe what makes up the hydrosphere.
- Students will describe how Earth's systems interact with each other.

PA Standards/Anchors:	Eligible Content:
3.3.5.C 3.3.5.D	

Instructional Strategies:	Assessments:
• Science Notebook/Consumable Textbook • Note-taking • Lecture • Demonstrations • Cooperative learning groups • Hand-on Activities and Experiments	• SAVVAS quiz • Lab Reports • Student Checklists • Posters

Grade level: 5 | **Course Title: Science** | **Topic/Concept: Earth Science/Earth's Water**

Time Allotment: | **Unit Sequence: 4**

Major Concepts to be learned:

- Explore the interaction among water and land
- Examine how water in lakes and rivers differs from ocean water

Expected Skills to be demonstrated:

- Students will explain the parts of the water cycle.
- Students will recognize that the ocean is an important part of the water cycle.
- Students will identify that most of Earth's freshwater is in glaciers, ice caps, or underground.
- Students will explain that some fresh water is found in lakes, rivers, wetland, and the atmosphere.
- Students will describe how most of Earth's water is in the ocean.

PA Standards/Anchors:	Eligible Content:
3.3.5.C 3.3.5.D 3.3.5.E 3.3.4.E	

Instructional Strategies:	Assessments:
• Science Notebook/Consumable Textbook • Note-taking • Lecture • Demonstrations • Cooperative learning groups • Hand-on Activities and Experiments	• SAVVAS quiz • Lab Reports • Student Checklists • Posters

Grade level: 5 **Course Title: Science** **Topic/Concept: Earth Science/Human Impact on Earth's**

Time Allotment: **Unit Sequence: 5**

Major Concepts to be learned:

- Understand renewable and non-renewable resources on Earth
- Explore how resources are used for energy, food, and building materials
- Examine how humas use of resources impacts Earth's systems

Expected Skills to be demonstrated:

- Students will describe Earth's natural resources.
- Students will identify where energy on Earth comes from.
- Students will explain how activites affect Earth's resources and environments.
- Students will describe ways to protect Earth's resources and environments.

PA Standards/Anchors:

3.3.5.E	3.4.3-5.B	3.4.3-5.F
3.3.5.F	3.4.3-5.C	3.4.3-5.G
3..4.3-5.A	3.4.3-5.D	

Eligible Content:

Instructional Strategies:

- Science Notebook/Consumable Textbook
- Note-taking
- Lecture
- Demonstrations
- Cooperative learning groups
- Hand-on Activities and Experiments

Assessments:

- SAVVAS quiz
- Lab Reports
- Student Checklists
- Posters

Grade level: 5 | **Course Title: Science** | **Topic/Concept: Earth Science/Solar System**

Time Allotment: | **Unit Sequence: 6**

Major Concepts to be learned:

- Exlore the solar system
- Develop models to observe the relative brightness of stary, planetary orbit, ant the size of objects in space
- Recognize the position of Earth in our solar system

Expected Skills to be demonstrated:

- Students will recognize that many stars are as big and bright as the sun.
- Students will explain how the apparent brightness of stars is related to their distance from Earth.
- Students will describe the inner plants.
- Students will recognize the position of Earth within the solar system.
- Students will describe the outer solar system.

PA Standards/Anchors:	Eligible Content:
3.3.5.A	

Instructional Strategies:	Assessments:
• Science Notebook/Consumable Textbook • Note-taking • Lecture • Demonstrations • Cooperative learning groups • Hand-on Activities and Experiments	• SAVVAS quiz • Lab Reports • Student Checklists • Posters

Grade level: 5 **Course Title: Science** **Topic/Concept: Earth Science/Patterns in Space**

Time Allotment: **Unit Sequence: 7**

Major Concepts to be learned:

- Understand how patterns in the natural world contibute to the understanding of the phases of the moon, the movement of stars, and the rotation and revolution of the Earth
- Demonstrate the principles of developing and using models, constructiing explanations, and designing solutions
- Apply the content to better understand why the sun, moon, and stars apprear at diffent times.

Expected Skills to be demonstrated:

- Students will demonstrate that Earth's gravity pulls objects toward the center of the Earth.
- Students will demonstrate that night and day are caused by the rotation of Earth around its axis once a day.
- Students will explain that Earth revolves around the sun once a year.
- Students will deomonstrate why the sun, moon, and stars appear at different times.
- Students will describe why shadow changes size and direction during the day.

PA Standards/Anchors:	Eligible Content:
3.3.5.B 3.2.5.F 3.4.3-5.E	

Instructional Strategies:	Assessments:
• Science Notebook/Consumable Textbook • Note-taking • Lecture • Demonstrations • Cooperative learning groups • Hand-on Activities and Experiments	• SAVVAS quiz • Lab Reports • Student Checklists • Posters

Grade level: 5 **Course Title: Science** **Topic/Concept: Life Science/Energy and Food**

Time Allotment: **Unit Sequence: 8**

Major Concepts to be learned:

- Understand how energy is used to make food and how energy is transferred througthout the environment
- Demonstrate the principal of energy conservation

Expected Skills to be demonstrated:

- Students will use a model to describe how the energy in an animal's food was once energy from the sun.
- Students will describe how plants make food using sunlight, air, water, and materials in soil.
- Students will explain how animals use the energy they get from food.

PA Standards/Anchors:	Eligible Content:
3.1.5.A 3.2.5.G	

Instructional Strategies:	Assessments:
• Science Notebook/Consumable Textbook • Note-taking • Lecture • Demonstrations • Cooperative learning groups • Hand-on Activities and Experiments	• SAVVAS quiz • Lab Reports • Student Checklists • Posters

Grade level: 5 **Course Title: Science** **Topic/Concept: Life Science/Matter and Energy in Ecosystems**

Time Allotment: **Unit Sequence: 9**

Major Concepts to be learned:

- Understand how the living and nonliving components of an ecosystem ineract
- Use models to descrive how matter and energy move in ecosystems
- Discover that changes to part of an ecosystem affect the system as a whole

Expected Skills to be demonstrated:

- Students will describe the compnents of an ecosystem.
- Students will describe how organisims use matter.
- Students will identify the characteristics of a heathy and changing ecosystem.
- Students will model the movement of matter among organisms and the environment.

PA Standards/Anchors:	Eligible Content:
3.1.5.B	

Instructional Strategies:	Assessments:
• Science Notebook/Consumable Textbook • Note-taking • Lecture • Demonstrations • Cooperative learning groups • Hand-on Activities and Experiments	• SAVVAS quiz • Lab Reports • Student Checklists • Posters