FIFTH GRADE MASTERY OBJECTIVES

Note: Students are expected to know content and apply skills from previous grades. The following objectives are to be mastered by the end of GRADE 5.

Notes:

Standard 1: Nature of Science

Goal 1.1: Understand Systems, Order, and Organization

_____ 5.S.1.1.1 Compare and contrast different systems.

Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations

_____ 5.S.1.2.1 Use observations and data as evidence on which to base scientific explanations and predictions.

_____ 5.S.1.2.2 Explain the difference between observation and inference.

_____ 5.S.1.2.3 Use models to explain or demonstrate a concept.

Goal 1.3: Understand Constancy, Change, and Measurement

_____ 5.S.1.3.1 Analyze changes that occur in and among systems.

_____ 5.S.1.3.2 Measure in both U.S. Customary and International System of Measurement (metric system) units with an emphasis on the metric system.

Goal 1.5: Understand Concepts of Form and Function

_____ 5.S.1.5.1 Explain how the shape or form of an object or system is frequently related to its use or function.

Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills

_____ 5.S.1.6.1 Write and analyze questions that can be answered by conducting scientific experiments.

_____ 5.S.1.6.2 Conduct scientific investigations using a control and a variable.

_____ 5.S.1.6.3 Select and use appropriate tools and techniques to gather and display data.

_____ 5.S.1.6.4 Use evidence to analyze descriptions, explanations, predictions, and models.

_____ 5.S.1.6.5 State a hypothesis based on observations.

_____ 5.S.1.6.6 Compare alternative explanations and predictions.

_____ 5.S.1.6.7 Communicate scientific procedures and explanations.

Goal 1.8: Understand Technical Communication

_____ 5.S.1.8.1 Read and follow technical instructions.

Standard 2: Physical Science

Goal 2.1: Understand the Structure and Function of Matter and Molecules and Their Interactions

_____ 5.S.2.1.1 Describe the differences among elements, compounds, and mixtures.

_____ 5.S.2.1.2 Compare the physical differences among solids, liquids, and gases.

_____ 5.S.2.1.3 Explain the nature of physical change and how it relates to physical properties.

Standard 3: Biology

Goal 3.2: Understand the Relationship between Matter and Energy in Living Systems

_____ 5.S.3.2.1 Communicate how plants convert energy from the sun through photosynthesis.

Goal 3.3: Understand the Cell is the Basis of Form and Function for All Living Things

_____ 5.S.3.3.1 Compare and contrast the structural differences between plant and animal cells.

_____ 5.S.3.3.2 Explain the concept that traits are passed from parents to offspring.

Standard 4: Earth and Space Systems

Goal 4.1: Understand Scientific Theories of Origin and Subsequent Changes in the Universe and Earth Systems

Notes:

_____ 5.S.4.1.1 Describe the interactions among the solid earth, oceans and atmosphere (erosion, climate, tectonics and continental drift).

Goal 4.2: Understand Geo-chemical Cycles and Energy in the Earth System

_____ 5.S.4.2.1 Explain the rock cycle and identify the three classifications of rocks.

Notes:

Standard 5: Personal and Social Perspectives; Technology

Goal 5.1: Understand Common Environmental Quality Issues, Both Natural and Human Induced

_____ 5.S.5.1.1 Identify issues for environmental studies.

Goal 5.2: Understand the Relationship between Science and Technology

_____ 5.S.5.2.1 Describe how science and technology are part of a student's life.

_____ 5.S.5.2.2 List examples of science and technology.

Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them

_____ 5.S.5.3.1 Identify the differences between renewable and nonrenewable resources.