

## Fourth Grade – Animals All Around (07/09/09)

**Vocabulary:** adaptations, amphibians, carnivores, endangered, herbivores, heredity, mammals, metamorphosis, omnivores, reptiles, threatened, thriving, traits/characteristics

*Third Grade Vocabulary: amphibians, attributes, birds, extinct, feathers, gills, habitats, life cycle, living, lungs, mammals, manmade, non-living, offspring, organism, patterns, predator, prey, reptiles, survival*

### EMBEDDED INQUIRY

GLE 0407.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data	
--	--

### LIFE Science

#### 2. Interdependence

GLE 0307.2.1 Analyze the effects of changes in the environment on the stability of an ecosystem	
---	--

### LIFE Science

#### 3. Flow of Matter & Energy

	✓ 0407.3.1 Create a food web that illustrates the energy relationships between plants and animals and the key issues or assumptions found in the model (post-visit package)
--	---

	✓ 0407.3.2 Classify organisms as carnivores, herbivores, or omnivores
--	---

### LIFE Science

#### 4. Heredity

	✓0407.4.2 Study the life cycles of a variety of organisms and determine whether these processes illustrate complete or incomplete metamorphosis
--	---

### LIFE Science

#### 5. Biodiversity and Change

GLE 0407.5.1 Analyze physical and behavioral adaptations that enable organisms to survive in their environment	
--	--

	✓0407.5.2 Classify animals according to their physical adaptations for obtaining food, oxygen, and surviving within a particular environment
--	--

# Fourth Grade – Energy in Everything (07/09/09)

**Vocabulary:** distance, friction, gravity, parallel circuit, series circuit, solar energy, speed

*Third Grade Vocabulary: : energy, force, friction, gravity, magnetic attraction, parallel circuit, series circuit, simple circuit*

## EMBEDDED INQUIRY

GLE 0407.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data	
--	--

## EARTH and SPACE Science

### 8. The Atmosphere

GLE 0407.8.1 Recognize the major components of the water cycle	✓Prepare a model that illustrates the basic features of the water cycle
--	---

## PHYSICAL Science

### 9. Matter

GLE 0407.9.1 Collect data to illustrate that the physical properties of matter can be described with tools, that measure weight, mass, length, and volume	✓Use appropriate tools to measure and compare the physical properties of various solids and liquids
---	---

## PHYSICAL Science

### 10. Energy

GLE 0407.10.2 Investigate how light travels and is influenced by different types of materials and surfaces	✓0407.10.3 Gather and organize information about a variety of materials to categorize them as translucent, transparent, or opaque
--	---

## PHYSICAL Science

### 11. Motion

GLE 0407.11.2 Design a simple investigation to demonstrate how friction affects the movement of an object	✓0407.11.4 Plan and execute an investigation that demonstrates how friction affects the movement of an object
GLE 0407.11.3 Investigate the relationship between the speed of an object and the distance traveled during a certain time period	✓0407.11.5 Design and implement an investigation to determine that the speed of an object is equal to the distance traveled over time

## PHYSICAL Science

### 12. Forces in Nature

GLE 0407.12.1 Explore the interactions between magnets	
GLE 0407.12.1 Explore the interactions between an electrically charged object and other materials	✓0407.12.2 Design an experiment to investigate how a simple electromagnet affects common objects
GLE 0407.12.2 Observe that electrically charged objects exert a pull on other materials	
GLE0407.12.3 Explain how electricity in a simple circuit requires a complete loop through which current can pass	0407.12.3 Determine the path of an electrical current in a simple circuit

## Fourth Grade – Energy in Everything – cont.

### MATH

#### 1. Mathematical Processes

	✓0406.1.5 Measure using ruler, meter stick, clock, thermometer, or other scaled instruments
--	---

#### 5. Data, Probability and Statistics

GLE 0406.5.1 Collect, record, arrange, present, and interpret data using tables and various representations	
---	--

## Fourth Grade – Festival of Holiday Trees (07/01/09)

### Vocabulary:

*Third Grade Vocabulary: cardinal directions, culture, equator, global, latitude, longitude, map key (legend)*

### Social Studies

#### Culture

4.1.02 Discuss cultures and human patterns of places and regions of the world	4.1.02.a Explore similarities and differences in how groups, societies, and cultures address similar human needs and concerns 4.1.02.b Compare how people from different cultures think about and handle their physical environments and social conditions
4.1.03 Recognize the contributions that individuals and people of various ethnic, racial, religious, and socioeconomic groups have made to the development of civilizations	4.1.03.a Explain the significance of selected ethnic and/or cultural celebrations in Tennessee, the United States and other nations such as St. Patrick's Day, Cinco de Mayo, and Kwanzaa
4.1.04 Understand the contributions of individuals and people of various ethnic, racial, religious, and socioeconomic groups to Tennessee	4.1.04b Identify customs, celebrations, and traditions of various culture groups in early Tennessee

## Fourth Grade – Habitat Cents Museum to Go only (07/10/09)

**Vocabulary:** amphibian, adaptations, heredity, mammals, renewable/non-renewable, reptiles, threatened, thriving, traits/characteristics

*Third Grade Vocabulary: characteristics, energy, environment, food, natural resources, observe, offspring, organism, photosynthesis, predator, prey, scientific method, survive*

### Embedded Inquiry

GLE 0407.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data	
GLE 0407.Inq.3 Organize data into appropriate tables, graphs, drawings, or diagrams	✓0407.1.5 Maintain a science notebook that includes observations, data, diagrams, and explanations
GLE 0407.Inq.6 Compare the results of an investigation with what scientists already accept about this question	

### LIFE Science

#### 2. Interdependence

GLE 0407.2.1 Analyze the effects of changes in the environment on the stability of an ecosystem	✓0407.2.1 Analyze how an increase or decrease in competition or predation affects an ecosystem
---	--

### LIFE Science

#### 3. Flow of Matter and Energy

GLE 0407.3.2 Investigate different ways that organisms meet their energy needs	✓0407.3.1 Create a food web that illustrates the energy relationships between plants and animals and key issues or assumptions found in the model ✓0407.3.2 Classify organisms as carnivores, herbivores, or omnivores ✓0407.3.3 Identify how a variety of organisms meet their energy needs
--	--

### LIFE Science

#### 4. Heredity

GLE 0407.4.1 Recognize the relationship between reproduction and the continuation of a species	
--	--

### LIFE Science

#### 5. Biodiversity and Change

GLE 0407.5.1 Analyze physical and behavioral adaptations that enable organisms to survive in their environment	✓0407.5.2 Describe how animal behaviors such as migration, defense, means of locomotion, and hibernation enable them to survive in an environment ✓0407.5.5 Analyze the common causes of extinction and explain how human actions sometimes result in the extinction of a species
--	--

## Fourth Grade – KidsBuild KEVA – Museum to Go only (07/10/09)

**Vocabulary:** above, behind, below, in front, left, rectangle, right, shape, square, triangle, under

*Third Grade Vocabulary: above, behind, below, in front, left, rectangle, right, shape, square, triangle, under*

### Embedded Technology and Engineering

GLE 0407.T/E.3 Identify appropriate materials, tools, and machines that can extend or enhance the ability to solve a specified problem	✓ 0407.T/E.3 Determine criteria to evaluate the effectiveness of a solution to a specified problem
--	--

### PHYSICAL Science

#### 9. Matter

GLE 0407.9.1 Collect data to illustrate that the physical properties of matter can be described with tools that measure weight, mass, length, and volume	
--	--

### PHYSICAL Science

#### 11. Motion

GLE 0407.11.1 Recognize that the position of an object can be described relative to other objects or a background	✓ 0407.11.1 Identify the position of objects relative to fixed reference points
---	---

### MATH

#### 4. Geometry and Measurement

GLE 0406.2 Understand and use measures of length, area, capacity, and weight	✓ 0406.4.12 Estimate the size of an object with respect to a given measurement attribute (length, perimeter, area, or capacity) ✓ 0406.4.13 Compare objects with respect to a given attribute such as length, area, and capacity

## Fourth Grade – Rock Hounds (07/10/09)

**Vocabulary:** earth's layers, erosion, mixture, renewable/nonrenewable

*Third Grade Vocabulary: extinct, force, geological features, magnetic attraction, measurement, natural resources, physical properties, scientific method, water cycle, weathering*

### Embedded Inquiry

GLE 0407.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data	
--	--

### PHYSICAL Science

#### 7. The Earth

GLE 0407.7.1 Investigate how the Earth's geological features change as a result of erosion (weathering and transportation) and deposition	✓0407.7.1 Prepare a demonstration to illustrate how wind and water affect the earth's surface features ✓0407.7.2 Design an investigation to demonstrate how erosion and deposition change the earth's surface
GLE 0407.7.2 Evaluate how some earth materials can be used to solve human problems and enhance the quality of life	✓0407.7.3 List factors that determine the appropriate use of an earth material

### PHYSICAL Science

#### 9. Matter

GLE 0407.9.1 Collect data to illustrate that the physical properties of matter can be described with tools, that measure weight, mass, length, and volume	✓0407.9.1 Use appropriate tools to measure and compare the physical properties of various solids and liquids
GLE 0407.9.2 Explore different types of physical changes in matter	✓0407.9.2 Compare the causes and effects of various physical changes in matter

## **Fourth Grade – Science Explorer (07/10/09) – 90 minutes**

**Vocabulary:** adaptations, amphibians, birds, carnivores, condensation, ecosystem, environment, evaporation, food web, friction, herbivores, gravity, mammals, metamorphosis, omnivores, precipitation, renewable/nonrenewable

*Third Grade Vocabulary: amphibians, atmosphere, birds, conservation, energy, extinct, force, life cycle, natural resources, offspring, organism, photosynthesis, physical properties, pollution, precipitation, predator, prey, scientific method, water cycle*

### **Embedded Inquiry**

GLE 0407.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data	
--	--

### **LIFE Science**

#### **2. Interdependence**

GLE 0307.2.1 Analyze the effects of changes in the environment on the stability of an ecosystem	
---	--

### **LIFE Science**

#### **3. Flow of Matter & Energy**

	✓ 0407.3.1 Create a food web that illustrates the energy relationships between plants and animals and the key issues or assumptions found in the model
	✓ 0407.3.2 Classify organisms as carnivores, herbivores, or omnivores

### **LIFE Science**

#### **4. Heredity**

	✓0407.4.2 Study the life cycles of a variety of organisms and determine whether these processes illustrate complete or incomplete metamorphosis
--	---

### **LIFE Science**

#### **5. Biodiversity and Change**

GLE 0407.5.1 Analyze physical and behavioral adaptations that enable organisms to survive in their environment	✓0407.5.1 Classify animals according to their physical adaptations for obtaining food, oxygen, and surviving within a particular environment
--	--

### **EARTH and SPACE Science**

#### **8. The Atmosphere**

GLE 0407.8.1 Recognize the major components of the water cycle	✓Prepare a model that illustrates the basic features of the water cycle
--	---

## **Fourth Grade – Science Explorer cont. 90 minutes**

### **PHYSICAL Science**

#### **9. Matter**

GLE 0407.9.1 Collect data to illustrate that the physical properties of matter can be described with tools, that measure weight, mass, length, and volume	✓Use appropriate tools to measure and compare the physical properties of various solids and liquids
---	---

### **PHYSICAL Science**

#### **10. Energy**

GLE 0407.10.2 Investigate how light travels and is influenced by different types of materials and surfaces	✓0407.10.3 Gather and organize information about a variety of materials to categorize them as translucent, transparent, or opaque
--	---

### **PHYSICAL Science**

#### **11. Motion**

GLE 0407.11.2 Design a simple investigation to demonstrate how friction affects the movement of an object	✓0407.11.4 Plan and execute an investigation that demonstrates how friction affects the movement of an object
GLE 0407.11.3 Investigate the relationship between the speed of an object and the distance traveled during a certain time period	✓0407.11.5 Design and implement an investigation to determine that the speed of an object is equal to the distance traveled over time

### **PHYSICAL Science**

#### **12. Forces in Nature**

GLE 0407.12.1 Explore the interactions between magnets	
GLE 0407.12.2 Observe that electrically charged objects exert a pull on other materials	✓407.12.1 Explore the interactions between an electrically charged object and other materials ✓407.12.2 Design an experiment to investigate how a simple electromagnet affects common objects
GLE0407.12.3 Explain how electricity in a simple circuit requires a complete loop through which current can pass	✓ 0407.12.3 Determine the path of an electrical current in a simple circuit

### **MATH**

#### **1. Mathematical Processes**

GLE 0406.5.1 Collect, record, arrange, present, and interpret data using tables and various representations	
	✓0406.1.5 Measure using ruler, meter stick, clock, thermometer, or other scaled instruments

## **Fourth Grade – S.T.A.R. (07/10/09)**

**Vocabulary:** lunar, moon phases (correct sequence), solar energy

*Third Grade Vocabulary: atmosphere, moon phases (basic four), observe, orbit, rotation, solar system, weathering*

### **EARTH and SPACE Science**

#### **6. The Universe**

GLE 0407.6.1 Analyze patterns, relative movements, and relationships among the sun, moon, and earth	✓0407.6.1 Sequence the major phases of the moon during a lunar cycle
---	--

### **EARTH and SPACE Science**

#### **7. The Earth**

GLE 0407.7 .1 Investigate how the Earth's geological features change as a result of erosion (weathering and transportation) and deposition	✓0407.7.1 Prepare a demonstration to illustrate how wind and water affect the earth's surface features ✓0407.7.2 Design an investigation to demonstrate how erosion and deposition change the earth's surface
--	--

### **EARTH and SPACE Science**

#### **8. The Atmosphere**

GLE 0407.8.1 Recognize the major components of the water cycle GLE 0407.8.2 Differentiate between weather and climate	✓0407.8.2 Prepare a demonstration to illustrate how wind and water affect the earth's surface features ✓0407.8.2 Use long term weather data to distinguish between weather and climate
--	---

## **Fourth Grade – Tennessee Ties and Cherokee Nation (07/10/09) 90 minutes**

**Vocabulary:** American Revolution, colonial, Constitution, democracy, judicial branch, legislative branch, Native American groups (Cherokee), Tennessee political leaders (Daniel Boone, Andrew Jackson), Trail of Tears, Westward Expansion

*Third Grade Vocabulary: agriculture, barter, borders, culture, folktale, future, cardinal and intermediate directions, legend, natural resources, past, present, wants and needs*

### **CULTURE**

1.01 Understand the diversity of human culture	a. Describe cultures of Native American tribes b Explain how European settlers created a new culture
1.02 Discuss cultures and human patterns of places and regions of the world	a. Explore similarities and differences in how groups, societies, and cultures address similar human needs and concerns b. Compare how people from different cultures think about and handle their physical environments an social conditions
1.04 Understand the contributions of individuals an people of various ethnic, racial, religious, and socioeconomic groups to Tennessee	b. Identify customs, celebrations, and traditions of various culture groups in early Tennessee c. Summarize the contributions of people of various racial, ethnic, and religious groups in the development of early Tennessee

### **ECONOMICS**

2.01 Describe the potential costs and benefits of personal economic choices in a market economy	a. Identify the economic motivations for European exploration and colonization b. Describe how Native Americans in Tennessee and the Western Hemisphere met their basic economic needs c. Analyze how people in different parts of the United States earned a living in the past and do so in the present
2.02 Give examples of the interaction of groups, businesses, and governments in a market economy	a. Explain the economic patterns of various early Native American groups in Tennessee and the Western Hemisphere
2.03 Understand fundamental economic concepts	a. Explain and demonstrate the role of money in daily life b. Describe the relationship of price to supply and demand and how it affected early American history
2.04 Understand the development of economics within Tennessee and early America	a. Identify the economic motivations for European exploration and settlement in Tennessee and the Western Hemisphere b. Examine the location, distribution, and patterns of economic activities and of settlement in Tennessee

# Fourth Grade – Tennessee Ties and Cherokee Nation cont. (07/10/09)

## GEOGRAPHY

3.01 Understand how to use maps, globes, and other geographic representations, tools, and technologies to acquire, process and report information from a spatial perspective	c. Locate places on a map using cardinal and intermediate directions. Latitude and longitude and time zones.
3.04 Understand the geographic factors that determined the locations of and patterns of settlements in Tennessee	a. Explain how the patterns and processes of migration affect the development of Tennessee b. Explain how environmental issues such as water supply, air quality, and solid waste confronted humans when settling Tennessee

## GOVERNANCE and CIVICS

4.01 Discuss the structure and purposes of governance	e. Explain how Native Americans governed their communities c. Compare the systems of government of early European colonists
---	--

## HISTORY

### Era 1

5.01 Identify the ancient civilizations of the Americas	a. Identify the ancient civilizations of the Americas at the time of European arrival b. Explain the cultures of the Western Hemisphere's native peoples prior to European contact
5.02 Understand the place of historical events in the context of past, present and future	a. Demonstrate an ability to use correct vocabulary associated with time such as post, present, future, and long ago; read and construct simple timelines; identify examples of change; and recognize examples of cause and effect relationships
5.03 Recognize major events, people, and patterns in Tennessee	a. Identify Native American groups in Tennessee and the Western Hemisphere before European exploration b. Summarize reasons for European exploration and settlement of Tennessee and the Western Hemisphere

## HISTORY

### Era 2

5.05 Understand the place of historical events in the context of past, present and future	a. Compare and contrast different stories or accounts about past events, people, places, or situations, identifying how they contribute to our understanding of the past
5.6 Identify the causes and results of the American Revolution	d. Summarize the results of the American Revolution, including the establishment of the United States (Cherokee Nation)

## HISTORY

### Era 3

5.07 Identify the causes and results of the American Revolution	d. Summarize the results of the American Revolution, including the establishment of the United States (impact on Cherokee Nation)
5.08 Understand the place of historical events in the context of past, present and future	a. Demonstrate an understanding that people in different times and places view the word differently

## **Fourth Grade – Tennessee Ties and Cherokee Nation cont. (07/10/09)**

### **HISTORY**

#### **Era 4**

5.10 Recognize American territorial expansions and its effects on relations with European powers and Native Americans	a. Give examples of maps, time lines, and charts that show western expansion b. Identify the factors that led to territorial expansion and its effects c. Identify the contributions of early pioneers such as Daniel Boone to the development of colonial America
5.11 Understand sectional differences brought on by the Western movement, expansion of slavery, and emerging industrialization	d. Understand the impact of territorial expansion on Native American tribes

### **INDIVIDUALS, GROUPS, and INTERACTIONS**

6.01 Recognize the impact of individual and group decisions	a. Analyze a particular event to identify reasons individuals might respond to it in different ways
6.02 Understand how groups can impact change at the local, state and national level	a. Identify and describe examples of tension between a group's belief system and the government's policies and laws

## **Fourth Grade – Wetland Challenge (07/10/09) – 90 minutes**

**Vocabulary:** adaptations, amphibians, exotic, heredity, invasive, mammals, reptiles, thriving, traits/characteristics

*Third Grade Vocabulary: amphibian, bird, life cycle, mammal, natural resources, observe, offspring, organism, photosynthesis, pollution, precipitation, predator, prey, reptile*

### **Embedded Inquiry**

GLE 0407.Inq.1 Explore different scientific phenomena by asking questions, making logical predictions, planning investigations, and recording data

### **LIFE Science**

#### **2. Interdependence**

GLE 0407.2.1 Analyze the effects of changes in the environment on the stability of an ecosystem

### **LIFE Science**

#### **3. Flow of Matter & Energy**

✓ 0407.3.1 Create a food web that illustrates the energy relationships between plants and animals and the key issues or assumptions found in the model (post-visit package)

✓ 0407.3.2 Classify organisms as carnivores, herbivores, or omnivores

### **LIFE Science**

#### **4. Heredity**

✓ 0407.4.2 Study the life cycles of a variety of organisms and determine whether these processes illustrate complete or incomplete metamorphosis

### **LIFE Science**

#### **5. Biodiversity and Change**

GLE 0407.5.1 Analyze physical and behavioral adaptations that enable organisms to survive in their environment

✓ 0407.5.2 Classify animals according to their physical adaptations for obtaining food, oxygen, and surviving within a particular environment

### **MATH**

#### **5. Data, Probability and Statistics**

GLE 0406.5.1 Collect, record, arrange, present, and interpret data using tables and various representations

✓ 0406.1.5 Measure using ruler, meter stick, clock, thermometer, or other scaled instruments