

Science Instructional Guide for Grade 4

1 st Nine Weeks	2 nd Nine Weeks	3 rd Nine Weeks	4 th Nine Weeks
<p>Scott Foresman Introduction to Scientific Thinking #1 pp. xx-xxxii</p> <p>Scott Foresman Unit B Earth Science #2 <u>Chapter 6</u> Directed Inquiry Lesson 1 Lesson 2 <i>Omit Lesson 3</i> <i>Omit Lesson 4</i> <i>Omit Guided Inquiry</i></p> <p>#3 <u>Chapter 7</u> Directed Inquiry Lesson 1 Lesson 2 Guided Inquiry Math in Science</p> <p><i><u>Omit Chapter 8</u></i></p> <p>#4 <u>Chapter 9</u> Directed Inquiry Lesson 1 Lesson 2 Lesson 3 Guided Inquiry</p> <p>#5 <u>Chapter 10</u> <i>Omit Directed Inquiry</i> Lesson 1 <i>Omit Lesson 2</i> <i>Omit Guided Inquiry</i> Math in Science Full Inquiry</p> <p>Unit C Physical Science #6 <u>Chapter 11</u> Directed Inquiry Lesson 1 Lesson 2 Lesson 3 Lesson 4 Guided Inquiry Math in Science</p>	<p>Scott Foresman Unit C Physical Science #7 <u>Chapter 12</u> <i>Omit Directed Inquiry</i> Lesson 1 Lesson 2 Guided Inquiry Math in Science</p> <p>#8 <u>Chapter 13</u> Directed Inquiry Lesson 1 Lesson 2 Lesson 3 Lesson 4 Lesson 5 Guided Inquiry</p> <p>#9 <u>Chapter 14</u> Directed Inquiry Lesson 1 Lesson 2 <i>Omit Lesson 3</i> Lesson 4 Guided Inquiry</p>	<p>Scott Foresman Unit C Physical Science #10 <u>Chapter 15</u> <i>Omit Directed Inquiry</i> Lesson 1 Lesson 2 <i>Omit Lesson 3</i> Guided Inquiry</p> <p><i><u>Omit Chapter 16</u></i></p> <p>Scott Foresman Unit D Space and Technology #11 <u>Chapter 17</u> <i>Omit Directed Inquiry</i> Lesson 1 Lesson 2 Guided Inquiry Math in Science</p> <p>#12 <u>Chapter 18</u> Directed Inquiry Lesson 1 Lesson 2 Lesson 3 Lesson 4 Math in Science <i>Omit Guided Inquiry</i> Full Inquiry</p> <p><i><u>Omit Chapter 19</u></i></p>	<p>Scott Foresman Unit A Life Science #13 <u>Chapter 1</u> Directed Inquiry Lesson 1 Lesson 2 <i>Omit Lesson 3</i> Lesson 4 Lesson 5 <i>Omit Guided Inquiry</i></p> <p>#14 <u>Chapter 2</u> Directed Inquiry Lesson 1 <i>Omit Lesson 2</i> <i>Omit Lesson 3</i> <i>Omit Lesson 4</i> Guided Inquiry Math in Science</p> <p>#15 <u>Chapter 3</u> Directed Inquiry Lesson 1 Lesson 2 Lesson 3 Guided Inquiry Math in Science</p> <p>#16 <u>Chapter 4</u> Directed Inquiry Lesson 1 Lesson 2 Lesson 3 Lesson 4 Guided Inquiry</p> <p>#17 <u>Chapter 5</u> Directed Inquiry Lesson 1 Lesson 2 Lesson 3 <i>Omit Lesson 4</i> <i>Omit Guided Inquiry</i> Full Inquiry</p>

FOURTH GRADE: #13

Life Science

Scott Foresman Chapter 1: Classifying Plants and Animals

BENCHMARK AND ITEM CLARIFICATION	AA or CS	Test Item Code
The student...		
SC.F.1.2.3 knows that living things are different but share similar structures. <i>Compares and contrasts components of organisms.</i>	AA	MC, SR
SC.F.1.2.4 knows that similar cells form different kinds of structures.	CS	MC
SC.F.2.2.1 knows that many characteristics of an organism are inherited from the parents of the organism, but that other characteristics are learned from an individual's interactions with the environment.	CS	MC
SC.G.1.2.2 knows that living things compete in a climatic region with other living things and that structural adaptations make them fit for an environment. <i>Identifies, explains, analyzes, and interprets the causes and benefits of adaptations in an organism.</i>	AA	MC, SR
SC.G.2.2.1 knows that all living things must compete for Earth's limited resources; organisms best adapted to compete for the available resources will be successful and pass their adaptations (traits) to their offspring. <i>Identifies characteristics of an organism that increase its probability of reproducing.</i>	AA	MC, SR
Benchmark Codes: AA = Annually Assessed Benchmarks; CS = Content-Sampled Benchmarks Test Item Codes: MC = Multiple Choice; SR = Short Response; ER = Extended Response		

SCOTT FORESMAN SCIENCE

Scott Foresman Textbook	Directed Inquiry Lesson 1 What are living things made of? p. 4 Lesson 2 What are building blocks of life? pp. 6-9 Lesson 4 How are living things grouped? pp. 10-13 How are animals classified? pp. 18-25 Lesson 5 How do animals adapt? pp. 26-33	SC.F.1.2.3 SC.F.1.2.4 SC.F.1.2.3 SC.F.1.2.3 SC.G.2.2.1 SC.F.2.2.1 SC.G.1.2.2 SC.G.2.2.1
Scott Foresman Leveled Readers	<i>Classifying Plants and Animals</i> (Below-Level) <i>Plant and Animal Classification</i> (On-Level) <i>Reptile or Amphibian?</i> (Advanced)	
Scott Foresman Assessment	Chapter Review; ExamView Test (build your own test for lessons 1, 2, 4 and 5 in chapter 1); FCAT Science Test Prep pp. 1-6; Assessment Book pp. 1-4; Workbook pp. 4, 5, 7, 8 (Note: Omit all questions relating to lesson 3.)	
Vocabulary Bold = FCAT Underscore = Marzano	<u>microscopic</u> , <u>organism</u> , <u>protist</u>	

OTHER RESOURCES

CIA www.cs.ocps.net	Strands F and G - Life Adaptations: How Many Bears Will This Forest Hold? Adapting to Change; Build a Better Beak	
AIMS www.aimsedu.org	<i>Magnificent Microworlds</i> : Onion Rings; Vol. 17, No. 5: Cell Blocks; <i>Critters</i> : Beetle Mania, Animal Antics	
Literature		
Other	Science Court: <i>Living Things</i> , Tom Snyder Productions Page Keeley, <i>Uncovering Student Ideas in Science, Vol. 1</i> : Is It Made of Cells?	

NOTES

FOURTH GRADE #14

Life Science

Scott Foresman Chapter 2: Energy from Plants

BENCHMARKS AND ITEM CLARIFICATION

AA or CS

Test Item Code

The student...

SC.E.1.2.3 knows that the sun is a star and that its energy can be captured or concentrated to generate heat and light for work on Earth.

CS

MC

SC.F.1.2.3 knows that living things are different but share similar structures.

Compares and contrasts components of organisms.

AA

MC, SR

SC.G.1.2.3 knows that green plants use carbon dioxide, water, and sunlight energy to turn minerals and nutrients into food for growth, maintenance, and reproduction.

Identifies and describes the process and importance of photosynthesis.

AA

MC, SR

Benchmark Codes: AA = Annually Assessed Benchmarks; CS = Content-Sampled Benchmarks

Test Item Codes: MC = Multiple Choice; SR = Short Response; ER = Extended Response

SCOTT FORESMAN SCIENCE

**Scott Foresman
Textbook**

**Directed Inquiry
Lesson 1**

**How can you show that a plant needs light? p. 44
What are plants' characteristics? pp. 46-49**

SC.G.1.2.3

SC.E.1.2.3

SC.G.1.2.3

**Guided Inquiry
Math in Science**

**How can you grow a potato without a seed? pp. 66-67
How Plants Respond to Sunlight pp. 68-69**

SC.F.1.2.3

SC.G.1.2.3

**Scott Foresman
Leveled Readers**

*Energy From Plants (Below-Level)
How Plants Grow and Change (On-Level)
Weird Plants (Advanced)*

**Scott Foresman
Assessment**

Chapter Review; ExamView Test (build your own test for lesson 1 in chapter 2); FCAT Science Test Prep pp. 7-12; Assessment Book pp. 5-8; Workbook p. 16

(Note: Omit all questions relating to lessons 2-4.)

Vocabulary
Bold = FCAT
Underscore = Marzano

photosynthesis

OTHER RESOURCES

CIA
www.cs.ocps.net

Strands F and G - Ecosystems: Habitat, Sweet Habitat; Shed Some Light on Photosynthesis; Feasting on Yeast; Food Breakers; Mini Landfills; What's for Dinner? Web of Life

AIMS
www.aimsedu.org

The Budding Botanist: Photosynthesis; Exploring Germination

Literature

Newbridge: *How Plants Survive*

Other

Page Keeley, *Uncovering Student Ideas in Science, Vol. 2: Needs of Seeds*

NOTES

FOURTH GRADE: #15

Life Science

Scott Foresman Chapter 3: Ecosystems

BENCHMARKS AND <i>ITEM CLARIFICATION</i>	AA or CS	Test Item Code
The student...		
SC.B.1.2.1 knows how to trace the flow of energy in a system (e.g. as in an ecosystem). <i>Identifies energy transfer in abiotic systems.</i>	AA	MC, SR
SC.B.2.2.1 knows that some source of energy is needed for organisms to stay alive and grow. <i>Recognizes that all organisms, including plants and animals, need energy to maintain life and to grow.</i>	CS	MC
SC.F.1.2.2 knows how all animals depend on plants. <i>Identifies various ways animals use plants for survival.</i>	CS	MC
SC.G.1.2.1 knows ways that plants, animals, and protists interact. <i>Identifies the roles of different organisms in an ecosystem.</i>	CS	MC
SC.G.1.2.4 knows that some organisms decompose dead plants and animals into simple minerals and nutrients for use by living things and thereby recycle matter. (Assessed as G.1.2.6)	CS	MC
SC.G.1.2.5 knows that animals eat plants or other animals to acquire the energy they need for survival. <i>Identifies the roles of organisms in a food chain.</i>	CS	MC
SC.G.1.2.6 knows that organisms are growing, dying, and decaying and that new organisms are being produced from the materials of dead organisms. (Also assesses G.1.2.4) <i>Identifies the cyclic nature of nutrients.</i>	CS	MC
SC.G.1.2.7 knows that variations in light, water, temperature, and soil content are largely responsible for the existence of different kinds of organisms and population densities in an ecosystem. <i>Identifies factors that benefit or slow down the development of different organisms in an ecosystem.</i>	CS	MC
SC.G.2.2.1 knows that all living things must compete for Earth's limited resources; organisms best adapted to compete for the available resources will be successful and pass their adaptations (traits) to their offspring. <i>Identifies characteristics of an organism that increase its probability of reproducing.</i>	AA	MC, SR
Benchmark Codes: AA = Annually Assessed Benchmarks; CS = Content-Sampled Benchmarks Test Item Codes: MC = Multiple Choice; SR = Short Response; ER = Extended Response		

SCOTT FORESMAN SCIENCE

Scott Foresman Textbook	Directed Inquiry	How can you make a model of an earthworm habitat? P. 74	SC.G.1.2.1
	Lesson 1	What are the parts of ecosystems? pp. 78-83	SC.G.1.2.1 SC.G.1.2.7
	Lesson 2	How does energy flow in ecosystems? pp. 84-89	SC.B.1.2.1 SC.B.2.2.1 SC.F.1.2.2 SC.G.1.2.1 SC.G.1.2.5 SC.G.1.2.6
	Lesson 3	How does matter flow through ecosystems? pp. 90-95	SC.F.1.2.2 SC.G.1.2.1 SC.G.1.2.4 SC.G.1.2.6
	Guided Inquiry	What do decomposers do? pp. 96-97	SC.G.1.2.4
	Math in Science	Graphing Populations pp. 98-99	SC.G.2.2.1
	Scott Foresman Leveled Readers	<i>Ecosystems</i> (Below-Level) <i>Life in an Ecosystem</i> (On-Level) <i>Pond Life</i> (Advanced)	
Scott Foresman	Chapter Review; ExamView Test (build your own test for lessons 1-3 in chapter 3); FCAT Science Test Prep pp. 13-18; Assessment Book pp. 9-12; Workbook pp. 26-28		

Assessment	
Vocabulary Bold = FCAT Underscore = Marzano	carnivore, community, decomposer, ecosystem, herbivore, population
OTHER RESOURCES	
CIA www.cs.ocps.net	Strands F and G - <u>Ecosystems</u> : Habitat, Sweet Habitat; Shed Some Light on Photosynthesis; Feasting on Yeast; Food Breakers; Mini Landfills; What's for Dinner? Web of Life
AIMS www.aimsedu.org	<i>Vol. 19, No. 8</i> : Sea Food; <i>Field Detectives</i> : From Leaf to Soil, Dirt Dwellers
Literature	Newbridge: <i>Web of Life</i>
Other	Science Court: <i>Living Things</i> , Tom Snyder Productions
NOTES	

FOURTH GRADE #16

Life Science

Scott Foresman Chapter 4: Changes in Ecosystems

BENCHMARKS AND <i>ITEM CLARIFICATION</i>	AA or CS	Test Item Code
The student...		
SC.G.1.2.7 knows that variations in light, water, temperature, and soil content are largely responsible for the existence of different kinds of organisms and population densities in an ecosystem. <i>Identifies factors that benefit or slow down the development of different organisms in an ecosystem.</i>	CS	MC
SC.G.2.2.1 knows that all living things must compete for Earth's limited resources; organisms best adapted to compete for the available resources will be successful and pass their adaptations (traits) to their offspring. <i>Identifies characteristics of an organism that increase its probability of reproducing.</i>	AA	MC, SR
SC.G.2.2.2 knows that the size of a population is dependent upon the available resources within its community. <i>Identifies factors that limit the population of an organism.</i>	CS	MC
SC.G.2.2.3 understands that changes in the habitat of an organism may be beneficial or harmful. <i>Identifies the effects that changes in a habitat have on organisms.</i>	CS	MC
Benchmark Codes: AA = Annually Assessed Benchmarks; CS = Content-Sampled Benchmarks Test Item Codes: MC = Multiple Choice; SR = Short Response; ER = Extended Response		

SCOTT FORESMAN SCIENCE

Scott Foresman Textbook	Directed Inquiry	What is the effect of crowding on plants? p. 108	SC.G.2.2.2
	Lesson 1	How are ecosystems balanced? pp. 110-113	SC.G.2.2.2
	Lesson 2	How do organisms interact? pp. 114-117	SC.G.2.2.1
			SC.G.2.2.3
	Lesson 3	How do environments change? pp. 118-123	SC.G.1.2.7
			SC.G.2.2.1
	Lesson 4	How do people disturb the balance? pp. 124-129	SC.G.2.2.3
	Guided Inquiry	How can a change in the environment affect plant growth? pp. 130-131	SC.G.2.2.3
Scott Foresman Leveled Readers	<i>Changes in Ecosystems</i> (Below-Level) <i>Ecosystem Changes</i> (On-Level) <i>Parasitic Life</i> (Advanced)		
Scott Foresman Assessment	Chapter Review; ExamView Test (build your own test for lessons 1-4 in chapter 4); FCAT Science Test Prep pp. 19-24; Assessment Book pp. 13-16; Workbook pp. 36-39		
Vocabulary Bold = FCAT Underscore = Marzano			

OTHER RESOURCES

CIA www.cs.ocps.net	
AIMS www.aimsedu.org	<i>Vol.18, No.10: Habitat Changes; Field Detectives: Compacted Playgrounds, From Leaf to Soil</i>
Literature	
Other	Science Court: <i>Soil</i> , Tom Snyder Productions

NOTES

FOURTH GRADE #17

Life Science

Scott Foresman Chapter 5: Systems of the Body

BENCHMARKS AND <i>ITEM CLARIFICATION</i>	AA or CS	Test Item Code
The student...		
SC.F.1.2.1 knows that the human body is made of systems with structures and functions that are related. <i>Identifies, describes, and compares the functions of systems (i.e., digestive system, respiratory system, nervous system, muscular system, circulatory system, and/or skeletal system) in the human body.</i>	CS	MC
SC.F.1.2.4 knows that similar cells form different kinds of structures.	CS	MC
SC.G.1.2.7 knows that variations in light, water, temperature, and soil content are largely responsible for the existence of different kinds of organisms and population densities in an ecosystem. <i>Identifies factors that benefit or slow down the development of different organisms in an ecosystem.</i>	CS	MC
Benchmark Codes: AA = Annually Assessed Benchmarks ; CS = Content-Sampled Benchmarks Test Item Codes: MC = Multiple Choice; SR = Short Response; ER = Extended Response		

SCOTT FORESMAN SCIENCE

Scott Foresman Textbook	Directed Inquiry Lesson 1	How does shape affect bone strength? p. 140 What are the skeletal and muscular systems? pp. 142-147	SC.F.1.2.1 SC.F.1.2.1
	Lesson 2	What are the respiratory and circulatory systems? pp. 148-151	SC.F.1.2.4 SC.F.1.2.1
	Lesson 3	What are the digestive and nervous systems? pp. 152-155	SC.F.1.2.4 SC.F.1.2.1
	Full Inquiry	Do mealworms prefer damp or dry places? pp. 172-175	SC.G.1.2.7
Scott Foresman Leveled Readers	<i>Systems of the Human Body</i> (Below-Level) <i>The Body's Systems</i> (On-Level) <i>Fighting Infections</i> (Advanced)		
Scott Foresman Assessment	Chapter Review; ExamView Test (build your own test for lessons 1, 2, and 3 in chapter 5); FCAT Science Test Prep pp. 25-30; Assessment Book pp. 17-20; Workbook pp. 46-48 (Note: Omit all questions relating to lesson 4.)		
Vocabulary Bold = FCAT Underscore = Marzano			

OTHER RESOURCES

CIA www.cs.ocps.net	Strands F and G - <u>The Human Body</u> : Lung Power; The Beat Goes On; Muscle Mates; Discoveries about Digestion; Brain Drain Olympics
AIMS www.aimsedu.org	<i>Vol. 11, No. 10</i> : The Food Tube; <i>From Head to Toe</i> : Dem Bones, Ya Gotta Have Heart, You Take My Breath Away
Literature	
Other	Science Court: <i>Living Things</i> , Tom Snyder Productions

NOTES