Science Instructional Guide for Grade 5

1st Nine Weeks

Scott Foresman Introduction to Scientific Thinking

#1

pp. xx-xxxii

Scott Foresman
Unit B Earth Science

#2

Chapter 7
Omit Directed Inquiry
Lesson 1
Lesson 2
Lesson 3
Lesson 4
Guided Inquiry

Omit Chapter 8

#3

Chapter 9
Omit Directed Inquiry
Omit Lesson 1
Lesson 2
Lesson 3
Lesson 4
Omit Lesson 5
Lesson 6
Guided Inquiry

#4

Chapter 10
Omit Directed Inquiry
Lesson 1
Lesson 2
Lesson 3
Lesson 4
Guided Inquiry
Omit Full Inquiry

2nd Nine Weeks

Scott Foresman
Unit C Physical Science

#5

Chapter 11
Directed Inquiry
Lesson 1
Lesson 2
Lesson 3
Lesson 4
Guided Inquiry
Math in Science

#6

Chapter 12
Directed Inquiry
Lesson 1
Omit Lesson 2
Omit Lesson 3
Omit Lesson 4
Guided Inquiry

#7

Chapter 13
Directed Inquiry
Lesson 1
Lesson 2
Lesson 3
Lesson 4
Guided Inquiry

#8

Chapter 14
Directed Inquiry
Lesson 1
Lesson 2
Omit Lesson 3
Lesson 4
Omit Guided Inquiry

#9

Chapter 15
Directed Inquiry
Lesson 1
Lesson 2
Omit Lesson 3
Omit Guided Inquiry
Full Inquiry

3rd Nine Weeks

Scott Foresman
Unit D
Space and Technology

#10

Chapter 16
Omit Directed Inquiry
Omit Lesson 1
Lesson 2
Lesson 3
Guided Inquiry

#11

Chapter 17
Omit Directed Inquiry
Lesson 1
Lesson 2
Lesson 3
Lesson 4
Guided Inquiry

Omit Chapter 18

FCAT Review of Annually Assessed Benchmarks

4th Nine Weeks

Scott Foresman
Unit A Life Science

#12

Chapter 1
Directed Inquiry
Lesson 1
Lesson 2
Lesson 3
Lesson 4
Guided Inquiry

#13

Chapter 2
Directed Inquiry
Lesson 1
Lesson 2
Omit Lesson 3
Omit Guided Inquiry

#14

Chapter 3
Directed Inquiry
Lesson 1
Lesson 2
Lesson 3
Guided Inquiry

#15

Chapter 4
Directed Inquiry
Lesson 1
Lesson 2
Omit Lesson 3
Omit Lesson 4
Guided Inquiry
Math in Science

#16

Chapter 5
Directed Inquiry
Lesson 1
Lesson 2
Lesson 3
Lesson 4
Lesson 5
Lesson 6
Guided Inquiry
Math in Science

#17

Chapter 6
Directed Inquiry
Lesson 1
Lesson 2
Lesson 3
Guided Inquiry
Omit Full Inquiry

FIFTH GRADE #5

Physical Science

Scott Foresman Chapter 11: Matter and Its Properties

BENCHMARKS AND *ITEM CLARIFICATION*

The student…	AA or CS	Test Item Code
SC.A.1.2.1 determines that the properties of materials (e.g., density and volume) can be compared and measured (e.g., using rulers, balances, and thermometers). ***Identifies properties and uses appropriate tools to determine the properties of materials.***	**AA**	**MC**
SC.A.1.2.2 knows that common materials (e.g., water) can be changed from one state to another by heating and cooling. *Identifies how a change in temperature can alter a material's state of matter.*	CS	MC
SC.A.1.2.3 knows that the weight of an object always equals the sum of its parts.	CS	MC
SC.A.1.2.4 knows that different materials are made by physically combining substances and that different objects can be made by combining different materials. ***Identifies different materials made by physically combining substances and/or identifies similarities and differences between mixtures and solutions.***	**AA**	**MC**
SC.A.2.2.1 knows that materials may be made of parts too small to be seen without magnification. *Identifies organisms or objects that are too small to be seen without a microscope.*	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 one way you can determine density? p. 340**	**SC.A.1.2.1**
	Lesson 1	**What are properties of matter? pp. 343-347**	**SC.A.1.2.1** SC.A.1.2.3
	Lesson 2	How do atoms combine? pp. 348-353	SC.A.2.2.1
	Lesson 3	How do phase changes occur? pp. 354-357	SC.A.1.2.2
	Lesson 4	**What are mixtures and solutions? pp. 358-361**	**SC.A.1.2.4**
	Guided Inquiry	**What boat design will carry the most cargo? pp. 362-363**	**SC.A.1.2.1**
	Math in Science	Data Point Spreads pp. 364-365	SC.A.1.2.2
Scott Foresman Leveled Readers	*Matter and Its Properties* (Below-Level) *Properties of Matter* (On-Level) *Pioneers in Physics* (Advanced)		
Scott Foresman Assessment	Chapter Review; ExamView Test (build your own test for lessons 1-4 in chapter 11); FCAT Science Test Prep pp. 73-78; Assessment Book pp. 69-72		
Vocabulary **Bold = FCAT** **Underscore = Marzano**	**<u>atom</u>**, **<u>compound</u>**, **density**, **gas**, **<u>element</u>**, **liquid**, **matter**, **mixture**, **solid**, **solution**		

OTHER RESOURCES

CIA **www.cs.ocps.net**	<u>Strand A - Physical and Chemical Changes</u>: It's in the Bag; Color Clues; Powder Puzzle; Name That Change!
AIMS **www.aimsedu.org**	*Chemistry Matters*: Balancing Bottles; *Off the Wall Science*: Floating and Sinking
Literature	
Other	Science Court: *Particles in Motion*, Tom Snyder Productions Page Keeley, *Uncovering Student Ideas in Science, Vol. 1*: Lemonade pp. 55-60, Seedlings in a Jar pp. 67-72

NOTES

FIFTH GRADE: #6

Physical Science

Scott Foresman Chapter 12: Changes in Matter

BENCHMARKS AND *ITEM CLARIFICATION*	AA or CS	Test Item Code
The student…		
SC.A.1.2.5 knows that materials made by chemically combining two or more substances may have properties that differ from the original materials. *Identifies a change in properties as a result of a chemical change.*	CS	MC
SC.B.1.2.5 knows that various forms of energy (e.g., mechanical, chemical, electrical, magnetic, nuclear, and radiant) can be measured in ways that make it possible to determine the amount of energy that is transformed. (Assessed as B.1.2.2)	**AA**	**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 can happen during a chemical change? pp. 372-373**	SC.A.1.2.5 **SC.B.1.2.5**
	Lesson 1	What are chemical changes? pp. 374-377	SC.A.1.2.5
	Guided Inquiry	How does temperature affect how long a reaction takes? pp. 394-395	SC.A.1.2.5
Scott Foresman Leveled Readers	*Changes in Matter* (Below-Level) *Changing Matter* (On-Level) *Baking Chemistry* (Advanced)		
Scott Foresman Assessment	Chapter Review; ExamView Test (build your own test for lesson 1 in chapter 12); FCAT Science Test Prep pp. 79-84; Assessment Book pp. 73-76 (Note: Omit all questions relating to lessons 2-4.)		
Vocabulary **Bold = FCAT** **Underscore = Marzano**	**chemical change**, **physical change**		

OTHER RESOURCES

CIA **www.cs.ocps.net**	Strand A - Physical and Chemical Changes: It's in the Bag; Color Clues; Powder Puzzle; Name That Change!
AIMS **www.aimsedu.org**	*Chemistry Matters*: Product Testing, Feel the Heat, Change Matters; *Vol. 14, No. 5*: Energized
Literature	Newbridge: *Acids and Bases*
Other	Science Court: *Particles in Motion*, Tom Snyder Productions Science Court: *Gravity*, Tom Snyder Productions

NOTES

FIFTH GRADE #7

Physical Science

Scott Foresman Chapter 13: Forces in Motion

BENCHMARKS AND *ITEM CLARIFICATION*	AA or CS	Test Item Code
The student…		
SC.C.1.2.1 understands that the motion of an object can be described and measured. *Identifies and quantifies the movement of an object and makes predictions based on its movements.*	CS	MC
SC.C.2.2.1 recognizes that forces of gravity, magnetism, and electricity operate simple machines. *Identifies ways in which simple machines use forces other than human input to operate.*	CS	MC
SC.C.2.2.2 knows that an object may move in a straight line at a constant speed, speed up, slow down, or change direction dependent on net force acting on the object. (Assessed as C.2.2.4)	**AA**	**MC, SR, ER**
SC.C.2.2.3 knows that the more massive an object is, the less effect a given force has. (Assessed as C.2.2.4)	**AA**	**MC, SR, ER**
SC.C.2.2.4 knows that the motion of an object is determined by the overall effect of all of the forces acting on the object. (Also assesses C.2.2.2 and C.2.2.3) ***Identifies the net force acting on an object and describes the motion of that object.***	**AA**	**MC, SR, ER**

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 learn about the motion of a pendulum? p. 404**	**SC.C.2.2.4**
	Lesson 1	**How can you describe motion? pp. 406-409**	SC.C.1.2.1 **SC.C.2.2.2**
	Lesson 2	**What are forces? pp. 410-417**	**SC.C.2.2.2** **SC.C.2.2.4**
	Lesson 3	**What are Newton's Laws of Motion? pp. 418-425**	**SC.C.2.2.3** **SC.C.2.2.4**
	Lesson 4	What are simple machines? pp. 426-431	SC.C.2.2.1
	Guided Inquiry	**How can you describe motion? pp. 432-433**	SC.C.1.2.1 **SC.C.2.2.4**
Scott Foresman Leveled Readers	*Forces and Motion* (Below-Level) *Objects on the Move* (On-Level) *Building Science* (Advanced)		
Scott Foresman Assessment	Chapter Review; ExamView Test (build your own test for lessons 1-4 in chapter 13); FCAT Science Test Prep pp. 85-90; Assessment Book pp. 77-80		
Vocabulary **Bold = FCAT** **Underscore = Marzano**	**force**, **gravitation**, **gravity**, **inertia**, **magnetism (magnetic)**		

OTHER RESOURCES

CIA www.cs.ocps.net	Strand C – Force and Motion: Catch a Wave; Bouncing Balls; More Bouncing Balls; Penny Push; Hide and Seek Energy; Losing Your Marbles; Ramps and Sliders Strand C – Simple Machines: Are You So Inclined? The Clever Lever; Lifting with Levers; Pulley Power; On a Roll
AIMS www.aimsedu.org	*Vol. 11, No. 7*: Tug Teams; *Popping with Power*: Catapults
Literature	Newbridge: *Amusement Park Science; Forces and Motion*
Other	Science Court: *Inertia*, Tom Snyder Productions Carolina Biological Program, *Science, Technology and Children*: Motion and Design Kit

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FIFTH GRADE #8

Physical Science

Scott Foresman Chapter 14: Changing Forms of Energy

BENCHMARKS AND *ITEM CLARIFICATION*	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).	**AA**	**MC, SR**
SC.B.1.2.2 recognizes various forms of energy (e.g., heat, light, and electricity). (Also assesses B.1.2.3, B.1.2.4, B.1.2.5, and B.1.2.6) ***Identifies types of energy by their source and properties.***	**AA**	**MC**
SC.B.1.2.3 knows that most things that emit light also emit heat. (Assessed as B.1.2.2)	**AA**	**MC**
SC.B.1.2.4 knows the many ways in which energy can be transformed from one type to another. (Assessed as B.1.2.2)	**AA**	**MC**
SC.B.1.2.5 knows that various forms of energy (e.g., mechanical, chemical, electrical, magnetic, nuclear, and radiant) can be measured in ways that make it possible to determine the amount of energy that is transformed. (Assessed as B.1.2.2)	**AA**	**MC**
SC.B.1.2.6 knows ways that heat can move from one object to another. (Assessed as B.1.2.2)	**AA**	**MC**
SC.C.1.2.2 knows that waves travel at different speeds through different materials.	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**	**How can energy change its forms? p. 444**	**SC.B.1.2.4** **SC.B.1.2.5**
	Lesson 1	**What is energy? pp. 447-453**	**SC.B.1.2.1** **SC.B.1.2.2** **SC.B.1.2.4**
	Lesson 2	**What is sound energy? pp. 454-457**	**SC.B.1.2.2** SC.C.1.2.2
	Lesson 4	**What is thermal energy? pp. 462-465**	**SC.B.1.2.3** **SC.B.1.2.6**
Scott Foresman Leveled Readers	*Changing Forms of Energy* (Below-Level) *How Energy Changes* (On-Level) *Generating Power* (Advanced)		
Scott Foresman Assessment	Chapter Review; ExamView Test (build your own test for lessons 1, 2, and 4 in chapter 14); FCAT Science Test Prep pp. 91-96; Assessment Book pp. 81-84 (Note: Omit all questions relating to lesson 3.)		
Vocabulary **Bold = FCAT** **Underscore = Marzano**	**change of state**, conduction, convection, **energy**, **energy transfer**, **kinetic energy**, phase change, **potential energy**, radiation		

OTHER RESOURCES

CIA **www.cs.ocps.net**	Strand B - Energy: Rocket Balloons; The Heat Is On; Hot Rods; What Makes the Best Insulator: Get a Rise out of Heat; A Current Affair Strand B - Energy: Catch a Wave
AIMS **www.aimsedu.org**	*Vol. 17, No. 8*: Solar Mitts
Literature	Newbridge: *Energy on Earth*
Other	Science Court: *Sound*, Tom Snyder Productions Page Keeley, *Uncovering Student Ideas in Science, Vol. 1*: Apple in the Dark, pp. 31-36; The Mitten Problem, pp. 103-108

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FIFTH GRADE #9

Physical Science

Scott Foresman Chapter 15: Electricity

BENCHMARKS AND *ITEM CLARIFICATION*	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). ***Identifies energy transfers in biotic or abiotic systems.***	**AA**	**MC, SR**
SC.B.1.2.2 recognizes various forms of energy (e.g., heat, light, and electricity). (Also assesses B.1.2.3, B.1.2.4, B.1.2.5, and B.1.2.6) ***Identifies types of energy by their source and properties.***	**AA**	**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** **Lesson 2** **Full Inquiry**	**What can electricity flow through? pp. 476-477** **What are the effects of moving charges? pp. 479-481** **What are simple circuits? pp. 482-485** **Can you change the poles of an electromagnet? pp. 500-503**	**SC.B.1.2.1** **SC.B.1.2.2** **SC.B.1.2.1** **SC.B.1.2.1**
Scott Foresman Leveled Readers	*Electricity* (Below-Level) *Electricity and Its Uses* (On-Level) *The Light Bulb* (Advanced)		
Scott Foresman Assessment	Chapter Review; ExamView Test (build your own test for Lessons 1 and 2 in chapter 15); FCAT Science Test Prep pp. 97-102; Assessment Book pp. 85-88 (Note: Omit all questions relating to lesson 3.)		
Vocabulary **Bold = FCAT** **Underscore = Marzano**	conductor (conduction), electric circuit, electric current, electromagnet, insulator		

OTHER RESOURCES

CIA **www.cs.ocps.net**	Strand B - Electricity and Magnetism: I Finally See the Light; Let It Flow, Let It Flow, Let It Flow; Insulators and Conductors; What's My Line? Galloping Galvanometer
AIMS **www.aimsedu.org**	*Electrical Connections*: Circuit Quiz Boards
Literature	
Technology	Science Court: *Electric Circuits*, Tom Snyder Productions

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