SRA Snapshots Video ScienceTM: Level A correlation to Hawaii Science Content Standards Grade 3

*SRA Snapshots Video Science*TM consists of four interdependent components. Each level has four program DVDs that provide engaging video lessons. The student edition (SE) provides student friendly text that reinforces the concepts introduced in the video. The Teacher's Resource Book (TRB) provides support activities in a blackline master format. The Teacher's Guide (TG) provides lesson planning, differentiated instruction activities, and answers to all student activities in the Student Edition.

	KEY:
Reference	Program Component
Video	Video lessons on program DVDs
SE	Student Edition
TRB	Teacher's Resource Book
TG	Teacher's Guide

Domain I: How Humans Think While Understanding the Natural World Science as Inquiry Grade Cluster Benchmarks DOING SCIENTIFIC INQUIRY 1. Students demonstrate the skills necessary to engage in scientific inquiry. • Generate ideas, questions, and/or predictions about objects, organisms, events, places, and/or relationships in the environment. Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66 Chapter 4, Lesson 2, Process Skill, SE page 79; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102 Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120 Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156 Chapter 9, Lesson 1, Process Skill, SE page 183; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural WorldScience as Inquiry Grade Cluster BenchmarksDOING SCIENTIFIC INQUIRY1. Students demonstrate the skills necessary to engage in scientific inquiry.• Design and conduct simple investigations using systematic observations.Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102Chapter 6, LabTime Hands-On Activity 7, TRB pages 105-107, TG page 120Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Science as Inquiry Grade Cluster Benchmarks

DOING SCIENTIFIC INQUIRY

1. Students demonstrate the skills necessary to engage in scientific inquiry.

Collect and organize data using simple tools, equipment, and techniques.

Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57

Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105

Chapter 6, KnowZone, SE page 124-125; Lesson 3, Video B, SE page 128; Video C, SE page 129; Process Skill, SE page 131

Chapter 7, LabTime Hands-On Activity, TRB pages 123-125; TG page 138

Chapter 8, Lesson 1, Video C, SE page 187; LabTime Hands-On Activity. TRB ages 141-143, TG page 156

Domain I: How Humans Think While Understanding the Natural WorldScience as Inquiry Grade Cluster BenchmarksDOING SCIENTIFIC INQUIRY1. Students demonstrate the skills necessary to engage in scientific inquiry.• Analyze data to construct a reasonable explanation.Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66Chapter 5, LabTime Hands-On Activity 5, TRB pages 102Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120Chapter 7, LabTime Hands-On Activity 8, TRB pages 123-125, TG page 138Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World
Science as Inquiry Grade Cluster Benchmarks
DOING SCIENTIFIC INQUIRY
1. Students demonstrate the skills necessary to engage in scientific inquiry.
• Appropriately communicate their investigations and explanations to an audience.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30
Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48
Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66
Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84
Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102
Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120
Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138
Chapter 8, Lesson 2, Process Skill, SE page 167; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8,
TRB pages 141-143, TG page 156
Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World
Science as Inquiry Grade Cluster Benchmarks
DOING SCIENTIFIC INQUIRY
1. Students demonstrate the skills necessary to engage in scientific inquiry.
• Defend explanations based on evidence and revise explanations when they are faulty or inadequate.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30
Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66
Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102
Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120
Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138
Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156
Chanter 9 LabTime Hands-On Activity 9, TRB nages 159-161, TG nage 174

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

HONESTY

• Report observations accurately.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 2, Process Skill, SE page 59; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

CRITICAL-MINDEDNESS

• Ask many questions starting with What, Where, Why, Whom, and How, to gather information about their "wonderings."

Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 2, Process Skill, SE page 79; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Process Skill, SE page 183; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

OBJECTIVITY

• Examine many perspectives of a question, situation or problem.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120 Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 9, Lab Time Hands-On Activity 9, TRB pages 125-125, TG page 156 Chapter 8, Lab Time Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

OPEN-MINDEDNESS

• Examine ideas presented by others.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

QUESTIONING

• Ask "wondering" questions.

Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 2, Process Skill, SE page 79; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Process Skill, SE page 183; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

SELF-DIRECTED

• Share new experiences and knowledge learned from individual investigations.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 2, Process Skill, SE page 167; Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

VALUE SCIENCE

• Ask questions and describe the wonderings about the world around us.

Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 2, Process Skill, SE page 79; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Process Skill, SE page 183; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world.

SYSTEM

• Identify the components of a system that interact to perform a function (examples of systems are human body, clock, solar system, or automobile).

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Lesson 3, Video A, SE page 39; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Lesson 2, Video B, SE page 56; Video C, SE page 57; Lesson 3, Video B, SE page 62; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson, 1, Video B, SE page 70; Video C, SE page 71; Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video A, SE page 99; Video B, SE page 100; Video C, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Lesson 3, Video A, SE page 127; Video B, SE page 128; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Lesson 3, Video A, SE page 171; Video B, SE page 172; Video C, SE page 173; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Lesson 3, Video A, SE page 193; Video B, SE page 194; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174 Energy Transfer, SE page 203

Planet Earth, SE page 204

Earth in Space, SE page 205

Habits of Mind Grade Cluster Benchmarks

USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world. CHANGE

• Observe and describe changes that occur in nature.

Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Critical Thinking, SE page 21; Process Skill, SE page 21

Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 65; Critical Thinking, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Critical Thinking, SE page 73; Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Video B, SE page 92; Video C, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video B, SE page 100; Critical Thinking, SE page 103; Process Skill, SE page 103; Lesson 3, Video B, SE page 106; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Critical Thinking, SE page 117; Process Skill, SE page 117; Lesson 3, Video A, SE page 127; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120 Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Lesson 2, Video A, SE page 143; Video B, SE page 144; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 141; Critical Thinking, SE page 153; Process Skill, SE page 153

Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Critical Thinking, SE page 167; Lesson 3, Video A, SE page 171; Critical Thinking, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video B, SE page 180; Video C, SE page 181; Critical Thinking, SE page 183; Video C, SE page 183 Energy Transfer, SE page 203

The Planet Earth, SE page 204

Earth in Space, SE page 205

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world.

SCALE

• Describe changes in the size, weight, color, or movement of things, and note which of their other qualities remains the same.

Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Critical Thinking, SE page 73; Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Video B, SE page 92; Video C, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video B, SE page 100; Critical Thinking, SE page 103; Process Skill, SE page 103; Lesson 3, Video B, SE page 106; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Critical Thinking, SE page 117; Process Skill, SE page 117; Lesson 3, Video A, SE page 127; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Lesson 2, Video A, SE page 143; Video B, SE page 144; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 141; Critical Thinking, SE page 153; Process Skill, SE page 153

Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Critical Thinking, SE page 167; Lesson 3, Video A, SE page 171; Critical Thinking, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video B, SE page 180; Video C, SE page 181; Critical Thinking, SE page 183; Video C, SE page 183

The Planet Earth, SE page 204 Earth in Space, SE page 205

Habits of Mind Grade Cluster Benchmarks USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world.

MODEL

• Use a model, such as a toy or a picture, to describe the feature or function of the original object, device, thing, etc.

Chapter 4 LabTime Hands-On Activity, TRB Pages 69-71; TG page 84 Chapter 5 LabTime Hands-On Activity, TRB Pages 87-89; TG page 102 Chapter 6 LabTime Hands-On Activity, TRB pages 105, 107; TC page 120

Chapter 6 LabTime Hands-On Activity, TRB pages 105-107; TG page 120

Chapter 7, Lesson 3 Process Skill, SE page 153

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

• Apply school, classroom, laboratory, and field trip rules, as appropriate, to maintain a safe learning environment.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 5, Lesson 3, Video C, Se page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

• Identify potential unsafe conditions prior to that activity and explain how accidents can be prevented.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 5, Lesson 3, Video C, Se page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Domain I: How Humans Think While Understanding the Natural WorldHabits of Mind Grade Cluster BenchmarksDOING SAFETY4. Students demonstrate the importance of safety by applying safety skills in all activities.• Follow prescribed procedures of science activity under teacher supervision.Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66Chapter 4, LabTime Hands-On Activity 5, TRB pages 69-71, TG page 102Chapter 5, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

Handle live organisms only under proper supervision.

See Level B:

Chapter 2, Lesson 1, Process Skill, SE page 29

See also Level C:

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

Apply appropriate safety protocols when conducting scientific activities in and out of the classroom. •

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 5, Lesson 3, Video C, Se page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Domain I: How Humans Think While Understanding the Natural World

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

Identify a simple problem. •

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102 Chapter 9, Lesson 2 Process Skill, SE page 191

Domain I: How Humans Think While Understanding the Natural World

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

• Gather information needed to solve the problem.

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

Domain I: How Humans Think While Understanding the Natural World

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

Determine relevant information, draw conclusions, and arrive at alternative solutions.

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

• Make inferences for each alternative solution and select a solution based on information collected.

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

Domain I: How Humans Think While Understanding the Natural World

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

• State solution as a recommendation and give reasons for the decision made.

Chapter 5, LabTime Hands-On Activity, TRB pages 87-89, TG page 102

Chapter 9, Lesson 2 Process Skill, SE page 191

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC INQUIRY

• Identify and describe the skills of inquiry including asking questions, doing a scientific investigation, and comparing the answers with what is already known.

Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 2, Process Skill, SE page 79; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Process Skill, SE page 183; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC INQUIRY

• Give examples where scientists use technology to increase their ability to observe, measure, and compare things more accurately.

Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57

Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, SE page 105

Chapter 6, KnowZone, SE page 124-125; Lesson 3, Video B, SE page 128; Video C, SE page 129; Process Skill, SE page 131

Chapter 7, LabTime Hands-On Activity, TRB pages 123-125; TG page 138

Chapter 8, Lesson 1, Video C, SE page 187; LabTime Hands-On Activity. TRB ages 141-143, TG page 156

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC KNOWLEDGE

• Describe how scientists prove that their conclusions are valid.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 3, Process Skill, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

2. Students analyze and evaluate the interdependence of science, technology, and society.

INTERDEPENDENCE OF SCIENCE, TECHNOLOGY, AND SOCIETY

• Identify new and old technologies and the impact they have/had on society and the environment.

Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57; Math in Science, SE page 59

Chapter 4, Lesson 1, Process Skill, SE page 73

Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, 105

Chapter 6, KnowZone, SE pages 124-125; Lesson 3, Video B, SE page 128; Video C, SE page 129

Chapter 8, KnowZone, SE pages 168-169

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

2. Students analyze and evaluate the interdependence of science, technology, and society.

TECHNOLOGICAL IMPACTS

• Give examples of how various technologies such as agriculture, information, manufacturing, and communication have affected the students' lives.

Chapter 3, Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57; Math in Science, SE page 59 Chapter 4, Lesson 1, Process Skill, SE page 73

Chapter 5, KnowZone, SE pages 96-97; Lesson 3, Video A, 105

Chapter 6, KnowZone, SE pages 124-125; Lesson 3, Video B, SE page 128; Video C, SE page 129

Chapter 8, KnowZone, SE pages 168-169

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

2. Students analyze and evaluate the interdependence of science, technology, and society.

HEALTH TECHNOLOGIES

• Explain how sanitary practices, vaccinations, medicines, and other scientific treatments keep people healthy. Chapter 3, Lesson 2, Video B, SE page 56; Video C, SE page 57; Critical Thinking, SE page 59; Lesson 3, Video A, SE page 61

Historical Perspectives Grade Cluster Benchmarks

SUSTAINABILITY

3. Students make decisions needed to sustain life on Earth now and for future generations by considering the limited resources and fragile environmental conditions.

SUSTAINING FOOD SUPPLY

• Trace food technology from planting to human consumption.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

SUSTAINABILITY

3. Students make decisions needed to sustain life on Earth now and for future generations by considering the limited resources and fragile environmental conditions.

CONSERVAION OF RESOURCES

• Identify ways in which the natural resources can be conserved.

Chapter 3, Lesson 3, Video A, SE page 61; Video C, SE page 63; Process Skill, SE page 65

Chapter 4, Lesson 2, Video A, SE page 83; Video B, SE page 84; Video C, SE page 85

Chapter 5, Lesson 2, Video C, SE page 101

Chapter 9, Lesson 3, video C, SE page 195

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

UNITY AND DIVERSITY

4. Students examine the unity and diversity of organisms and how they can be compared scientifically.

• Describe the similarities and differences of plants and animals in their appearances, behaviors, and habitats. Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 17;

Video B, SE page 18; Video C, SE page 19; Critical Thinking, SE page 21; Process Skill, SE page 21

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

UNITY AND DIVERSITY

4. Students examine the unity and diversity of organisms and how they can be compared scientifically.

• Identify the different structures and functions of organisms that allow them to survive in the environment.

Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video C, SE page 19 Chapter 2, Lesson 2, Video A, SE page 31; KnowZone, SE pages 36-37; Lesson 3, Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

INTERDEPENDENCE

5. Students describe, analyze, and give examples of how organisms are dependent on one another and their environments.

• Identify and give examples of the various interactions within a local environment.

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C< SE page 27; Process Skill, SE page 29; Lesson 2, Video A, SE page 31; Video B, SE page 2; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Organisms and Development Grade Cluster Benchmarks

INTERDEPENDENCE

5. Students describe, analyze, and give examples of how organisms are dependent on one another and their environments.

• Explain interdependence in the environment by using photosynthesis as an example.

Chapter 2, Lesson 2, Video A, 31; Video B, SE page 32; Video C, SE page 33; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Energy Transfer, SE page 203

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

CYCLE OF MATTER AND ENERGY FLOW

6. Students trace the cycling of matter and the flow of energy through systems of living things.

• Compare and contrast the biological needs of plants and animals.

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4; Video C, SE page 5; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 3, Video A, SE page 39

Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; KnowZone, Se pages 52-53

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

CYCLE OF MATTER AND ENERGY FLOW

6. Students trace the cycling of matter and the flow of energy through systems of living things.

• Give examples of matter or energy being recycled in the environment.

Chapter 2, Lesson 2, Video C, SE page 33

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 2, Video A, SE page 75; Video C, SE page 77; Lesson 3, Video C, SE page 87

Chapter 5, Lesson 2, Video B, SE page 100

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

BIOLOGICAL EVOLUTION

7. Students examine evidence for the evolution of life on earth and assess the arguments for natural selection as a scientific explanation of biological evolution.

• Give examples of organisms that lived on earth and are no longer present, and show how they might be related to organisms living today.

Chapter 3, Lesson 3, Video C, SE page 63

Chapter 4, Lesson 2, Video B, SE page 76; Writing in Science, SE page 79; KnowZone, SE pages 80-81

 Domain II: What We Know Today About the World Around Us

 Organisms and Development Grade Cluster Benchmarks

 HEREDITY

 8. Students describe how variations in biological traits are passed on to successive generations.

 • Identify ways in which some offspring are very much like their parents, although not exactly.

 Chapter 1, Lesson 3, SE page 19

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

HUMAN BODY FUNCTIONS

• Identify the sensory organs that enable the human body to respond to its needs (e.g., skin responds to pain; eyes and nose in finding food).

Chapter 2, Lesson 3, Critical Thinking, SE page 43 Chapter 9, Lesson 1, Video C, SE page 181

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

PHYSICAL HEALTH

• Identify elements that will lead to maintaining a healthy body (e.g., personal hygiene, balanced diet).

Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51; Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

PHYSICAL HEALTH

• Describe how tobacco, alcohol, other drugs, and certain toxic materials can harm human beings.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

MENTAL HEALTH

• Give examples of how different people handle their feelings or behave differently.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

LEARNING

• Identify factors that affect learning such as different interests, motivation, skills, and talents.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

LEARNING

• Explain how people can learn from each other by telling and listening, showing and watching, and imitating what others do.

This concept is not covered at this level.

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

BEHAVIOR

• Explain how people are grouped by common behavior such as culture and learning style.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

BEHAVIOR

• Explain how different families, classrooms, and societies have different roles and patterns of behavior for their members.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

NATURE OF MATTER

13. Students examine the nature of matter.

• Identify the properties of matter from which objects are made.

Chapter 4, Lesson 3, Video A, SE page 83

Chapter 8, Lesson 1, Video B, SE page 156; Critical Thinking, SE page 161; Process Skill, SE page 161

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

ENERGY, ITS TRANSFORMATION AND MATTER

14. Students identify the different forms of energy and explain transformation of energy and its significance in understanding the structure of matter and the Universe.

• Illustrate that the sun warms the land, air, and water.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32

Chapter 4, Lesson 3, Critical Thinking, SE page 87

Chapter 5, Lesson 1, Video B, SE page 92; Lesson 2, Video B, SE page 100

Chapter 6, Lesson 1, Video B, SE page 114; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 9, Lesson 3, Video C, SE page 195

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

FORCES, MOTION, SOUND, AND LIGHT

15. Students explain the relationship between force, mass, and motion of objects; they analyze the nature of sound and electromagnetic radiation.

MOTION

• Describe the various ways or paths in which things can move such as back and forth, zigzag, and circular.

Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; KnowZone, SE pages 140-141; Lesson 2, Video A, SE page 143; Video B, SE page 144

The Physical Environment Grade Cluster Benchmarks

FORCES, MOTION, SOUND, AND LIGHT

15. Students explain the relationship between force, mass, and motion of objects; they analyze the nature of sound and electromagnetic radiation.

MOTION

• Describe a method to change how something is moving, such as applying more or less force (e.g., push-pull). Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

FORCES, MOTION, SOUND, AND LIGHT

15. Students explain the relationship between force, mass, and motion of objects; they analyze the nature of sound and electromagnetic radiation.

SOUND

• Describe how things make sound.

Chapter 9, Lesson 1, Video C, SE page 181; Critical Thinking, SE page 183; Writing in Science, SE page 183; Process Skill, SE page 183

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

UNIVERSE

16. Students discuss current scientific views of the Universe.

• Observe and describe the properties, locations, and movements of celestial objects in the sky.

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Process Skill, SE page 117; Lesson 3, Video A, SE page 127; Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES OF THE UNIVERSE

17. Students explain the major forces in nature: gravitational, electrical, and magnetic.

• Describe how things near the Earth fall to the ground unless something holds them up.

Chapter 6, Lesson 1, Video A, SE page 113

Chapter 7, Lesson 1, Video C, SE page 137; KnowZone, SE pages 140-141

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES OF THE UNIVERSE

17. Students explain the major forces in nature: gravitational, electrical, and magnetic.

• Describe how magnets make some things move without being touched.

Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Critical Thinking, SE page 147; Process Skill, SE page 147

Earth Systems and The Universe Grade Cluster Benchmarks

EARTH IN THE SOLAR SYSTEM

18. Students discuss how the Earth-moon-sun system causes seasons, moon phases, climate, weather, and global changes.

Describe the movements of the sun, moon, and stars throughout the day.

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120 Earth in Space, SE page 205

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

EARTH IN THE SOLAR SYSTEM

18. Students discuss how the Earth-moon-sun system causes seasons, moon phases, climate, weather, and global changes.

• Describe how weather changes from day to day and over the seasons.

Chapter 5, KnowZone, SE pages 96-97; Lesson 2, Process Skill, SE page 103; Lesson 3, Video A, SE page 105; Video B, SE page 106; Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES THAT SHAPE THE EARTH

19. Students analyze the scientific view of how the Earth's surface is formed.

Give examples of different Earth materials and how they are used. •

Chapter 4, Lesson 2, Video A, SE page 75; Video B, SE page 76; Video C, SE page 77; Lesson 3, Video A, SE page 83; Video B, SE page 84

Chapter 5, Lesson 1, Video A, SE page 91; Lesson 2, Video A, SE page 99

Chapter 9, Lesson 3, Video C, SE page 195

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES THAT SHAPE THE EARTH

19. Students analyze the scientific view of how the Earth's surface is formed.

Classify chunks of rocks by size and shape.

Chapter 4, Lesson 2, Video A, SE page 75

SRA Snapshots Video ScienceTM: Level B correlation to Hawaii Science Content Standards Grade 4

*SRA Snapshots Video Science*TM consists of four interdependent components. Each level has four program DVDs that provide engaging video lessons. The student edition (SE) provides student friendly text that reinforces the concepts introduced in the video. The Teacher's Resource Book (TRB) provides support activities in a blackline master format. The Teacher's Guide (TG) provides lesson planning, differentiated instruction activities, and answers to all student activities in the Student Edition.

KEY:
Program Component
Video lessons on program DVDs
Student Edition
Teacher's Resource Book
Teacher's Guide

Domain I: How Humans Think While Understanding the Natural World

Domain I. How Human's Timik while Onderstanding the Natural World
Science as Inquiry Grade Cluster Benchmarks
DOING SCIENTIFIC INQUIRY
1. Students demonstrate the skills necessary to engage in scientific inquiry.
• Explain how the question or problem arose. Develop a hypothesis or prediction based on the question.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30
Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48
Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66
Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84
Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102
Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120
Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138
Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156
Chanter 9 I ahTime Hands-On Activity 9 TRR nages 159-161 TC nage 174

Domain I: How Humans Think While Understanding the Natural World

Science as Inquiry Grade Cluster Benchmarks

DOING SCIENTIFIC INQUIRY

1. Students demonstrate the skills necessary to engage in scientific inquiry.

• Design and conduct simple investigations to answer their questions or to test their ideas about the environment.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Science as Inquiry Grade Cluster Benchmarks

DOING SCIENTIFIC INQUIRY

1. Students demonstrate the skills necessary to engage in scientific inquiry.

• Collect and organize data for analysis, using simple tools and equipment.

Chapter 1, Lesson 1, Video A, SE page 3

Chapter 4, Lesson 2, Video C, SE page 77

Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; KnowZone, SE pages 105-

107; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145

Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169

Chapter 9 KnowZone, SE pages 196-197

Domain I: How Humans Think While Understanding the Natural World

Science as Inquiry Grade Cluster Benchmarks

DOING SCIENTIFIC INQUIRY

1. Students demonstrate the skills necessary to engage in scientific inquiry.

• Use appropriate models to summarize data and construct conclusions based on observations and findings. Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, Lesson 2, Process Skill, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, Lesson 1, Process Skill, SE page 51; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66 Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102 Chapter 6, Lesson 2, Process Skill, SE page 123; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Process Skill, SE page 139; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Process Skill, SE page 183; Lesson 3, Process Skill, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Science as Inquiry Grade Cluster Benchmarks

DOING SCIENTIFIC INQUIRY

1. Students demonstrate the skills necessary to engage in scientific inquiry.

• Communicate investigations and results appropriately to an audience.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 3, Process Skill, SE page 109; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Science as Inquiry Grade Cluster Benchmarks

DOING SCIENTIFIC INQUIRY

1. Students demonstrate the skills necessary to engage in scientific inquiry.

• Defend conclusions based on evidence; reflect and revise conclusions based on recommendations from other points of view.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

HONESTY

• Report all observations accurately and precisely.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66 Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102 Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120 Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind. HONESTY

• Acknowledge work done by others.

Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, Lesson 2, Process Skill, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, Lesson 1, Process Skill, SE page 51; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66 Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102 Chapter 6, Lesson 2, Process Skill, SE page 123; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120 Chapter 7, Lesson 1, Process Skill, SE page 139; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156 Chapter 9, Lesson 1, Process Skill, SE page 183; Lesson 3, Process Skill, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

CRITICAL-MINDEDNESS

• Validate and evaluate multiple sources of information (texts, periodicals, web sites, and people) to support research.

Chapter 1 KnowZone, SE pages 14-15; Lesson 3 Process Skill, SE page 21

Chapter 2 KnowZone, SE pages 36-37; Lesson 3 Process Skill, SE page 43

Chapter 3 KnowZone, SE pages 52-53; Lesson 2 Process Skill, SE page 59

Chapter 4, Lesson 2 Process Skill, SE page 79; KnowZone, SE pages 86-87

Chapter 5 KnowZone, SE pages 102-103

Chapter 6, Lesson 3 Math in Science, SE page 129; KnowZone, SE pages 130-131

Chapter 7 KnowZone, SE pages 140-141

Chapter 8 KnowZone, SE pages 168-169

Chapter 9 KnowZone, SE pages 196-198

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

OBJECTIVITY

• Examine many perspectives of a question, situation or problem and consider many possible solutions.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66 Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands On Activity 4, TBB pages 60, 71, TC page 84

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

OPEN-MINDEDNESS

• Acknowledge that ideas, conclusions, and expectations may change.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

QUESTIONING

• Ask questions to clarify and expand an idea or statement.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

SELF-DIRECTED

• Plan and carry out tasks as an individual and as a member of a group.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

VALUE SCIENCE

• Ask questions and give examples of how science explains what is happening in the world around us.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Habits of Mind Grade Cluster Benchmarks

USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world.

SYSTEM

• Observe and describe how parts influence one another in a system.

Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Video C, SE page 27; Process Skill, SE page 29; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57; Process Skill, SE page 59; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 65

Chapter 4, Lesson 2, Video C, SE page 77

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Lesson 2, Video A, SE page 97; Lesson 3, Video C, SE page 107; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video C, SE page 121; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Video C, SE page 137; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 157; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Lesson 3, Video C, SE page 173; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 1, Video C, SE page 181; Lesson 2, Video C, SE page 187; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world.

CHANGE

• Identify patterns of change in things (such as steady, repetitive, or irregular change) using data as evidence.

Chapter 1, Lesson 1, Video A, SE page 3

Chapter 4, Lesson 2, Video C, SE page 77

Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; KnowZone, SE pages 105-

107; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145

Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169

Chapter 9 KnowZone, SE pages 196-197

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world. SCALE

• Measure things that are difficult to measure because they are very large or very small (e.g., buildings, trees, seeds, pinhead).

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Process Skill, SE page 147 Chapter 8, Lesson 3, Process Skill, SE page 175

The Metric System, SE pages 200-201

Habits of Mind Grade Cluster Benchmarks

USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world.

MODEL

• Use geometric figures, number sequences, graphs, diagrams, sketches, number lines, maps, or stories, to represent corresponding features of objects, events, and processes in the real world. Identify ways in which the representations do not match their original counterparts.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 1, Process Skill, SE page 73; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Math in Science, SE page 117; Lesson 3, Math in Science, SE page 129; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 2, Process Skill, SE page 189; Lesson 3, Math in Science, SE page 195; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

• Apply school, classroom, laboratory, and field trip rules, as appropriate, to maintain a safe learning environment.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 3, Video C, SE page 193; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

• Identify potential unsafe conditions prior to that activity and explain how accidents can be prevented.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 3, Video C, SE page 193; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

• Use supplies, chemicals, and equipment as instructed.

Chapter 1, Lesson 1, Video A, SE page 3

Chapter 4, Lesson 2, Video C, SE page 77

Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; KnowZone, SE pages 105-

107; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145

Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169

Chapter 9 KnowZone, SE pages 196-197

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

• Document and apply appropriate safety protocols when conducting scientific activities in and out of the classroom. Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 3, Video C, SE page 193; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

 Domain I: How Humans Think While Understanding the Natural World

 Science and Technology in Society Grade Cluster Benchmarks

 RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

 5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

 • Identify a simple problem.

 Chapter 6, Lesson 1 Process Skill, SE page 117

 Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

• Collect, organize, and analyze information from various sources and identify possible alternatives based in the information.

Chapter 6, Lesson 1 Process Skill, SE page 117

Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

• Make inferences for each alternative solution and select a tentative solution.

Chapter 6, Lesson 1 Process Skill, SE page 117

Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

• Test the solution and document the results.

Chapter 6, Lesson 1 Process Skill, SE page 117

Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

• Analyze the results and propose recommendations/modifications to the solution.

Chapter 6, Lesson 1 Process Skill, SE page 117

Chapter 9, Lesson 2 Process Skill, SE page 189; ; LabTime Hands-On Activity, TRB pages 159-161, TG page 174

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC INQUIRY

- Describe scientific inquiry including the asking of questions, conducting investigations, answering the questions, and presenting the results to others.
- Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30
- Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48
- Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC INQUIRY

• Explain how scientific methods for understanding are not perfect and results are not "magic."

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC KNOWLEDGE

• Explain how knowledge is acquired through scientific investigation.

Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, Lesson 1, Process Skill, SE page 29; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66 Chapter 4, Lesson 3, Process Skill, SE page 85; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102 Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120 Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156 Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC KNOWLEDGE

• Describe the events/people that made major contributions to science and technology throughout history.

Chapter 4, Lesson 2, Video C, SE page 77

Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; Math in Science, SE page 129; KnowZone, SE pages 130-131

Chapter 7, Lesson 3, Video A, SE page 149

Chapter 8 KnowZone, SE pages 168-169

Chapter 9 KnowZone, SE pages 196-197

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

2. Students analyze and evaluate the interdependence of science, technology, and society.

INTERDEPENDENCE OF SCIENCE, TECHNOLOGY, AND SOCIETY

• Examine new technology influenced the economy, demography, and environment of the state and nation.

Chapter 4, Lesson 3, Video B, SE page 82; Video C, SE page 83

Chapter 5, Lesson 2, Video C, SE page 99; KnowZone, SE pages 102-103

Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 27; KnowZone, SE pages 130-131 Chapter 7, KnowZone, SE pages 140-141

Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169; Lesson 3, Video C, SE page 173

Chapter 9, Lesson 2, Video C, SE page 187; Lesson 3, Video A, SE page 191; Video B, SE page 192; Process Skill, SE page 195; KnowZone, SE pages 196-197

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

2. Students analyze and evaluate the interdependence of science, technology, and society.

TECHNOLOGICAL IMPACTS

• Analyze how the various technologies have changed the nature of work and affected the economy, demography, and environment.

Chapter 4, Lesson 1, Video B, SE page 70; Lesson 3, Video C, SE page 83

Chapter 5, Lesson 2, Video C, SE page 99; KnowZone, SE pages 102-103

Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; Process Skill, SE page 129 Chapter 7, KnowZone, SE pages 140-141

Chapter 8, Lesson 2, Video C, SE page 165; KnowZone, SE pages 168-169

Chapter 9, Lesson 2, Video C, SE page 187; Process Skill, SE page 189; Lesson 3, Video A, SE page 191; Process Skill, SE page 195; KnowZone, SE pages 196-197

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

2. Students analyze and evaluate the interdependence of science, technology, and society.

HEALTH TECHNOLOGIES

• Explain how technology provides clues about what is happening inside the body and improves the medical treatment of people.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

SUSTAINABILITY

3. Students make decisions needed to sustain life on Earth now and for future generations by considering the limited resources and fragile environmental conditions.

SUSTAINING FOOD SUPPLY

• Explore how agricultural technology affects humans and the environment.

This concept is not covered at this level.

Historical Perspectives Grade Cluster Benchmarks

SUSTAINABILITY

3. Students make decisions needed to sustain life on Earth now and for future generations by considering the limited resources and fragile environmental conditions.

CONSERVAION OF RESOURCES

• Examine and explain why there is a need to conserve natural resources, including fossil fuel.

Chapter 4, Lesson 2, Video B, SE page 76; Lesson 3, Video A, SE page 81; Video B, SE page 82; Video C, SE page 83; KnowZone, SE pages 86-87

Chapter 5, Lesson 1, Video C, SE page 93; Lesson 2, Video A, SE page 97

Chapter 9, Lesson 3, Video A, SE page 191; Video B, SE page 192; Critical Thinking, SE page 195; Process Skill, SE page 195

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

UNITY AND DIVERSITY

4. Students examine the unity and diversity of organisms and how they can be compared scientifically.

• Explain how different organisms need specific environmental conditions in order to survive.

Chapter 1, Lesson 1, Video A, SE page 3; Lesson 3, Video B, SE page 18; Video C, SE page 19; Critical Thinking, SE page 21

Chapter 2, Lesson 1, Video A, SE page 25; Lesson 2, Video A, SE page 31; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 2, Video A, SE page 55

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

UNITY AND DIVERSITY

4. Students examine the unity and diversity of organisms and how they can be compared scientifically.

• Explain the relationship between structure and function in living things.

Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; KnowZone, SE pages 14-15; Lesson 3, Video B, SE page 18; Video C, SE page 19

Chapter 2, KnowZone, SE pages 36-37

Chapter 3, Lesson 1, Video B, SE page 48; KnowZone, SE pages 52-53; Lesson 2, Video B, SE page 56

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

INTERDEPENDENCE

5. Students describe, analyze, and give examples of how organisms are dependent on one another and their environments.
Identify how plants and animals depend on each other, in the exchange of oxygen, carbon dioxide, and nutrients.

Chapter 1, Lesson 1, Critical Thinking, SE page 7; Lesson 3, Video B, SE page 18; Video C, SE page 19; Critical Thinking, SE page 21

Chapter 2, Lesson 1, Video A, SE page 25; Video B, SE page 26; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; KnowZone, SE pages 36-37; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43

Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Critical Thinking, SE page 51; Process Skill, SE page 51; Lesson 2, Video A, SE page 55; Video B, SE page 56; Video C, SE page 57; Critical Thinking, SE page 59; Process Skill, SE page 59; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65; Process Skill, SE page 65

Organisms and Development Grade Cluster Benchmarks

INTERDEPENDENCE

5. Students describe, analyze, and give examples of how organisms are dependent on one another and their environments.

• Explain how organisms respond to a constantly changing environment.

Chapter 1, Lesson1, Video C, SE page 5; Lesson 3, Critical Thinking, SE page 21

Chapter 2, Lesson 1, Video B, SE page 26; Lesson 3, Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43

Chapter 3, Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65; Process Skill, SE page 65

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

CYCLE OF MATTER AND ENERGY FLOW

6. Students trace the cycling of matter and the flow of energy through systems of living things.

• Diagram how animals' food can be traced back to plants.

Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks CYCLE OF MATTER AND ENERGY FLOW

6. Students trace the cycling of matter and the flow of energy through systems of living things.

• Explain how "energy" is needed for all organisms to stay alive and grow.

Chapter 1, Lesson 1, Video A, SE page 3; Lesson 3, Video B, SE page 18

Chapter 2, Lesson 1, Video A, SE page 25; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks CYCLE OF MATTER AND ENERGY FLOW

6. Students trace the cycling of matter and the flow of energy through systems of living things.

• Give examples where organisms are reproducing, growing, dying, and decaying.

Chapter 1, Lesson 3, Video A, SE page 17; Video C, SE page 19

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

BIOLOGICAL EVOLUTION

7. Students examine evidence for the evolution of life on earth and assess the arguments for natural selection as a scientific explanation of biological evolution.

• Compare fossils to one another and to living organisms and explain their similarities and differences.

Chapter 1, Lesson 1, Video C, SE page 5; Math in Science, SE page 7; Process Skill, SE page 7

Chapter 4, Lesson 2, Video B, SE page 76; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Organisms and Development Grade Cluster Benchmarks

BIOLOGICAL EVOLUTION

7. Students examine evidence for the evolution of life on earth and assess the arguments for natural selection as a scientific explanation of biological evolution.

• Explain how certain organisms are more likely to survive and reproduce than others in the same environment.

Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35; Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 43; Critical thinking, SE page 43

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

HEREDITY

8. Students describe how variations in biological traits are passed on to successive generations.

• Explain how inheritance determines the characteristics of the organism.

Chapter 1, Lesson 2, Video C, SE page 11; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

HEREDITY

8. Students describe how variations in biological traits are passed on to successive generations.

• Explain how new variations of cultivated plants and domestic animals have resulted from selective breeding for particular traits.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

CELL, TISSUES, AND ORGANS

9. Students explain the structure, functions, and reproduction of living cells.

• Explain how living things have basic parts that work together to sustain life.

Chapter 1, Lesson 1, Video A, SE page 3; KnowZone, SE pages 14-15; Lesson 3, Video B, SE page 18; Video C, SE page 19

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

HUMAN DEVELOPMENT

10. Students explain the important aspects of human development from fertilization to death and compare it with other organisms.

• Compare and contrast the development (i.e., time and nourishment) of the human embryo with other species.

Level B:

Chapter 1, Lesson 3, Video C, SE page 19

See also Level A:

Chapter 1, Lesson 3, Video B, SE page 18; Process Skill, SE page 21

See also Level C:

Chapter 2, Lesson 2, Video A, SE page 31; KnowZone, SE pages 36-37

Organisms and Development Grade Cluster Benchmarks

HUMAN DEVELOPMENT

10. Students explain the important aspects of human development from fertilization to death and compare it with other organisms.

• Explain the major stages in physical and mental development in human beings, with an understanding that there are variations between individuals.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

HUMAN BODY FUNCTIONS

• Explain how people obtain energy and materials for survival (e.g., body repair and growth).

Level B:

Chapter 1, Lesson 1, Video A, SE page 3

See also Level A:

Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

PHYSICAL HEALTH

• Explain the need for proper diet and exercise to maintain a healthy body over time.

See Level A:

Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

PHYSICAL HEALTH

• Explain how a healthy body can fight most germs that get inside the body and identify some germs that interfere with the body's defenses.

Chapter 3, Lesson 2, Video C, SE page 57; Critical Thinking, SE page 59; Process Skill, SE page 59

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

MENTAL HEALTH

• Give examples that show how physical health can affect people's emotional well-being and vice versa. This concept is not covered at this level.

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

LEARNING

• Express that learning means using what one already knows to make sense out of new experiences or information, not just storing new information in one's head.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

LEARNING

• Explain and demonstrate how repetition and practice can make a skill automatic, such as riding a bike.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

BEHAVIOR

• Identify situations where members of a group and even people in a crowd sometimes do and say things that they would not do or say on their own.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

BEHAVIOR

• Compare human behavior in the various cultural groups during different time periods and give examples of some behaviors that are unacceptable in almost all cultures, past and present.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

NATURE OF MATTER

13. Students examine the nature of matter.

• Describe how materials can change from one state to another by heating or cooling (e.g., water cycle, burning candle). Chapter 7, Lesson 1, Video C, SE page 137; Critical Thinking, SE page 139; Process Skill, SE page 139; Lesson 3, Video C, SE page 151

The Physical Environment Grade Cluster Benchmarks

NATURE OF MATTER

13. Students examine the nature of matter.

• Give examples of how the properties of a material can be used to predict how that material will behave under different conditions.

Chapter 7, Lesson 1, Video C, SE page 137; Critical Thinking, SE page 1 39; Process Skill, SE page 139; KnowZone, SE pages 140-141; Lesson 2, Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; Critical Thinking, SE page 153; Process Skill, SE pages 153

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks ENERGY, ITS TRANSFORMATION AND MATTER

14. Students identify the different forms of energy and explain transformation of energy and its significance in understanding the structure of matter and the Universe.

• Explain how heat is produced and how it is different from light.

See Level A:

Chapter 8, Lesson 3, Video A, , SE page 171; Video B, SE page 172; Video C, SE page 173

See also Level C:

Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

ENERGY, ITS TRANSFORMATION AND MATTER

14. Students identify the different forms of energy and explain transformation of energy and its significance in understanding the structure of matter and the Universe.

• Explain how energy goes from more useful to less useful forms.

Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Process Skill, SE page 161; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Critical Thinking, SE page 167; KnowZone, SE pages 168-169; Lesson 3, Video A, SE page 171; Video B, SE page 172; Video C, SE page 173; Critical Thinking, SE page 175

Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; Critical Thinking, SE page 183; Process Skill, SE page 183; Lesson 2, Video A, SE page 185; Video B, SE page 186; Video C, SE page 187; Critical Thinking, SE page 189; Process Skill, SE page 189; Lesson 3, Video A, SE page 191; Video B, SE page 192; Video C, SE page 193; Critical Thinking, SE page 195; Process Skill, SE page 195; KnowZone, SE pages 196-197

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

FORCES, MOTION, SOUND, AND LIGHT

15. Students explain the relationship between force, mass, and motion of objects; they analyze the nature of sound and electromagnetic radiation.

MOTION AND FORCES

• Explain how force and mass can change the speed or direction of an object.

Chapter 8, Lesson 3, Video A, SE page 171

The Physical Environment Grade Cluster Benchmarks

FORCES, MOTION, SOUND, AND LIGHT

15. Students explain the relationship between force, mass, and motion of objects; they analyze the nature of sound and electromagnetic radiation.

MOTION AND FORCES

• Use time to describe motion.

Chapter 8, Lesson 3, Video A, SE page 171

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

FORCES, MOTION, SOUND, AND LIGHT

15. Students explain the relationship between force, mass, and motion of objects; they analyze the nature of sound and electromagnetic radiation.

ELECTROMAGNETIC RADIATION

• Explain that light travels in a straight line until it strikes an object (e.g., reflected by a mirror, refracted by a lens or absorbed by an object).

Chapter 8, Lesson 2, Video A, SE page 163; Video C, SE page 165

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

UNIVERSE

16. Students discuss current scientific views of the Universe.

• Identify the source of light and heat necessary to maintain the Earth's temperature and to support life.

Chapter 2, Lesson 2, Video A, SE page 31; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 5, Lesson 1, Video A, SE page 91; KnowZone, SE pages 102-103

Chapter 6, Lesson 1, Video A, SE page 113

Chapter 8, Lesson 2, Video A, SE page 163

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

UNIVERSE

16. Students discuss current scientific views of the Universe.

• Describe what constitutes the solar system of which Earth is a part.

Chapter 6, Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

UNIVERSE

16. Students discuss current scientific views of the Universe.

• Describe the tools used to gather information about the solar system.

Chapter 6, Lesson 3, Video A, SE page 125; Video B, SE page 126; Video C, SE page 127; Critical Thinking, SE page 129; Math in Science, SE page 129; Process Skill, SE page 129; KnowZone, SE pages 130-131

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES OF THE UNIVERSE

17. Students explain the major forces in nature: gravitational, electrical, and magnetic.

• Describe how the Earth's gravity pulls any object toward it without touching it.

Chapter 8, Lesson 3, Video A, SE page 171

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES OF THE UNIVERSE

17. Students explain the major forces in nature: gravitational, electrical, and magnetic.

• Describe how a magnet pulls on all things made of iron and either pushes or pulls on other magnets.

Chapter 9, Lesson 2, Video A, SE page 185

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES OF THE UNIVERSE

17. Students explain the major forces in nature: gravitational, electrical, and magnetic.

• Explain that electrically charged materials pull on other materials and may either push or pull other charged materials. Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Critical Thinking, SE page 183; Process Skill, SE page 183

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

EARTH IN THE SOLAR SYSTEM

18. Students discuss how the Earth-moon-sun system causes seasons, moon phases, climate, weather, and global changes.

• Illustrate the water cycle and its relationship to weather and climatic patterns.

Chapter 5, Lesson 1, Video A, SE page 91 The Water Cycle, SE page 204

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

EARTH IN THE SOLAR SYSTEM

18. Students discuss how the Earth-moon-sun system causes seasons, moon phases, climate, weather, and global changes.

• Explain the phases of the moon and eclipses.

Level B:

Chapter 6, Lesson 1, Video C, SE page 115 Eclipses, SE page 205

See also Level C: Chapter 6, Lesson 2, Video B, SE page 122 Eclipses, SE page 205

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

EARTH IN THE SOLAR SYSTEM

18. Students discuss how the Earth-moon-sun system causes seasons, moon phases, climate, weather, and global changes.

• Describe the Earth's daily rotation and annual revolution.

Chapter 6, Lesson 1, Video B, SE page 114; Process Skill, SE page 117

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES THAT SHAPE THE EARTH

19. Students analyze the scientific view of how the Earth's surface is formed.

• Conclude that rock is composed of different combinations of minerals and/or living things.

Chapter 4, Lesson 2, Video B, SE page 76; Video C, SE page 77; Process Skills, SE page 79; Lesson 3, Video A, SE page 81

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES THAT SHAPE THE EARTH

19. Students analyze the scientific view of how the Earth's surface is formed.

• Give examples of how waves, wind, water, and ice shape and reshape the Earth's land surface.

Chapter 4, Lesson 2, Video A, SE page 75

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES THAT SHAPE THE EARTH

19. Students analyze the scientific view of how the Earth's surface is formed.

• Explain the causes and effects of earthquakes and volcanoes.

Chapter 4, Lesson 1, Video B, SE page 70; Video C, SE page 71; Critical Thinking, SE page 73

SRA Snapshots Video ScienceTM: Level C correlation to Hawaii Science Content Standards Grade 5

*SRA Snapshots Video Science*TM consists of four interdependent components. Each level has four program DVDs that provide engaging video lessons. The student edition (SE) provides student friendly text that reinforces the concepts introduced in the video. The Teacher's Resource Book (TRB) provides support activities in a blackline master format. The Teacher's Guide (TG) provides lesson planning, differentiated instruction activities, and answers to all student activities in the Student Edition.

	KEY:
Reference	Program Component
Video	Video lessons on program DVDs
SE	Student Edition
TRB	Teacher's Resource Book
TG	Teacher's Guide

Domain I: How Humans Think While Understanding the Natural World

Science as I	Inquiry (Grade	Cluster	Benchma	irks
DOINC SC	TENTIE	IC IN			

DOING SCIENTIFIC INQUIRY

1. Students demonstrate the skills necessary to engage in scientific inquiry.

• Explain how the question or problem arose. Develop a hypothesis or prediction based on the question.

Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Science as Inquiry Grade Cluster Benchmarks

DOING SCIENTIFIC INQUIRY

1. Students demonstrate the skills necessary to engage in scientific inquiry.

• Design and conduct simple investigations to answer their questions or to test their ideas about the environment.

- Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30
- Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48
- Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66
- Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

- Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120
- Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138
- Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

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Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174
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Domain I: How Humans Think While Understanding the Natural WorldScience as Inquiry Grade Cluster BenchmarksDOING SCIENTIFIC INQUIRY1. Students demonstrate the skills necessary to engage in scientific inquiry.• Collect and organize data for analysis, using simple tools and equipment.Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; VideoB, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169Chapter 9, Lesson 2 Process Skill, SE page 191

Domain I: How Humans Think While Understanding the Natural World

Science as Inquiry Grade Cluster Benchmarks

DOING SCIENTIFIC INQUIRY

1. Students demonstrate the skills necessary to engage in scientific inquiry.

• Use appropriate models to summarize data and construct conclusions based on observations and findings.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural WorldScience as Inquiry Grade Cluster BenchmarksDOING SCIENTIFIC INQUIRY1. Students demonstrate the skills necessary to engage in scientific inquiry.• Communicate investigations and results appropriately to an audience.Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66Chapter 4, LabTime Hands-On Activity 5, TRB pages 69-71, TG page 102Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Science as Inquiry Grade Cluster Benchmarks

DOING SCIENTIFIC INQUIRY

1. Students demonstrate the skills necessary to engage in scientific inquiry.

• Defend conclusions based on evidence; reflect and revise conclusions based on recommendations from other points of view.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

HONESTY

• Report all observations accurately and precisely.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 2, Lab Time Hands-On Activity 2, TKB pages 53-55, TG page 46 Chapter 3, Lab Time Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

HONESTY

• Acknowledge work done by others.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Process Skill, SE page 131; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World
Habits of Mind Grade Cluster Benchmarks
LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND
2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.
CRITICAL-MINDEDNESS
• Validate and evaluate multiple sources of information (texts, periodicals, web sites, and people) to support research.
Chapter 1, KnowZone, SE pages 20-21
Chapter 2, KnowZone, SE pages 36-37
Chapter 3, KnowZone, SE pages 58-59
Chapter 4, KnowZone, SE pages 74-75
Chapter 5, KnowZone, SE pages 108-109
Chapter 6, KnowZone, SE pages 118-119
Chapter 7, KnowZone, SE pages 140-141
Chapter 8, KnowZone, SE pages 168-169
Chapter 9, KnowZone, SE pages 184-185

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

OBJECTIVITY

• Examine many perspectives of a question, situation or problem and consider many possible solutions.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, Lesson 1, Process Skill, SE page 51; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102 Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 3, Process Skill, SE page 153; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

OPEN-MINDEDNESS

• Acknowledge that ideas, conclusions, and expectations may change.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, Lesson 3, Process Skill, SE page 43; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, Lesson 1, Process Skill, SE page 51; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Process Skill, SE page 95; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102 Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 3, Process Skill, SE page 153; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

QUESTIONING

• Ask questions to clarify and expand an idea or statement.

Chapter 1, Lesson 2, Process Skill, SE page 13; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lesson 1, Process Skill, SE page 51; Lesson 3, Process Skill, SE page 65; LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, Lesson 2, Process Skill, 81; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, Process Skill, SE page 139; Lesson 2, Process Skill, SE page 147; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 3, Process Skill, SE page 197; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

SELF-DIRECTED

• Plan and carry out tasks as an individual and as a member of a group.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

LIVING THE VALUES, ATTITUDES, AND COMMITMENTS OF THE INQUIRING MIND

2. Students apply the values, attitudes, and commitments characteristic of an inquiring mind.

VALUE SCIENCE

• Ask questions and give examples of how science explains what is happening in the world around us.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Habits of Mind Grade Cluster Benchmarks

USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world.

SYSTEM

• Observe and describe how parts influence one another in a system.

Chapter 1, Lesson 1, Process Skill, SE page 7

Chapter 2, Lesson 1, Video B, SE page 26; Process Skill, SE page 29; Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Process Skill, SE page 35

Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62

Chapter 4, Lesson 2, Video C, SE page 77; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Video C, SE page 93; Lesson 2, Video B, SE page 100; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Lesson 2, Video A, SE page 119; Video B, SE page 120; Video C, SE page 121; Lesson 3, Video A, SE page 127; LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, Lesson 1, video C, SE page 137; Lesson 2, Video A, SE page 144; Video C, SE page 145; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151

Chapter 8, Lesson 3, Video B, SE page 172; Video C, SE page 173

Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Video C, SE page 181; Lesson 2, Video A, SE page 187; Video B, SE page 188; Video C, SE page 189; Lesson 3, Video A, SE page 193; Video B, SE page 194; Video C, SE page 195

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world.

CHANGE

• Identify patterns of change in things (such as steady, repetitive, or irregular change) using data as evidence.

Chapter 4, Lesson 1, Video B, SE page 70; video C, SE page 71; Lesson 2, Video A, SE page 77; Video B, SE page 78; Video C, SE page 79; Critical Thinking, SE page 81; Lesson 3, Critical Thinking, SE page 87 Chapter 5, Lesson 2, Video B, SE page 92; Leb Time Handa On Activity 5, TBB page 97

Chapter 5, Lesson 2, Video B, SE page 98; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 2, Video A, SE page 121; Video B, SE page 122; Video C, SE page 123

Chapter 7, Lesson 1, Video B, SE page 136

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world.

SCALE

• Measure things that are difficult to measure because they are very large or very small (e.g., buildings, trees, seeds, pinhead).

Chapter 1, LabTime Hands-On Activity 1, TRB page 15, TG page 30 Chapter 5, Lesson 3, Process Skill, SE page 107; LabTime Hands-On Activity 5, TRB page 87, TG page 102 Chapter 7, Lesson 2, Video C, SE page 165; LabTime Hands-On Activity 7, TRB page 123, TG page 138 Chapter 8, LabTime Hands-On Activity 8, TRB page 141, TG page 156 Chapter 9, Lesson 2, Process Skill, SE page 191 The Metric System, SE page 200-201

Habits of Mind Grade Cluster Benchmarks USING UNIFYING CONCEPTS AND THEMES

3. Students use concepts and themes such as system, change, scale, and model to help them understand and explain the natural world.

MODEL

• Use geometric figures, number sequences, graphs, diagrams, sketches, number lines, maps, or stories, to represent corresponding features of objects, events, and processes in the real world. Identify ways in which the representations do not match their original counterparts.

Chapter 1, Lesson 1, Process Skill, SE page 7; LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66 Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102 Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120 Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156 Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

• Apply school, classroom, laboratory, and field trip rules, as appropriate, to maintain a safe learning environment.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66 Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84 Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102 Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120 Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138 Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156 Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

• Identify potential unsafe conditions prior to that activity and explain how accidents can be prevented.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30 Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, Lab Time Hands-On Activity 3, TRB pages 53-55, TG page 46 Chapter 3, Lab Time Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World
Habits of Mind Grade Cluster Benchmarks
DOING SAFETY
4. Students demonstrate the importance of safety by applying safety skills in all activities.
Conduct authorized science activities with teacher present.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30
Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48
Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66
Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84
Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102
Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120
Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138
Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156
Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Habits of Mind Grade Cluster Benchmarks

DOING SAFETY

4. Students demonstrate the importance of safety by applying safety skills in all activities.

• Use supplies, chemicals, and equipment as instructed.

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16

Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129

Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169

Chapter 9, Lesson 2 Process Skill, SE page 191

Domain I: How Humans Think While Understanding the Natural World
Habits of Mind Grade Cluster Benchmarks
DOING SAFETY
4. Students demonstrate the importance of safety by applying safety skills in all activities.
• Document and apply appropriate safety protocols when conducting scientific activities in and out of the classroom.
Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30
Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48
Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66
Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84
Chapter 5, LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102
Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120
Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138
Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156
Chapter 9, LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World
Science and Technology in Society Grade Cluster Benchmarks
RELATING THE NATURE OF TECHNOLOGY TO SCIENCE
5. Students use the problem-solving process to address current issues involving human adaptation in the environment.
• Identify a simple problem.
Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

• Collect, organize, and analyze information from various sources and identify possible alternatives based in the information.

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

• Make inferences for each alternative solution and select a tentative solution.

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

• Test the solution and document the results.

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain I: How Humans Think While Understanding the Natural World

Science and Technology in Society Grade Cluster Benchmarks

RELATING THE NATURE OF TECHNOLOGY TO SCIENCE

5. Students use the problem-solving process to address current issues involving human adaptation in the environment.

Analyze the results and propose recommendations/modifications to the solution.

Chapter 9 LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC INQUIRY

• Describe scientific inquiry including the asking of questions, conducting investigations, answering the questions, and presenting the results to others.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC INQUIRY

• Explain how scientific methods for understanding are not perfect and results are not "magic."

Chapter 1, Lesson 3, Critical Thinking, SE page 19

Chapter 4, Lesson 3, Video C, SE page 85; Critical Thinking, SE page 87

Chapter 5, Lesson 2, Critical Thinking, SE page 101

Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131

Chapter 8, Lesson 3, Video C, SE page 173; Critical Thinking, SE page 175

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC KNOWLEDGE

• Explain how knowledge is acquired through scientific investigation.

Chapter 1, LabTime Hands-On Activity 1, TRB pages 15-17, TG page 30

Chapter 2, LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Chapter 3, LabTime Hands-On Activity 3, TRB pages 51-53, TG page 66

Chapter 4, LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Chapter 5, Lesson 2, Process Skill, SE page 101; LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, LabTime Hands-On Activity 6, TRB pages 105-107, TG page 120

Chapter 7, LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Chapter 9, Lesson 2, Process Skill, SE page 191; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

1. Students explain the process of how scientific knowledge is generated by scientific inquiry, and be able to critique a scientific investigation.

SCIENTIFIC KNOWLEDGE

• Describe the events/people that made major contributions to science and technology throughout history.

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16

Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129

Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169

Chapter 9, Lesson 2 Process Skill, SE page 191

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

2. Students analyze and evaluate the interdependence of science, technology, and society.

INTERDEPENDENCE OF SCIENCE, TECHNOLOGY, AND SOCIETY

• Examine new technology influenced the economy, demography, and environment of the state and nation.

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16

Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129

Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169

Chapter 9, Lesson 2 Process Skill, SE page 191

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

2. Students analyze and evaluate the interdependence of science, technology, and society.

TECHNOLOGICAL IMPACTS

• Analyze how the various technologies have changed the nature of work and affected the economy, demography, and environment.

Chapter 1, Lesson 1, Video A, SE page 3; Video B, SE page 4: Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16

Chapter 5 LabTime Hands-On Activity 5, TRB pages 87-89, TG page 102

Chapter 6, Lesson 3, Video B, SE page 128; Video C, SE page 129

Chapter 7, Lesson 2, Video B, SE page 144; LabTime Hands-On Activity 7, TRB pages 123-125, TG page 138

Chapter 8, Lesson C, Video C, SE page 165; KnowZone, SE pages 168-169

Chapter 9, Lesson 2 Process Skill, SE page 191

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

UNDERSTANDING SCIENTIFIC INQUIRY AND THE CHARACTER OF SCIENTIFIC KNOWLEDGE

2. Students analyze and evaluate the interdependence of science, technology, and society.

HEALTH TECHNOLOGIES

• Explain how technology provides clues about what is happening inside the body and improves the medical treatment of people.

Chapter 1, Lesson 1, Video C, SE page 5; Lesson 2, Video B, SE page 10; Video C, SE page 11; Lesson 3, Video A, SE page 15; Video B, SE page 16; Video C, SE page 19; KnowZone, SE pages 20-21

Domain II: What We Know Today About the World Around Us

Historical Perspectives Grade Cluster Benchmarks

SUSTAINABILITY

3. Students make decisions needed to sustain life on Earth now and for future generations by considering the limited resources and fragile environmental conditions.

SUSTAINING FOOD SUPPLY

• Explore how agricultural technology affect humans and the environment.

This concept is not covered at this level.

Historical Perspectives Grade Cluster Benchmarks

SUSTAINABILITY

3. Students make decisions needed to sustain life on Earth now and for future generations by considering the limited resources and fragile environmental conditions.

CONSERVAION OF RESOURCES

• Examine and explain why there is a need to conserve natural resources, including fossil fuel.

Chapter 3, Lesson 1, Video C, SE page 49; KnowZone, SE pages 58-59; Lesson 3, Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65

Chapter 4, Lesson 3, Video C, SE page 85; Critical Thinking, SE page 87

Chapter 5, Lesson 1, Video C, SE page 93; Critical Thinking, SE page 95; Lesson 2, Video C, SE page 99; Critical Thinking, SE page 101

Chapter 8, Lesson 1, Video C, SE page 159; Lesson 3, Video C, SE page 173; Critical Thinking, SE page 175

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

UNITY AND DIVERSITY

4. Students examine the unity and diversity of organisms and how they can be compared scientifically.

• Explain how different organisms need specific environmental conditions in order to survive.

Chapter 2, Lesson 2, Video B, SE page 32; KnowZone, SE pages 36-37; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

UNITY AND DIVERSITY

4. Students examine the unity and diversity of organisms and how they can be compared scientifically.

• Explain the relationship between structure and function in living things.

Chapter 1, Lesson 1, Video C, SE page 5; Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Critical Thinking, SE page 13; Lesson 3, Video A, SE page 15; Video B, SE page 16; Video C, SE page 17

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

INTERDEPENDENCE

5. Students describe, analyze, and give examples of how organisms are dependent on one another and their environments.

• Identify how plants and animals depend on each other, in the exchange of oxygen, carbon dioxide, and nutrients. Chapter 2, Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41; Critical Thinking, SE page 43; Process Skill, SE page 43

Chapter 3, Lesson 1, Video A, SE page 47; Video B, SE page 48; Video C, SE page 49; Lesson 2, Video A, SE page 53; Video C, SE page 54; Video C, SE page 55; Lesson 3, Video A, SE page 61; Video B, SE page 62; Critical Thinking, SE page 65

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

INTERDEPENDENCE

5. Students describe, analyze, and give examples of how organisms are dependent on one another and their environments.

• Explain how organisms respond to a constantly changing environment.

Chapter 2, Lesson 1, Video C, SE page 27; KnowZone, SE pages 36-37; Lesson 3, Critical Thinking, SE page 43 Chapter 3, Lesson 1, Video B, SE page 48; Critical Thinking, SE page 51; Process Skill, SE page 51; Lesson 3, Video A, SE page 61; Video B, SE page 62; Video C, SE page 63; Critical Thinking, SE page 65

Organisms and Development Grade Cluster Benchmarks

CYCLE OF MATTER AND ENERGY FLOW

6. Students trace the cycling of matter and the flow of energy through systems of living things.

• Diagram how animals' food can be traced back to plants.

Level C: Chapter 3, Lesson 1, Video C, SE page 49 Food Web, SE page 203 Energy Pyramid, SE page 203

See also Level B: Chapter 2, Lesson 2, Video A, SE page 31; Video B, SE page 32; Video C, SE page 33; Critical Thinking, SE page 35; Process Skill, SE page 35; LabTime Hands-On Activity 2, TRB pages 33-35, TG page 48 Food Web, SE page 203 Energy Pyramid, SE page 203

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

CYCLE OF MATTER AND ENERGY FLOW

6. Students trace the cycling of matter and the flow of energy through systems of living things.

• Explain how "energy" is needed for all organisms to stay alive and grow.

Chapter 1, Lesson 1, Video B, SE page 4; Lesson 2, Video A, SE page 9

Chapter 2, Lesson 3, Video A, SE page 39; Video B, SE page 40; Video C, SE page 41

Chapter 3, Lesson 1, Video B, SE page 48

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

CYCLE OF MATTER AND ENERGY FLOW

6. Students trace the cycling of matter and the flow of energy through systems of living things.

• Give examples where organisms are reproducing, growing, dying, and decaying.

Chapter 2, Lesson 1, Video C, SE page 27; Lesson 2, Video A, SE page 31; Critical Thinking, SE page 35 Chapter 3, Lesson 1, Video B, SE page 48; Video C, SE page 49

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

BIOLOGICAL EVOLUTION

7. Students examine evidence for the evolution of life on earth and assess the arguments for natural selection as a scientific explanation of biological evolution.

• Compare fossils to one another and to living organisms and explain their similarities and differences.

Chapter 2, Lesson 1, Video C, SE page 27

Chapter 4, Lesson 3, Video A, SE page 83

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

BIOLOGICAL EVOLUTION

7. Students examine evidence for the evolution of life on earth and assess the arguments for natural selection as a scientific explanation of biological evolution.

• Explain how certain organisms are more likely to survive and reproduce than others in the same environment.

Chapter 2, Lesson 1, Video C, SE page 27; KnowZone, SE pages 36-37

Chapter 3, Lesson 3, Video A, SE page 61; Video B, SE page 62

Organisms and Development Grade Cluster Benchmarks

HEREDITY

8. Students describe how variations in biological traits are passed on to successive generations.

• Explain how inheritance determines the characteristics of the organism.

Chapter 2, Lesson 2, Video B, SE page 32

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

HEREDITY

8. Students describe how variations in biological traits are passed on to successive generations.

• Explain how new variations of cultivated plants and domestic animals have resulted from selective breeding for particular traits.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

CELL, TISSUES, AND ORGANS

9. Students explain the structure, functions, and reproduction of living cells.

• Explain how living things have basic parts that work together to sustain life.

Chapter 1, Lesson 2, Video A, SE page 9; Video B, SE page 10; Video C, SE page 11; Critical Thinking, SE page 13; Process Skill, SE page 13; Lesson 3, Video A, SE page 15; Video B, SE page 16; Video C, SE page 17

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

HUMAN DEVELOPMENT

10. Students explain the important aspects of human development from fertilization to death and compare it with other organisms.

• Compare and contrast the development (i.e., time and nourishment) of the human embryo with other species.

Level C:

Chapter 2, Lesson 2, Video A, SE page 31

See also Level A:

Chapter 1, Lesson 3, Video A, SE page 17; Video B, SE page 18; Video C, SE page 19; Process Skill, SE page 21

See also Level B:

Chapter 1, Lesson 3, Video C, SE page 19

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

HUMAN DEVELOPMENT

10. Students explain the important aspects of human development from fertilization to death and compare it with other organisms.

• Explain the major stages in physical and mental development in human beings, with an understanding that there are variations between individuals.

This concept is not covered at this level.

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

HUMAN BODY FUNCTIONS

• Explain how people obtain energy and materials for survival (e.g., body repair and growth). See Level A:

Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

PHYSICAL HEALTH

• Explain the need for proper diet and exercise to maintain a healthy body over time.

See Level A:

Chapter 3, Lesson 1, Video C, SE page 49; Critical Thinking, SE page 51; Process Skill, SE page 51

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

PHYSICAL HEALTH

• Explain how a healthy body can fight most germs that get inside the body and identify some germs that interfere with the body's defenses.

Chapter 1, KnowZone, SE pages 20-21

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

WELLNESS

11. Students appraise the relationships between their bodily functions and their physical and mental well being.

MENTAL HEALTH

• Give examples that show how physical health can affect people's emotional well-being and vice versa.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

LEARNING

• Express that learning means using what one already knows to make sense out of new experiences or information, not just storing new information in one's head.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

LEARNING

• Explain and demonstrate how repetition and practice can make a skill automatic, such as riding a bike.

This concept is not covered at this level.

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

BEHAVIOR

• Identify situations where members of a group and even people in a crowd sometimes do and say things that they would not do or say on their own.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

Organisms and Development Grade Cluster Benchmarks

LEARNING AND HUMAN BEHAVIOR

12. Students explain what influences learning and human behavior.

BEHAVIOR

• Compare human behavior in the various cultural groups during different time periods and give examples of some behaviors that are unacceptable in almost all cultures, past and present.

This concept is not covered at this level.

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

NATURE OF MATTER

13. Students examine the nature of matter.

• Describe how materials can change from one state to another by heating or cooling (e.g., water cycle, burning candle). Chapter 7, Lesson 1, Video B, SE page 136; Lesson 2, Video A, SE page 143

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

NATURE OF MATTER

13. Students examine the nature of matter.

• Give examples of how the properties of a material can be used to predict how that material will behave under different conditions.

Chapter 7, Lesson 1, Video A, SE page 135; Video B, SE page 136; Video C, SE page 137; Critical Thinking, SE page 139; KnowZone, SE pages 140-141; Lesson 2, Video A, SE page 143; Video B, SE page 144; Video C, SE page 145; Critical Thinking, SE page 147; Process Skill, SE page 147; Lesson 3, Video A, SE page 149; Video B, SE page 150; Video C, SE page 151; Critical Thinking, SE page 153; Process Skill, SE page 153

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

ENERGY, ITS TRANSFORMATION AND MATTER

14. Students identify the different forms of energy and explain transformation of energy and its significance in understanding the structure of matter and the Universe.

• Explain how heat is produced and how it is different from light.

Chapter 8, Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Critical Thinking, SE page 167; Process Skill, SE page 167

The Physical Environment Grade Cluster Benchmarks

ENERGY, ITS TRANSFORMATION AND MATTER

14. Students identify the different forms of energy and explain transformation of energy and its significance in understanding the structure of matter and the Universe.

• Explain how energy goes from more useful to less useful forms.

Chapter 8, Lesson 1, Video A, SE page 157; Video B, SE page 158; Video C, SE page 159; Lesson 2, Video A, SE page 163; Video B, SE page 164; Video C, SE page 165; Lesson 3, Video A, SE page 171; Video B, SE page 172; Video C, SE page 173; Critical Thinking, SE page 175; LabTime Hands-On Activity 8, TRB pages 141-143, TG page 156

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

FORCES, MOTION, SOUND, AND LIGHT

15. Students explain the relationship between force, mass, and motion of objects; they analyze the nature of sound and electromagnetic radiation.

MOTION AND FORCES

• Explain how force and mass can change the speed or direction of an object.

Chapter 9, Lesson 3, Video A, SE page 193; Video B, SE page 194; Video C, SE page 195

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

FORCES, MOTION, SOUND, AND LIGHT

15. Students explain the relationship between force, mass, and motion of objects; they analyze the nature of sound and electromagnetic radiation.

MOTION AND FORCES

• Use time to describe motion.

Chapter 9, KnowZone, SE p[ages 184-185; Lesson 2, Video B, SE page 188; Video C, SE page 189; Critical Thinking, SE page 191; Process Skill, SE page 191; Lesson 3, Video B, SE page 194; Critical Thinking, SE page 197

Domain II: What We Know Today About the World Around Us

The Physical Environment Grade Cluster Benchmarks

FORCES, MOTION, SOUND, AND LIGHT

15. Students explain the relationship between force, mass, and motion of objects; they analyze the nature of sound and electromagnetic radiation.

ELECTROMAGNETIC RADIATION

• Explain that light travels in a straight line until it strikes an object (e.g., reflected by a mirror, refracted by a lens or absorbed by an object).

See Level A:

Chapter 9, Lesson 1, Video A, SE page 179; LabTime Hands-On Activity 9, TRB pages 159-161, TG page 174

See also Level B:

Chapter 8, Lesson 2, Video A, SE page 163; Video C, SE page 165

Earth Systems and The Universe Grade Cluster Benchmarks

UNIVERSE

16. Students discuss current scientific views of the Universe.

• Identify the source of light and heat necessary to maintain the Earth's temperature and to support life.

Chapter 3, Lesson 1, Video C, SE page 49

Chapter 5, Lesson 1, Video A, SE page 91; Video B, SE page 92; Lesson 2, Video B, SE page 98; Lesson 3, Video C, SE page 105

Chapter 6, Lesson 1, Video A, SE page 113; Lesson 2, Video A, SE page 121

Chapter 8, Lesson 1, Video A, SE page 157

The Water Cycle, SE page 204

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

UNIVERSE

16. Students discuss current scientific views of the Universe.

• Describe what constitutes the solar system of which Earth is a part.

Chapter 6, Lesson 1, Video A, SE page 113; Video B, SE page 114; Video C, SE page 115; Critical Thinking, SE page 117; Process Skill, SE page 117; KnowZone, SE pages 118-119

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

UNIVERSE

16. Students discuss current scientific views of the Universe.

• Describe the tools used to gather information about the solar system.

Chapter 6, Lesson 3, Video A, SE page 127; Video B, SE page 128; Video C, SE page 129; Critical Thinking, SE page 131

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES OF THE UNIVERSE

17. Students explain the major forces in nature: gravitational, electrical, and magnetic.

• Describe how the Earth's gravity pulls any object toward it without touching it.

Chapter 6, Lesson 1, Video B, SE page 114; Lesson 2, Video B, SE page 122

Chapter 9, Lesson 1, Video B, SE page 180

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES OF THE UNIVERSE

17. Students explain the major forces in nature: gravitational, electrical, and magnetic.

• Describe how a magnet pulls on all things made of iron and either pushes or pulls on other magnets.

See Level B:

Chapter 9, Lesson 2, Video A, SE page 185

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES OF THE UNIVERSE

17. Students explain the major forces in nature: gravitational, electrical, and magnetic.

• Explain that electrically charged materials pull on other materials and may either push or pull other charged materials. See Level B:

Chapter 9, Lesson 1, Video A, SE page 179; Video B, SE page 180; Critical Thinking, SE page 183; Process Skill, SE page 183

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

EARTH IN THE SOLAR SYSTEM

18. Students discuss how the Earth-moon-sun system causes seasons, moon phases, climate, weather, and global changes.

• Illustrate the water cycle and its relationship to weather and climatic patterns.

Chapter 4, Lesson 1, Video A, SE page 69

Chapter 5, Lesson 2, Video A, SE page 97; Video B, SE page 98; Video C, SE page 99; Critical Thinking, SE page 101; Process Skill, SE page 101

The Water Cycle, SE page 204

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

EARTH IN THE SOLAR SYSTEM

18. Students discuss how the Earth-moon-sun system causes seasons, moon phases, climate, weather, and global changes.

• Explain the phases of the moon and eclipses.

Chapter 6, Lesson 2, Video B, SE page 122; Video C, SE page 123; Critical Thinking, SE page 125 Eclipses, SE page 205

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

EARTH IN THE SOLAR SYSTEM

18. Students discuss how the Earth-moon-sun system causes seasons, moon phases, climate, weather, and global changes.

• Describe the Earth's daily rotation and annual revolution.

Chapter 6, Lesson 2, Video A, SE page 1121; Video C, SE page 123; Process Skill, SE page 125

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES THAT SHAPE THE EARTH

19. Students analyze the scientific view of how the Earth's surface is formed.

• Conclude that rock is composed of different combinations of minerals and/or living things.

Chapter 4, Lesson 3, Video A, SE page 83

Domain II: What We Know Today About the World Around Us

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES THAT SHAPE THE EARTH

19. Students analyze the scientific view of how the Earth's surface is formed.

• Give examples of how waves, wind, water, and ice shape and reshape the Earth's land surface.

Chapter 4, Lesson 2, Video A, SE page 77; Video B, SE page 78; Video C, SE page 79; Critical Thinking, SE page 81; Lesson 3, Process Skill, SE page 87; LabTime Hands-On Activity 4, TRB pages 69-71, TG page 84

Earth Systems and The Universe Grade Cluster Benchmarks

FORCES THAT SHAPE THE EARTH

19. Students analyze the scientific view of how the Earth's surface is formed.

• Explain the causes and effects of earthquakes and volcanoes.

Chapter 4, Lesson 1, Video C, SE page 71; Critical Thinking, SE page 73; Process Skill, SE page 73; KnowZone, SE pages 74-75; Lesson 3, Video A, SE page 83