

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS Connections for Young Learners

	√ Treasures	√ Spinners	√ Fairy Tales	√ Denise Fleming: An Author/Illustrator Study	√ Rolling Along	√ Ready, Set ... Cook	√ Mem Fox	√ Day/Night	√ Holes and Planting	√ Snails and Shells
1. Scientific Processes <i>The student participates in classroom and field investigations following home and school safety procedures. The student is expected to:</i> Demonstrate safe practices during classroom and field investigations. (K.1A)										
Learn how to use and conserve resources and materials. (K.1B)	√	√	√	√	√	√	√	√	√	√
2. Scientific Processes <i>The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:</i>										
Ask questions about organisms, objects, and events. (K.2A)	√	√	√	√	√	√	√	√	√	√
Plan and conduct simple descriptive investigations. (K.2B)	√	√	√	√	√	√	√	√	√	√
Gather information using simple equipment and tools to extend the senses. (K.2C)	√	√	√	√	√	√	√	√	√	√
Construct reasonable explanations using information. (K.2D)	√	√	√	√	√	√	√	√	√	√
Communicate findings about simple investigations. (K.2E)	√	√	√	√	√	√	√	√	√	√
3. Scientific Processes <i>The student knows that information and critical thinking are used in making decisions. The student is expected to:</i>										
Make decisions using information. (K.3A)	√	√	√	√	√	√	√	√	√	√
Discuss and justify the merits of decisions. (K.3B)	√	√	√	√	√	√	√	√	√	√
Explain a problem in his/her own words and propose a solution. (K.3C)	√	√	√	√	√	√	√	√	√	√
4. Scientific Processes <i>The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:</i>										
Identify and use senses as tools of observations. (K.4A)	√	√	√	√	√	√	√	√	√	√
Make observations using tools including hand lenses, balances, cups, bowls, and computers. (K.4B)	√	√	√	√	√	√	√	√	√	√
5. Science Concepts <i>The student knows that organisms, objects, and events have properties and patterns. The student is expected to:</i>										
Describe properties of objects and characteristics of organisms. (K.5A)	√	√	√	√	√	√	√	√	√	√

	Treasures	Spinners	Fairy Tales	Denise Fleming: An Author/Illustrator Study	Rolling Along	Ready, Set ... Cook	Mem Fox	Day/Night	Holes and Planting	Snails and Shells
Observe and identify patterns including seasons, growth, and day and night and predict what happens next. (K.5B)	√	√	Ctr.	√	√	√	√	√	√	Ctr.
Recognize and copy patterns seen in charts and graphs. (K.5C)	√	√	Ctr.	Ctr.	√	√	Ctr.	√	√	√
6. Science Concepts										
<i>The student knows that systems have parts and are composed of organisms and objects. The student is expected to:</i>										
Sort organisms and objects into groups according to their parts and describe how the groups are formed. (K.6A)	√	√	√	√	√	√	√	√	√	√
Record observations about parts of plants including leaves, roots, stems, and flowers. (K.6B)	Ctr.	√	Ctr.	√	Ctr.	Ctr.	Ctr.	Ctr.	√	√
Record observations about parts of animals including wings, feet, heads, and tails. (K.6C)	Ctr.	√	Ctr.	√	Ctr.	Ctr.	Ctr.	√	Ctr.	√
Identify parts that, when separated from the whole, may result in the part or the whole not working, such as cars without wheels and plants without roots. (K.6D)	Ctr.	√	Ctr.	Ctr.	√	Ctr.	Ctr.	√	√	Ctr.
Manipulate parts of objects such as toys, vehicles, or construction sets that, when put together, can do things they cannot do by themselves. (K.6E)	Ctr.	√	Ctr.	√	√	Ctr.	√	√	√	√
7. Science Concepts										
<i>The student knows that many types of change occur. The student is expected to:</i>										
Observe, describe, and record changes in size, mass, color, position, quantity, time, temperature, sounds, and movement. (K.7A)	√	√	Ctr.	√	√	√	√	√	√	√
Identify that heat causes change, such as ice melting or the Sun warming the air and compare objects according to temperature. (K.7B)					√	√		√		
Observe and record weather changes from day to day and over seasons. (K.7C)	Ctr.	Ctr.	Ctr.	Ctr.	Ctr.	Ctr.	Ctr.	√	Ctr.	Ctr.
Observe and record stages in the life cycle of organisms in their natural environment. (K.7D)						√			√	√
8. Science Concepts										
<i>The student knows the difference between living organisms and nonliving objects. The student is expected to:</i>										
Identify a particular organism or object as living or nonliving. (K.8A)	Ctr.	Ctr.	Ctr.	Ctr.	Ctr.	Ctr.	Ctr.	Ctr.	√	√
Group organisms and objects as living and nonliving. (K.8B)	Ctr.	Ctr.	Ctr.	Ctr.	Ctr.	Ctr.	Ctr.	√	Ctr.	√
9. Science Concepts										
<i>The student knows that living organisms have basic needs.</i>										
<i>The student is expected to:</i>										
Identify basic needs of living organisms. (K.9A)	Ctr.	Ctr.	Ctr.	√	Ctr.	√	Ctr.	√	√	√

Treasures										
Spinners										
Fairy Tales										
Denise Fleming: An Author/Illustrator Study										
Rolling Along										
Ready, Set ... Cook										
Mem Fox										
Day/Night										
Holes and Planting									✓	✓
Snails and Shells										

Give examples of how living organisms depend on each other. (K.9B)

Identify ways that the earth can provide resources for life. (K.9C)

Ctr. Ctr. Ctr. ✓ Ctr. Ctr. Ctr. Ctr. ✓ ✓

10. Science Concepts

The student knows that the natural world includes rocks, soil, and water. The student is expected to:

Observe and describe properties of rocks, soil, and water. (K.10A)

Ctr. Ctr. Ctr. Ctr. Ctr. Ctr. Ctr. Ctr. ✓ ✓

Give examples of ways that rocks, soil, and water are useful. (K.10B)

Ctr. Ctr. Ctr. Ctr. Ctr. Ctr. Ctr. Ctr. ✓ ✓

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 1A ME AND MY SENSES

	I Spy ... with All My Senses	Pancakes for All the Senses	Sensing Is Believing	An Apple by Any Other Name ...	The Better to Hear You	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:</i> Demonstrate safe practices during classroom and field investigations (1.1A)	√	√	√	√	√	
Learn how to use and conserve resources and materials. (1.1B)	√	√	√	√	√	
2. Scientific Processes <i>The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:</i> Ask questions about organisms, objects, and events. (1.2A)	√	√	√	√	√	
Plan and conduct simple descriptive investigations. (1.2B)	√	√	√	√	√	
Gather information using simple equipment and tools to extend the senses. (1.2C)	√	√	√	√	√	
Construct reasonable explanations and draw conclusions. (1.2D)	√	√	√	√	√	
Communicate explanations about investigations. (1.2E)	√	√	√	√	√	
3. Scientific Processes <i>The student knows that information and critical thinking are used in making decisions. The student is expected to:</i> Make decisions using information. (1.3A)	√	√	√	√	√	
Discuss and justify the merits of decisions. (1.3B)	√	√	√	√	√	
Explain a problem in his/her own words and identify a task and solution related to the problem. (1.3C)	√	√	√	√	√	
4. Scientific Processes <i>The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:</i> Collect information using tools including hand lenses, clocks, computers, thermometers, and balances. (1.4A)		√	√	√	√	
Record and compare collected information. (1.4B)	√	√	√	√	√	
Measure organisms and objects and parts of organisms and objects, using non-standard units such as paper clips, hands, and pencils. (1.4C)		√		√	√	

	√ I Spy ... with All My Senses	√ Pancakes for All the Senses	√ Sensing Is Believing	√ An Apple by Any Other Name ...	√ The Better to Hear You	Found in Other Grades Listed
5. Science Concepts <i>The student knows that organisms, objects, and events have properties and patterns. The student is expected to:</i> Sort objects and events based on properties and patterns. (1.5A)	√	√	√	√	√	
Identify, predict, and create patterns including those seen in charts, graphs, and numbers. (1.5B)				√	√	
6. Science Concepts <i>The student knows that systems have parts and are composed of organisms and objects. The student is expected to:</i> Sort organisms and objects according to their parts and characteristics. (1.6A)	√	√	√	√	√	
Observe and describe the parts of plants and animals. (1.6B)				√	√	
Manipulate objects such as toys, vehicles, or construction sets so that the parts are separated from the whole which may result in the part or the whole not working. (1.6C)			√			K,2, 3
Identify parts that, when put together, can do things they cannot do by themselves, such as a working camera with film, a car moving with a motor, and an airplane flying with fuel. (1.6D)	√	√	√	√	√	
7. Science Concepts <i>The student knows that many types of change occur. The student is expected to:</i> Observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement. (1.7A)				√	√	
Identify and test ways that heat may cause change such as when ice melts. (1.7B)		√		√		K,2
Observe and record changes in weather from day to day and over seasons. (1.7C)						
Observe and record changes in the life cycle of organisms. (1.7D)						
8. Science Concepts <i>The student distinguishes between living organisms and nonliving objects. The student is expected to:</i> Group living organisms and nonliving objects. (1.8A)	√					
Compare living organisms and nonliving objects. (1.8B)	√					
9. Science Concepts <i>The student knows that living organisms have basic needs. The student is expected to:</i> Identify characteristics of living organisms that allow their basic needs to be met. (1.9A)				√	√	
Compare and give examples of the ways living organisms depend on each other for their basic needs. (1.9B)			√			

10. Science Concepts

The student knows that the natural world includes rocks, soil, and water. The student is expected to:

Identify and describe a variety of natural sources of water including streams, lakes, and oceans. (1.10A)

Observe and describe differences in rocks and soil samples. (1.10B)

Identify how rocks, soil, and water are used and how they can be recycled. (1.10C)

I Spy ... with All My Senses

Pancakes for All the Senses

Sensing Is Believing

An Apple by Any Other Name ...

The Better to Hear You

Found in Other Grades Listed

K,2,
3

K,3

K,2,
3

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 1B MY MARVELOUS MACHINE

	Me ... Outside	Me ... Inside Out	When I Was a Baby	Getting to Know the Animals	My Body Needs	Where Does It Come From?	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:</i> Demonstrate safe practices during classroom and field investigations (1.1A)	√	√	√	√	√	√	
Learn how to use and conserve resources and materials. (1.1B)	√	√	√	√	√	√	
2. Scientific Processes <i>The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:</i> Ask questions about organisms, objects, and events. (1.2A)	√	√	√	√	√	√	
Plan and conduct simple descriptive investigations. (1.2B)	√	√	√	√	√	√	
Gather information using simple equipment and tools to extend the senses. (1.2C)	√	√	√	√	√	√	
Construct reasonable explanations and draw conclusions. (1.2D)	√	√	√	√	√	√	
Communicate explanations about investigations. (1.2E)	√	√	√	√	√	√	
3. Scientific Processes <i>The student knows that information and critical thinking are used in making decisions. The student is expected to:</i> Make decisions using information. (1.3A)	√	√	√	√	√	√	
Discuss and justify the merits of decisions. (1.3B)	√	√	√	√	√	√	
Explain a problem in his/her own words and identify a task and solution related to the problem. (1.3C)	√	√	√	√	√	√	
4. Scientific Processes <i>The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:</i> Collect information using tools including hand lenses, clocks, computers, thermometers, and balances. (1.4A)	√	√	√	√		√	
Record and compare collected information. (1.4B)	√	√	√	√	√	√	
Measure organisms and objects and parts of organisms and objects, using non-standard units such as paper clips, hands, and pencils. (1.4C)	√	√	√		√	√	

	Me ... Outside	Me ... Inside Out	When I Was a Baby	Getting to Know the Animals	My Body Needs	Where Does It Come From?	Found in Other Grades Listed
5. Science Concepts <i>The student knows that organisms, objects, and events have properties and patterns. The student is expected to:</i> Sort objects and events based on properties and patterns. (1.5A)	√	√	√	√	√	√	
Identify, predict, and create patterns including those seen in charts, graphs, and numbers. (1.5B)	√	√	√		√	√	
6. Science Concepts <i>The student knows that systems have parts and are composed of organisms and objects. The student is expected to:</i> Sort organisms and objects according to their parts and characteristics. (1.6A)	√	√	√	√	√	√	
Observe and describe the parts of plants and animals. (1.6B)			√	√	√	√	
Manipulate objects such as toys, vehicles, or construction sets so that the parts are separated from the whole which may result in the part or the whole not working. (1.6C)							K,2, 3
Identify parts that, when put together, can do things they cannot do by themselves, such as a working camera with film, a car moving with a motor, and an airplane flying with fuel. (1.6D)		√					
7. Science Concepts <i>The student knows that many types of change occur. The student is expected to:</i> Observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement. (1.7A)	√	√	√			√	
Identify and test ways that heat may cause change such as when ice melts. (1.7B)							K,2
Observe and record changes in weather from day to day and over seasons. (1.7C)							
Observe and record changes in the life cycle of organisms. (1.7D)	√		√	√		√	
8. Science Concepts <i>The student distinguishes between living organisms and nonliving objects. The student is expected to:</i> Group living organisms and nonliving objects. (1.8A)							
Compare living organisms and nonliving objects. (1.8B)							
9. Science Concepts <i>The student knows that living organisms have basic needs. The student is expected to:</i> Identify characteristics of living organisms that allow their basic needs to be met. (1.9A)	√	√	√	√	√	√	
Compare and give examples of the ways living organisms depend on each other for their basic needs. (1.9B)			√	√	√	√	

10. Science Concepts

The student knows that the natural world includes rocks, soil, and water. The student is expected to:

Identify and describe a variety of natural sources of water including streams, lakes, and oceans. (1.10A)

Observe and describe differences in rocks and soil samples. (1.10B)

Identify how rocks, soil, and water are used and how they can be recycled. (1.10C)

Me ... Outside

Me ... Inside Out

When I Was a Baby

Getting to Know the Animals

My Body Needs

Where Does It Come From?

Found in Other Grades Listed

K,2,3

K,3

K,2,3

TEXAS

ESSENTIAL KNOWLEDGE AND SKILLS

1C Me and the People and Places Around Me

	Celebrating Me	Family Ties	You've Got to Have Friends	Special Places	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:</i>					
Demonstrate safe practices during classroom and field investigations (1.1A)	√	√	√	√	
Learn how to use and conserve resources and materials. (1.1B)	√	√	√	√	
2. Scientific Processes <i>The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:</i>					
Ask questions about organisms, objects, and events. (1.2A)	√	√	√	√	
Plan and conduct simple descriptive investigations. (1.2B)	√	√	√		
Gather information using simple equipment and tools to extend the senses. (1.2C)	√	√	√	√	
Construct reasonable explanations and draw conclusions. (1.2D)	√	√	√		
Communicate explanations about investigations. (1.2E)	√	√	√	√	
3. Scientific Processes <i>The student knows that information and critical thinking are used in making decisions. The student is expected to:</i>					
Make decisions using information. (1.3A)	√	√	√		
Discuss and justify the merits of decisions. (1.3B)	√	√	√		
Explain a problem in his/her own words and identify a task and solution related to the problem. (1.3C)	√	√			
4. Scientific Processes <i>The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:</i>					
Collect information using tools including hand lenses, clocks, computers, thermometers, and balances. (1.4A)	√	√	√	√	
Record and compare collected information. (1.4B)	√	√	√	√	
Measure organisms and objects and parts of organisms and objects, using non-standard units such as paper clips, hands, and pencils. (1.4C)	√	√	√		

	Celebrating Me	Family Ties	You've Got to Have Friends	Special Places	Found in Other Grades Listed
5. Science Concepts <i>The student knows that organisms, objects, and events have properties and patterns. The student is expected to:</i> Sort objects and events based on properties and patterns. (1.5A)	√	√	√	√	
Identify, predict, and create patterns including those seen in charts, graphs, and numbers. (1.5B)		√			
6. Science Concepts <i>The student knows that systems have parts and are composed of organisms and objects. The student is expected to:</i> Sort organisms and objects according to their parts and characteristics. (1.6A)	√	√	√		
Observe and describe the parts of plants and animals. (1.6B)					
Manipulate objects such as toys, vehicles, or construction sets so that the parts are separated from the whole which may result in the part or the whole not working. (1.6C)					K,2, 3
Identify parts that, when put together, can do things they cannot do by themselves, such as a working camera with film, a car moving with a motor, and an airplane flying with fuel. (1.6D)					
7. Science Concepts <i>The student knows that many types of change occur. The student is expected to:</i> Observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement. (1.7A)	√	√			
Identify and test ways that heat may cause change such as when ice melts. (1.7B)					K,2
Observe and record changes in weather from day to day and over seasons. (1.7C)					
Observe and record changes in the life cycle of organisms. (1.7D)				√	
8. Science Concepts <i>The student distinguishes between living organisms and nonliving objects. The student is expected to:</i> Group living organisms and nonliving objects. (1.8A)					
Compare living organisms and nonliving objects. (1.8B)					
9. Science Concepts <i>The student knows that living organisms have basic needs. The student is expected to:</i> Identify characteristics of living organisms that allow their basic needs to be met. (1.9A)	√	√			
Compare and give examples of the ways living organisms depend on each other for their basic needs. (1.9B)			√	√	

10. Science Concepts

The student knows that the natural world includes rocks, soil, and water. The student is expected to:

Identify and describe a variety of natural sources of water including streams, lakes, and oceans. (1.10A)

Observe and describe differences in rocks and soil samples. (1.10B)

Identify how rocks, soil, and water are used and how they can be recycled. (1.10C)

Celebrating Me

Family Ties

You've Got to Have Friends

Special Places

Found in Other Grades Listed

K, 2, 3

K, 3

K, 2, 3

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 1D Structures All Around

	What's in a Shape?	A House Is a House	Build Me a ...	Making It Work	All Our Boxes Form a ...
1. Scientific Processes <i>The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:</i>					
Demonstrate safe practices during classroom and field investigations (1.1A)	√	√	√	√	√
Learn how to use and conserve resources and materials. (1.1B)	√	√	√	√	√
2. Scientific Processes <i>The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:</i>					
Ask questions about organisms, objects, and events. (1.2A)	√	√	√	√	√
Plan and conduct simple descriptive investigations. (1.2B)	√	√	√	√	√
Gather information using simple equipment and tools to extend the senses. (1.2C)	√	√	√	√	√
Construct reasonable explanations and draw conclusions. (1.2D)	√	√	√	√	√
Communicate explanations about investigations. (1.2E)	√	√	√	√	√
3. Scientific Processes <i>The student knows that information and critical thinking are used in making decisions. The student is expected to:</i>					
Make decisions using information. (1.3A)	√	√	√	√	√
Discuss and justify the merits of decisions. (1.3B)	√	√	√	√	√
Explain a problem in his/her own words and identify a task and solution related to the problem. (1.3C)	√	√	√	√	√
4. Scientific Processes <i>The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:</i>					
Collect information using tools including hand lenses, clocks, computers, thermometers, and balances. (1.4A)					√
Record and compare collected information. (1.4B)	√	√	√	√	√
Measure organisms and objects and parts of organisms and objects, using non-standard units such as paper clips, hands, and pencils. (1.4C)					√

Found in Other Grades Listed

5. Science Concepts

The student knows that organisms, objects, and events have properties and patterns. The student is expected to:

Sort objects and events based on properties and patterns. (1.5A)

What's in a Shape?	A House Is a House	Build Me a ...	Making It Work	All Our Boxes Form a ...
√	√	√	√	√

Identify, predict, and create patterns including those seen in charts, graphs, and numbers. (1.5B)

√	√	√		√
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6. Science Concepts

The student knows that systems have parts and are composed of organisms and objects. The student is expected to:

Sort organisms and objects according to their parts and characteristics. (1.6A)

√	√	√	√	√
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Observe and describe the parts of plants and animals. (1.6B)

	√			
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Manipulate objects such as toys, vehicles, or construction sets so that the parts are separated from the whole which may result in the part or the whole not working. (1.6C)

			√	K,2, 3
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Identify parts that, when put together, can do things they cannot do by themselves, such as a working camera with film, a car moving with a motor, and an airplane flying with fuel. (1.6D)

√	√	√	√	√
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7. Science Concepts

The student knows that many types of change occur. The student is expected to:

Observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement. (1.7A)

√		√	√	
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Identify and test ways that heat may cause change such as when ice melts. (1.7B)

				K,2
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Observe and record changes in weather from day to day and over seasons. (1.7C)

Observe and record changes in the life cycle of organisms. (1.7D)

8. Science Concepts

The student distinguishes between living organisms and nonliving objects. The student is expected to:

Group living organisms and nonliving objects. (1.8A)

		√		
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Compare living organisms and nonliving objects. (1.8B)

√	√	√		
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9. Science Concepts

The student knows that living organisms have basic needs.

The student is expected to:

Identify characteristics of living organisms that allow their basic needs to be met. (1.9A)

	√	√		
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Compare and give examples of the ways living organisms depend on each other for their basic needs. (1.9B)

10. Science Concepts

The student knows that the natural world includes rocks, soil, and water. The student is expected to:

Identify and describe a variety of natural sources of water including streams, lakes, and oceans. (1.10A)

Observe and describe differences in rocks and soil samples. (1.10B)

Identify how rocks, soil, and water are used and how they can be recycled. (1.10C)

What's in a Shape?

A House Is a House

Build Me a ...

Making It Work

All Our Boxes Form a ...

Found in Other Grades Listed

K,2,3

K,3

K,2,3

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 1E Me and Others

	Together Is Better	People in My Neighborhood	R and R	Getting Along	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:</i> Demonstrate safe practices during classroom and field investigations (1.1A)	√	√	√	√	
Learn how to use and conserve resources and materials. (1.1B)	√	√	√	√	
2. Scientific Processes <i>The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:</i> Ask questions about organisms, objects, and events. (1.2A)	√	√	√	√	
Plan and conduct simple descriptive investigations. (1.2B)	√				
Gather information using simple equipment and tools to extend the senses. (1.2C)	√	√	√	√	
Construct reasonable explanations and draw conclusions. (1.2D)	√	√	√	√	
Communicate explanations about investigations. (1.2E)	√	√	√	√	
3. Scientific Processes <i>The student knows that information and critical thinking are used in making decisions. The student is expected to:</i> Make decisions using information. (1.3A)	√	√	√	√	
Discuss and justify the merits of decisions. (1.3B)	√	√	√	√	
Explain a problem in his/her own words and identify a task and solution related to the problem. (1.3C)	√	√	√	√	
4. Scientific Processes <i>The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:</i> Collect information using tools including hand lenses, clocks, computers, thermometers, and balances. (1.4A)					
Record and compare collected information. (1.4B)	√	√	√	√	
Measure organisms and objects and parts of organisms and objects, using non-standard units such as paper clips, hands, and pencils. (1.4C)	√				

	Together Is Better	People in My Neighborhood	R and R	Getting Along	Found in Other Grades Listed
<p>5. Science Concepts <i>The student knows that organisms, objects, and events have properties and patterns. The student is expected to:</i> Sort objects and events based on properties and patterns. (1.5A)</p> <p>Identify, predict, and create patterns including those seen in charts, graphs, and numbers. (1.5B)</p>	√	√	√	√	
<p>6. Science Concepts <i>The student knows that systems have parts and are composed of organisms and objects. The student is expected to:</i> Sort organisms and objects according to their parts and characteristics. (1.6A)</p> <p>Observe and describe the parts of plants and animals. (1.6B)</p> <p>Manipulate objects such as toys, vehicles, or construction sets so that the parts are separated from the whole which may result in the part or the whole not working. (1.6C)</p> <p>Identify parts that, when put together, can do things they cannot do by themselves, such as a working camera with film, a car moving with a motor, and an airplane flying with fuel. (1.6D)</p>	√	√			K, 2, 3
<p>7. Science Concepts <i>The student knows that many types of change occur. The student is expected to:</i> Observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement. (1.7A)</p> <p>Identify and test ways that heat may cause change such as when ice melts. (1.7B)</p> <p>Observe and record changes in weather from day to day and over seasons. (1.7C)</p> <p>Observe and record changes in the life cycle of organisms. (1.7D)</p>	√				K, 2
<p>8. Science Concepts <i>The student distinguishes between living organisms and nonliving objects. The student is expected to:</i> Group living organisms and nonliving objects. (1.8A)</p> <p>Compare living organisms and nonliving objects. (1.8B)</p>		√			
<p>9. Science Concepts <i>The student knows that living organisms have basic needs. The student is expected to:</i> Identify characteristics of living organisms that allow their basic needs to be met. (1.9A)</p> <p>Compare and give examples of the ways living organisms depend on each other for their basic needs. (1.9B)</p>	√	√	√	√	
	√	√	√	√	

10. Science Concepts

The student knows that the natural world includes rocks, soil, and water. The student is expected to:

Identify and describe a variety of natural sources of water including streams, lakes, and oceans. (1.10A)

Observe and describe differences in rocks and soil samples. (1.10B)

Identify how rocks, soil, and water are used and how they can be recycled. (1.10C)

✓ Together Is Better

People in My Neighborhood

R and R

Getting Along

Found in Other Grades Listed
K, 2, 3

K, 3

✓

K, 2, 3

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 1F My Natural World

	Recycle Cycle	Where Did It Go?	All My Life's a Cycle	A Season for Everything	As the World Turns	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:</i> Demonstrate safe practices during classroom and field investigations (1.1A)	√	√	√	√	√	
Learn how to use and conserve resources and materials. (1.1B)	√	√	√	√	√	
2. Scientific Processes <i>The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:</i> Ask questions about organisms, objects, and events. (1.2A)	√	√	√	√	√	
Plan and conduct simple descriptive investigations. (1.2B)	√	√	√	√	√	
Gather information using simple equipment and tools to extend the senses. (1.2C)	√	√	√	√	√	
Construct reasonable explanations and draw conclusions. (1.2D)	√	√	√	√	√	
Communicate explanations about investigations. (1.2E)	√	√	√	√	√	
3. Scientific Processes <i>The student knows that information and critical thinking are used in making decisions. The student is expected to:</i> Make decisions using information. (1.3A)	√	√	√	√	√	
Discuss and justify the merits of decisions. (1.3B)	√	√	√	√	√	
Explain a problem in his/her own words and identify a task and solution related to the problem. (1.3C)	√	√	√	√	√	
4. Scientific Processes <i>The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:</i> Collect information using tools including hand lenses, clocks, computers, thermometers, and balances. (1.4A)			√	√	√	
Record and compare collected information. (1.4B)	√	√	√	√	√	
Measure organisms and objects and parts of organisms and objects, using non-standard units such as paper clips, hands, and pencils. (1.4C)		√	√	√	√	

	Recycle Cycle	Where Did It Go?	All My Life's a Cycle	A Season for Everything	As the World Turns	Found in Other Grades Listed
5. Science Concepts <i>The student knows that organisms, objects, and events have properties and patterns. The student is expected to:</i> Sort objects and events based on properties and patterns. (1.5A)	√	√	√	√	√	
Identify, predict, and create patterns including those seen in charts, graphs, and numbers. (1.5B)			√	√	√	
6. Science Concepts <i>The student knows that systems have parts and are composed of organisms and objects. The student is expected to:</i> Sort organisms and objects according to their parts and characteristics. (1.6A)	√	√	√	√	√	
Observe and describe the parts of plants and animals. (1.6B)		√	√	√		
Manipulate objects such as toys, vehicles, or construction sets so that the parts are separated from the whole which may result in the part or the whole not working. (1.6C)			√			K,2, 3
Identify parts that, when put together, can do things they cannot do by themselves, such as a working camera with film, a car moving with a motor, and an airplane flying with fuel. (1.6D)						
7. Science Concepts <i>The student knows that many types of change occur. The student is expected to:</i> Observe, measure, and record changes in size, mass, color, position, quantity, sound, and movement. (1.7A)		√	√	√	√	
Identify and test ways that heat may cause change such as when ice melts. (1.7B)				√		K,2
Observe and record changes in weather from day to day and over seasons. (1.7C)	√	√	√	√	√	
Observe and record changes in the life cycle of organisms. (1.7D)		√	√	√		
8. Science Concepts <i>The student distinguishes between living organisms and nonliving objects. The student is expected to:</i> Group living organisms and nonliving objects. (1.8A)		√				
Compare living organisms and nonliving objects. (1.8B)		√				
9. Science Concepts <i>The student knows that living organisms have basic needs. The student is expected to:</i> Identify characteristics of living organisms that allow their basic needs to be met. (1.9A)		√	√	√		
Compare and give examples of the ways living organisms depend on each other for their basic needs. (1.9B)		√	√			

10. Science Concepts

The student knows that the natural world includes rocks, soil, and water. The student is expected to:

Identify and describe a variety of natural sources of water including streams, lakes, and oceans. (1.10A)

Observe and describe differences in rocks and soil samples. (1.10B)

Identify how rocks, soil, and water are used and how they can be recycled. (1.10C)

Recycle Cycle

Where Did It Go?

All My Life's a Cycle

A Season for Everything

As the World Turns

Found in Other Grades Listed

K, 2, 3

K, 3

K, 2, 3

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 2A On the Water

	The Unsinkable Floaters	Ship Shape	Higher and Higher	Shaping the Hull	Powering Along the Water	Our Harbor with Boats Afloat	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:</i> Demonstrate safe practices during classroom and field investigations (2.1A)	√	√	√	√	√	√	
Learn how to use and conserve resources and dispose of materials. (2.1B)	√	√	√	√	√	√	
2. Scientific Processes <i>The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:</i> Ask questions about organisms, objects, and events. (2.2A)	√	√	√	√	√	√	
Plan and conduct simple descriptive investigations. (2.2B)	√	√	√	√	√	√	
Compare results of investigations with what students and scientists know about the world. (2.2C)	√	√	√	√	√	√	
Gather information using simple equipment and tools to extend the senses. (2.2D)	√	√	√	√	√	√	
Construct reasonable explanations and draw conclusions using information and prior knowledge. (2.2E)	√	√	√	√	√	√	
Communicate explanations about investigations. (2.2F)	√	√	√	√	√	√	
3. Scientific Processes <i>The student knows that information and critical thinking are used in making decisions. The student is expected to:</i> Make decisions using information. (2.3A)	√	√	√	√	√	√	
Discuss and justify the merits of decisions. (2.3B)	√	√	√	√	√	√	
Explain a problem in his/her own words and identify a task and solution related to the problem. (2.3C)	√	√	√	√	√	√	
4. Scientific Processes <i>The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:</i> Collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances. (2.4A)	√	√	√	√	√	√	

	The Unsinkable Floaters	Ship Shape	Higher and Higher	Shaping the Hull	Powering Along the Water	Our Harbor with Boats Afloat	Found in Other Grades Listed
Measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units. (2.4B)	√	√	√	√	√	√	
5. Science Concepts							
<i>The student knows that organisms, objects, and events have properties and patterns. The student is expected to:</i>							
Classify and sequence organisms, objects, and events based on properties and patterns. (2.5A)	√	√	√	√	√	√	
Identify, predict, replicate, and create patterns including those seen in charts, graphs, and numbers. (2.5B)	√	√	√	√	√	√	
6. Science Concepts							
<i>The student knows that systems have parts and are composed of organisms and objects. The student is expected to:</i>							
Manipulate, predict, and identify parts that, when separated from the whole, may result in the part or the whole not working, such as flashlights without batteries and plants without leaves. (2.6A)	√	√	√	√	√	√	
Manipulate, predict, and identify parts that, when put together, can do things they cannot do by themselves, such as a guitar and guitar strings. (2.6B)	√	√	√	√	√	√	
Observe and record the functions of plant parts. (2.6C)							
Observe and record the functions of animal parts. (2.6D)							
7. Science Concepts							
<i>The student knows that many types of change occur. The student is expected to:</i>							
Observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement. (2.7A)	√	√	√	√	√	√	
Identify, predict, and test uses of heat to cause change such as melting and evaporation. (2.7B)							
Demonstrate a change in the motion of an object by giving the object a push or a pull. (2.7C)					√	√	√
Observe, measure, and record changes in weather, the night sky, and seasons. (2.7D)							
8. Science Concepts							
<i>The student distinguishes between living organisms and nonliving objects. The student is expected to:</i>							
Identify characteristics of living organisms. (2.8A)	√	√	√		√	√	
Identify characteristics of nonliving objects. (2.8B)		√	√	√	√	√	

9. Science Concepts

The student knows that living organisms have basic needs.

The student is expected to:

Identify the external characteristics of different kinds of plants and animals that allow their needs to be met. (2.9A)

Compare and give examples of the ways living organisms depend on each other and on their environments. (2.9B)

10. Science Concepts

The student knows that the natural world includes rocks, soil, water, and gases of the atmosphere. The student is expected to:

Describe and illustrate the water cycle. (2.10A)

Identify uses of natural resources. (2.10B)

The Unsinkable Floaters						
Ship Shape						
Higher and Higher						
Shaping the Hull						
Powering Along the Water						
Our Harbor with Boats Afloat						
Found in Other Grades Listed						
	√	√	√	√	√	√

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 2B We Are on Our Way

1. Scientific Processes

The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:

Demonstrate safe practices during classroom and field investigations (2.1A)

Learn how to use and conserve resources and dispose of materials. (2.1B)

2. Scientific Processes

The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:

Ask questions about organisms, objects, and events. (2.2A)

Plan and conduct simple descriptive investigations. (2.2B)

Compare results of investigations with what students and scientists know about the world. (2.2C)

Gather information using simple equipment and tools to extend the senses. (2.2D)

Construct reasonable explanations and draw conclusions using information and prior knowledge. (2.2E)

Communicate explanations about investigations. (2.2F)

3. Scientific Processes

The student knows that information and critical thinking are used in making decisions. The student is expected to:

Make decisions using information. (2.3A)

Discuss and justify the merits of decisions. (2.3B)

Explain a problem in his/her own words and identify a task and solution related to the problem. (2.3C)

4. Scientific Processes

The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:

Collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances. (2.4A)

Mapping the Journey
Getting Packed
Ice Keepers
It's All in the Container
Let It Blow!
Where Does It All Go?
Falling Water
The Boater's Log *

Found in Other Grades Listed

√ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √

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√ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √

Measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units. (2.4B)

Mapping the Journey	√						
Getting Packed	√						
Ice Keepers	√						
It's All in the Container	√						
Let It Blow!	√						
Where Does It All Go?	√						
Falling Water	√						
The Boater's Log *	√						

5. Science Concepts

The student knows that organisms, objects, and events have properties and patterns. The student is expected to:

Classify and sequence organisms, objects, and events based on properties and patterns. (2.5A)

√	√	√	√	√	√	√	√
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Identify, predict, replicate, and create patterns including those seen in charts, graphs, and numbers. (2.5B)

√	√	√	√	√	√	√	√
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6. Science Concepts

The student knows that systems have parts and are composed of organisms and objects. The student is expected to:

Manipulate, predict, and identify parts that, when separated from the whole, may result in the part or the whole not working, such as flashlights without batteries and plants without leaves. (2.6A)

							√
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Manipulate, predict, and identify parts that, when put together, can do things they cannot do by themselves, such as a guitar and guitar strings. (2.6B)

						√	√
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Observe and record the functions of plant parts. (2.6C)

Observe and record the functions of animal parts. (2.6D)

7. Science Concepts

The student knows that many types of change occur. The student is expected to:

Observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement. (2.7A)

√	√	√	√	√	√	√	√
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Identify, predict, and test uses of heat to cause change such as melting and evaporation. (2.7B)

						√	√
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Demonstrate a change in the motion of an object by giving the object a push or a pull. (2.7C)

Observe, measure, and record changes in weather, the night sky, and seasons. (2.7D)

						√	√
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8. Science Concepts

The student distinguishes between living organisms and nonliving objects. The student is expected to:

Identify characteristics of living organisms. (2.8A)

						√	√
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Identify characteristics of nonliving objects. (2.8B)

√	√						√
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9. Science Concepts

The student knows that living organisms have basic needs.

The student is expected to:

Identify the external characteristics of different kinds of plants and animals that allow their needs to be met. (2.9A)

Compare and give examples of the ways living organisms depend on each other and on their environments. (2.9B)

10. Science Concepts

The student knows that the natural world includes rocks, soil, water, and gases of the atmosphere. The student is expected to:

Describe and illustrate the water cycle. (2.10A)

Identify uses of natural resources. (2.10B)

Mapping the Journey
 Getting Packed
 Ice Keepers
 It's All in the Container
 Let It Blow!
 Where Does It All Go?
 Falling Water
 The Boater's Log*
 Found in Other Grades Listed

√ √ √ √ √ √ √

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 2C Sink or Swim

1. Scientific Processes

The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:

Demonstrate safe practices during classroom and field investigations (2.1A)

Learn how to use and conserve resources and dispose of materials. (2.1B)

2. Scientific Processes

The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:

Ask questions about organisms, objects, and events. (2.2A)

Plan and conduct simple descriptive investigations. (2.2B)

Compare results of investigations with what students and scientists know about the world. (2.2C)

Gather information using simple equipment and tools to extend the senses. (2.2D)

Construct reasonable explanations and draw conclusions using information and prior knowledge. (2.2E)

Communicate explanations about investigations. (2.2F)

3. Scientific Processes

The student knows that information and critical thinking are used in making decisions. The student is expected to:

Make decisions using information. (2.3A)

Discuss and justify the merits of decisions. (2.3B)

Explain a problem in his/her own words and identify a task and solution related to the problem. (2.3C)

4. Scientific Processes

The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:

Collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances. (2.4A)

✓ We're All Wet!

✓ What a Mess!

✓ There's a Hole in the ...

✓ It's Time to Roll Along

Found in Other Grades Listed

Measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units. (2.4B)	√	√	√	√
5. Science Concepts <i>The student knows that organisms, objects, and events have properties and patterns. The student is expected to:</i> Classify and sequence organisms, objects, and events based on properties and patterns. (2.5A)	√	√	√	√
Identify, predict, replicate, and create patterns including those seen in charts, graphs, and numbers. (2.5B)	√	√	√	√
6. Science Concepts <i>The student knows that systems have parts and are composed of organisms and objects. The student is expected to:</i> Manipulate, predict, and identify parts that, when separated from the whole, may result in the part or the whole not working, such as flashlights without batteries and plants without leaves. (2.6A)		√	√	√
Manipulate, predict, and identify parts that, when put together, can do things they cannot do by themselves, such as a guitar and guitar strings. (2.6B)	√	√	√	√
Observe and record the functions of plant parts. (2.6C)				
Observe and record the functions of animal parts. (2.6D)				
7. Science Concepts <i>The student knows that many types of change occur. The student is expected to:</i> Observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement. (2.7A)	√	√	√	√
Identify, predict, and test uses of heat to cause change such as melting and evaporation. (2.7B)	√			
Demonstrate a change in the motion of an object by giving the object a push or a pull. (2.7C)				
Observe, measure, and record changes in weather, the night sky, and seasons. (2.7D)				
8. Science Concepts <i>The student distinguishes between living organisms and nonliving objects. The student is expected to:</i> Identify characteristics of living organisms. (2.8A)	√	√		
Identify characteristics of nonliving objects. (2.8B)		√	√	√

9. Science Concepts

The student knows that living organisms have basic needs.

The student is expected to:

Identify the external characteristics of different kinds of plants and animals that allow their needs to be met. (2.9A)

Compare and give examples of the ways living organisms depend on each other and on their environments. (2.9B)

We're All Wet!

What a Mess!

There's a Hole in the ...

It's Time to Roll Along

Found in Other Grades Listed

√

10. Science Concepts

The student knows that the natural world includes rocks, soil, water, and gases of the atmosphere. The student is expected to:

Describe and illustrate the water cycle. (2.10A)

Identify uses of natural resources. (2.10B)

√

√

√

√

√

√

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 2D Let's Celebrate!

	At the Carnival with a Bounce, Stretch, and Spin	Ice Sculptures	My Roots	Where in the World...?	Celebrating Our Heritage *	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:</i>						
Demonstrate safe practices during classroom and field investigations (2.1A)	√	√	√	√	√	
Learn how to use and conserve resources and dispose of materials. (2.1B)	√	√	√	√	√	
2. Scientific Processes <i>The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:</i>						
Ask questions about organisms, objects, and events. (2.2A)	√	√	√	√	√	
Plan and conduct simple descriptive investigations. (2.2B)	√	√	√	√	√	
Compare results of investigations with what students and scientists know about the world. (2.2C)	√	√	√	√	√	
Gather information using simple equipment and tools to extend the senses. (2.2D)	√	√	√	√	√	
Construct reasonable explanations and draw conclusions using information and prior knowledge. (2.2E)	√	√	√	√	√	
Communicate explanations about investigations. (2.2F)	√	√	√	√	√	
3. Scientific Processes <i>The student knows that information and critical thinking are used in making decisions. The student is expected to:</i>						
Make decisions using information. (2.3A)	√	√	√	√	√	
Discuss and justify the merits of decisions. (2.3B)	√	√	√	√	√	
Explain a problem in his/her own words and identify a task and solution related to the problem. (2.3C)	√	√	√	√	√	
4. Scientific Processes <i>The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:</i>						
Collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances. (2.4A)	√	√	√	√	√	

	At the Carnival with a Bounce, Stretch, and Spin	Ice Sculptures	My Roots	Where in the World ...?	Celebrating Our Heritage *	Found in Other Grades Listed
Measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units. (2.4B)	√	√	√	√	√	
5. Science Concepts <i>The student knows that organisms, objects, and events have properties and patterns. The student is expected to:</i> Classify and sequence organisms, objects, and events based on properties and patterns. (2.5A)	√	√	√	√	√	
Identify, predict, replicate, and create patterns including those seen in charts, graphs, and numbers. (2.5B)	√	√	√	√	√	
6. Science Concepts <i>The student knows that systems have parts and are composed of organisms and objects. The student is expected to:</i> Manipulate, predict, and identify parts that, when separated from the whole, may result in the part or the whole not working, such as flashlights without batteries and plants without leaves. (2.6A)						
Manipulate, predict, and identify parts that, when put together, can do things they cannot do by themselves, such as a guitar and guitar strings. (2.6B)	√	√				
Observe and record the functions of plant parts. (2.6C)						
Observe and record the functions of animal parts. (2.6D)						
7. Science Concepts <i>The student knows that many types of change occur. The student is expected to:</i> Observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement. (2.7A)	√	√				
Identify, predict, and test uses of heat to cause change such as melting and evaporation. (2.7B)						
Demonstrate a change in the motion of an object by giving the object a push or a pull. (2.7C)	√					
Observe, measure, and record changes in weather, the night sky, and seasons. (2.7D)						
8. Science Concepts <i>The student distinguishes between living organisms and nonliving objects. The student is expected to:</i> Identify characteristics of living organisms. (2.8A)			√	√		
Identify characteristics of nonliving objects. (2.8B)	√	√				

9. Science Concepts

The student knows that living organisms have basic needs.

The student is expected to:

Identify the external characteristics of different kinds of plants and animals that allow their needs to be met. (2.9A)

Compare and give examples of the ways living organisms depend on each other and on their environments. (2.9B)

10. Science Concepts

The student knows that the natural world includes rocks, soil, water, and gases of the atmosphere. The student is expected to:

Describe and illustrate the water cycle. (2.10A)

Identify uses of natural resources. (2.10B)

At the Carnival with a Bounce,
Stretch, and Spin

Ice Sculptures

My Roots

Where in the World ...?

Celebrating Our Heritage *

Found in Other Grades Listed

√

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 2E Out and About With Nature

	Critters in Motion	Collection Contraptions	Nature's Ways	Changes, Changes, Changes	A Closer Look	Critter Café	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:</i>							
Demonstrate safe practices during classroom and field investigations (2.1A)	√	√	√	√	√	√	
Learn how to use and conserve resources and dispose of materials. (2.1B)	√	√	√	√	√	√	
2. Scientific Processes <i>The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:</i>							
Ask questions about organisms, objects, and events. (2.2A)	√	√	√	√	√	√	
Plan and conduct simple descriptive investigations. (2.2B)	√	√	√	√	√	√	
Compare results of investigations with what students and scientists know about the world. (2.2C)	√	√	√	√	√	√	
Gather information using simple equipment and tools to extend the senses. (2.2D)	√	√	√	√	√	√	
Construct reasonable explanations and draw conclusions using information and prior knowledge. (2.2E)	√	√	√	√	√	√	
Communicate explanations about investigations. (2.2F)	√	√	√	√	√	√	
3. Scientific Processes <i>The student knows that information and critical thinking are used in making decisions. The student is expected to:</i>							
Make decisions using information. (2.3A)	√	√	√	√	√	√	
Discuss and justify the merits of decisions. (2.3B)	√	√	√	√	√	√	
Explain a problem in his/her own words and identify a task and solution related to the problem. (2.3C)	√	√	√	√	√	√	
4. Scientific Processes <i>The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:</i>							
Collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances. (2.4A)	√	√	√	√	√	√	

	Critters in Motion	Collection Contraptions	Nature's Ways	Changes, Changes, Changes	A Closer Look	Critter Café	Found in Other Grades Listed
Measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units. (2.4B)	√	√	√	√	√	√	
5. Science Concepts							
<i>The student knows that organisms, objects, and events have properties and patterns. The student is expected to:</i>							
Classify and sequence organisms, objects, and events based on properties and patterns. (2.5A)	√	√	√	√	√	√	
Identify, predict, replicate, and create patterns including those seen in charts, graphs, and numbers. (2.5B)	√	√	√	√	√	√	
6. Science Concepts							
<i>The student knows that systems have parts and are composed of organisms and objects. The student is expected to:</i>							
Manipulate, predict, and identify parts that, when separated from the whole, may result in the part or the whole not working, such as flashlights without batteries and plants without leaves. (2.6A)		√		√		√	
Manipulate, predict, and identify parts that, when put together, can do things they cannot do by themselves, such as a guitar and guitar strings. (2.6B)		√				√	
Observe and record the functions of plant parts. (2.6C)		√	√	√			
Observe and record the functions of animal parts. (2.6D)	√	√	√	√	√	√	
7. Science Concepts							
<i>The student knows that many types of change occur. The student is expected to:</i>							
Observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement. (2.7A)	√	√	√	√	√	√	
Identify, predict, and test uses of heat to cause change such as melting and evaporation. (2.7B)							
Demonstrate a change in the motion of an object by giving the object a push or a pull. (2.7C)							
Observe, measure, and record changes in weather, the night sky, and seasons. (2.7D)							
8. Science Concepts							
<i>The student distinguishes between living organisms and nonliving objects. The student is expected to:</i>							
Identify characteristics of living organisms. (2.8A)	√	√	√	√	√	√	
Identify characteristics of nonliving objects. (2.8B)	√	√	√	√		√	

9. Science Concepts

The student knows that living organisms have basic needs.

The student is expected to:

Identify the external characteristics of different kinds of plants and animals that allow their needs to be met. (2.9A)

✓ Critters in Motion

✓ Collection Contraptions

✓ Nature's Ways

✓ Changes, Changes, Changes

✓ A Closer Look

✓ Critter Café

Found in Other Grades Listed

Compare and give examples of the ways living organisms depend on each other and on their environments. (2.9B)

✓

✓

✓

✓

✓

✓

10. Science Concepts

The student knows that the natural world includes rocks, soil, water, and gases of the atmosphere. The student is expected to:

Describe and illustrate the water cycle. (2.10A)

Identify uses of natural resources. (2.10B)

✓

✓

✓

✓

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 3A The Twins Get All Charged Up

	Mysterious Rock	May the Force Go Through	Which Pole is Which?	Let's Decorate	Static Show	Push Me--Pull Me	Test It Out	Found in Other Grades Listed
1. Scientific Processes								
<i>The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:</i>								
Demonstrate safe practices during field and laboratory investigations (3.1A)	√	√	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (3.1B)	√	√	√	√	√	√	√	
2. Scientific Processes								
<i>The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</i>								
Plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (3.2A)	√	√	√	√	√	√	√	
Collect information by observing and measuring. (3.2B)	√	√	√	√	√	√	√	
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (3.2C)	√	√	√	√	√	√	√	
Communicate valid conclusions. (3.2D)	√	√	√	√	√	√	√	
Construct simple graphs, tables, maps, and charts to organize, examine, and evaluate information. (3.2E)	√	√	√	√	√	√	√	
3. Scientific Processes								
<i>The student knows that information, critical thinking, and scientific problem solving are used in making decisions. The student is expected to:</i>								
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (3.3A)	√	√	√	√	√	√	√	
Draw inferences based on information related to promotional materials for products and services. (3.3B)	√	√	√	√	√	√	√	
Represent the natural world using models and identify their limitations. (3.3C)	√	√	√	√	√	√	√	
Evaluate the impact of research on scientific thought, society, and the environment. (3.3D)	√	√	√	√	√	√	√	
Connect Grade 3 science concepts with the history of science and contributions of scientists. (3.3E)	√	√	√	√		√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct scientific inquiry. The student is expected to:

Collect and analyze information using tools including calculators, microscopes, cameras, safety goggles, sound recorders, clocks, computers, thermometers, hand lenses, meter sticks, rulers, balances, magnets, and compasses. (3.4A)

✓ Mysterious Rock
 ✓ May the Force Go Through
 ✓ Which Pole is Which?
 ✓ Let's Decorate
 ✓ Static Show
 ✓ Push Me--Pull Me
 ✓ Test It Out

Demonstrate that repeated investigations may increase the reliability of results. (3.4B)

✓ ✓ ✓ ✓ ✓ ✓ ✓

5. Science Concepts

The student knows that systems exist in the world. The student is expected to:

Observe and identify simple systems such as a sprouted seed and a wooden toy car. (3.5A)

✓ ✓ ✓ ✓ ✓ ✓

Observe a simple system and describe the role of various parts such as a yo-yo and string. (3.5B)

✓ ✓ ✓ ✓ ✓ ✓

6. Science Concepts

The student knows that forces cause change. The student is expected to:

Measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied. (3.6A)

✓ ✓ ✓ ✓ ✓ ✓

Identify that the surface of the earth can be changed by forces such as earthquakes and glaciers. (3.6B)

4, 5

7. Science Concepts

The student knows that matter has physical properties. The student is expected to:

Gather information including temperature, magnetism, hardness, and mass using appropriate tools to identify physical properties of matter. (3.7A)

✓ ✓ ✓ ✓ ✓ ✓ ✓

Identify matter as liquids, solids, and gases. (3.7B)

1, 2, 4, 5

8. Science Concepts

The student knows that living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live. The student is expected to:

Observe and describe the habitats of organisms within an ecosystem. (3.8A)

Observe and identify organisms with similar needs that compete with one another for resources such as oxygen, water, food, or space. (3.8B)

Describe environmental changes in which some organisms would thrive, become ill, or perish. (3.8C)

4, 5

Describe how living organisms modify their physical environment to meet their needs such as beavers building a dam or humans building a home. (3.8D)

9. Science Concepts

The student knows that species have different adaptations that help them survive and reproduce in their environment. The student is expected to:

Observe and identify characteristics among species that allow each to survive and reproduce. (3.9A)

Analyze how adaptive characteristics help individuals within a species to survive and reproduce. (3.9B)

Mysterious Rock

May the Force Go Through

Which Pole is Which?

Let's Decorate

Static Show

Push Me--Pull Me

Test It Out

Found in Other Grades Listed

1, 2, 5

10. Science Concepts

The student knows that many likenesses between offspring and parents are inherited from the parents. The student is expected to:

Identify some inherited traits of plants. (3.10A)

5

Identify some inherited traits of animals. (3.10B)

1, 5

11. Science Concepts

The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:

Identify and describe the importance of earth materials including rocks, soil, water, and gases of the atmosphere in the local area and classify them as renewable, nonrenewable, or inexhaustible resources. (3.11A)

√

Identify and record properties of soils such as color and texture, capacity to retain water, and ability to support the growth of plants. (3.11B)

Identify the planets of our solar system and their position in relation to the sun. (3.11C)

1

Describe the characteristics of the sun. (3.11D)

1, 4, 5

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS

3B The Twins Get Lost in Time

	A Journey Through Time	Home Sweet Home	School Days	Pioneer Planting	Pioneer Village	Winter Wonderland	Time Capsule*	Found in Other Grades Listed
1. Scientific Processes								
<i>The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:</i>								
Demonstrate safe practices during field and laboratory investigations (3.1A)	√	√	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (3.1B)	√	√	√	√	√	√	√	
2. Scientific Processes								
<i>The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</i>								
Plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (3.2A)	√	√	√	√	√	√	√	
Collect information by observing and measuring. (3.2B)	√	√	√	√	√	√	√	
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (3.2C)	√	√	√	√	√	√	√	
Communicate valid conclusions. (3.2D)	√	√	√	√	√	√	√	
Construct simple graphs, tables, maps, and charts to organize, examine, and evaluate information. (3.2E)	√	√	√	√	√	√	√	
3. Scientific Processes								
<i>The student knows that information, critical thinking, and scientific problem solving are used in making decisions. The student is expected to:</i>								
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (3.3A)	√	√		√		√		
Draw inferences based on information related to promotional materials for products and services. (3.3B)	√	√	√	√	√	√	√	
Represent the natural world using models and identify their limitations. (3.3C)	√	√		√				
Evaluate the impact of research on scientific thought, society, and the environment. (3.3D)	√	√	√	√	√	√	√	
Connect Grade 3 science concepts with the history of science and contributions of scientists. (3.3E)	√	√	√	√	√	√	√	

	A Journey Through Time	Home Sweet Home	School Days	Pioneer Planting	Pioneer Village	Winter Wonderland	Time Capsule*	Found in Other Grades Listed
Analyze how adaptive characteristics help individuals within a species to survive and reproduce. (3.9B)								1, 2, 5
10. Science Concepts								
<i>The student knows that many likenesses between offspring and parents are inherited from the parents. The student is expected to:</i>								
Identify some inherited traits of plants. (3.10A)				√				5
Identify some inherited traits of animals. (3.10B)								1, 5
11. Science Concepts								
<i>The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</i>								
Identify and describe the importance of earth materials including rocks, soil, water, and gases of the atmosphere in the local area and classify them as renewable, nonrenewable, or inexhaustible resources. (3.11A)								
Identify and record properties of soils such as color and texture, capacity to retain water, and ability to support the growth of plants. (3.11B)								
Identify the planets of our solar system and their position in relation to the sun. (3.11C)								1
Describe the characteristics of the sun. (3.11D)								1, 4, 5

TEXAS

ESSENTIAL KNOWLEDGE AND SKILLS

3C How Does Your Garden Grow?

	Soil Sleuth	This Is the Way We Make... Holding Water	Composting	How Do Your Seeds Grow?	Getting to the Root of It	The Soil Movers	Taking a Closer Look	Botanists at Work	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:</i> Demonstrate safe practices during field and laboratory investigations (3.1A)	√	√	√	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (3.1B)	√	√	√	√	√	√	√	√	
2. Scientific Processes <i>The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</i> Plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (3.2A)	√	√	√	√	√	√	√	√	
Collect information by observing and measuring. (3.2B)	√	√	√	√	√	√	√	√	
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (3.2C)	√	√	√	√	√	√	√	√	
Communicate valid conclusions. (3.2D)	√	√	√	√	√	√	√	√	
Construct simple graphs, tables, maps, and charts to organize, examine, and evaluate information. (3.2E)	√	√	√	√	√	√	√	√	
3. Scientific Processes <i>The student knows that information, critical thinking, and scientific problem solving are used in making decisions. The student is expected to:</i> Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (3.3A)	√	√	√	√	√	√	√	√	
Draw inferences based on information related to promotional materials for products and services. (3.3B)	√	√	√	√	√	√	√	√	
Represent the natural world using models and identify their limitations. (3.3C)	√	√	√	√	√	√	√	√	
Evaluate the impact of research on scientific thought, society, and the environment. (3.3D)	√	√	√	√	√	√	√	√	
Connect Grade 3 science concepts with the history of science and contributions of scientists. (3.3E)		√		√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct scientific inquiry. The student is expected to:

Collect and analyze information using tools including calculators, microscopes, cameras, safety goggles, sound recorders, clocks, computers, thermometers, hand lenses, meter sticks, rulers, balances, magnets, and compasses. (3.4A)

Demonstrate that repeated investigations may increase the reliability of results. (3.4B)

5. Science Concepts

The student knows that systems exist in the world. The student is expected to:

Observe and identify simple systems such as a sprouted seed and a wooden toy car. (3.5A)

Observe a simple system and describe the role of various parts such as a yo-yo and string. (3.5B)

6. Science Concepts

The student knows that forces cause change. The student is expected to:

Measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied. (3.6A)

Identify that the surface of the earth can be changed by forces such as earthquakes and glaciers. (3.6B)

7. Science Concepts

The student knows that matter has physical properties. The student is expected to:

Gather information including temperature, magnetism, hardness, and mass using appropriate tools to identify physical properties of matter. (3.7A)

Identify matter as liquids, solids, and gases. (3.7B)

8. Science Concepts

The student knows that living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live. The student is expected to:

Observe and describe the habitats of organisms within an ecosystem. (3.8A)

Observe and identify organisms with similar needs that compete with one another for resources such as oxygen, water, food, or space. (3.8B)

Describe environmental changes in which some organisms would thrive, become ill, or perish. (3.8C)

Describe how living organisms modify their physical environment to meet their needs such as beavers building a dam or humans building a home. (3.8D)

9. Science Concepts

The student knows that species have different adaptations that help them survive and reproduce in their environment. The student is expected to:

Observe and identify characteristics among species that allow each to survive and reproduce. (3.9A)

	Soil Sleuth	This Is the Way We Make...	Holding Water	Composting	How Do Your Seeds Grow?	Getting to the Root of It	The Soil Movers	Taking a Closer Look	Botanists at Work	Found in Other Grades Listed
Collect and analyze information using tools including calculators, microscopes, cameras, safety goggles, sound recorders, clocks, computers, thermometers, hand lenses, meter sticks, rulers, balances, magnets, and compasses. (3.4A)	√	√	√	√	√	√	√	√	√	
Demonstrate that repeated investigations may increase the reliability of results. (3.4B)	√	√	√	√	√	√	√	√	√	
Observe and identify simple systems such as a sprouted seed and a wooden toy car. (3.5A)	√	√	√	√	√	√	√	√	√	
Observe a simple system and describe the role of various parts such as a yo-yo and string. (3.5B)	√	√	√	√	√	√	√	√	√	
Measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied. (3.6A)									√	
Identify that the surface of the earth can be changed by forces such as earthquakes and glaciers. (3.6B)									√	4, 5
Gather information including temperature, magnetism, hardness, and mass using appropriate tools to identify physical properties of matter. (3.7A)	√	√	√	√	√	√	√	√	√	
Identify matter as liquids, solids, and gases. (3.7B)										1, 2, 4, 5
Observe and describe the habitats of organisms within an ecosystem. (3.8A)	√	√							√	√
Observe and identify organisms with similar needs that compete with one another for resources such as oxygen, water, food, or space. (3.8B)	√					√		√	√	
Describe environmental changes in which some organisms would thrive, become ill, or perish. (3.8C)										√ 4, 5
Describe how living organisms modify their physical environment to meet their needs such as beavers building a dam or humans building a home. (3.8D)										
Observe and identify characteristics among species that allow each to survive and reproduce. (3.9A)								√	√	√

TEXAS

ESSENTIAL KNOWLEDGE AND SKILLS

3D The Twins Get Down to Business

1. Scientific Processes

The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices.

The student is expected to:

Demonstrate safe practices during field and laboratory investigations (3.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (3.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (3.2A)

Collect information by observing and measuring. (3.2B)

Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (3.2C)

Communicate valid conclusions. (3.2D)

Construct simple graphs, tables, maps, and charts to organize, examine, and evaluate information. (3.2E)

3. Scientific Processes

The student knows that information, critical thinking, and scientific problem solving are used in making decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (3.3A)

Draw inferences based on information related to promotional materials for products and services. (3.3B)

Represent the natural world using models and identify their limitations. (3.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (3.3D)

Connect Grade 3 science concepts with the history of science and contributions of scientists. (3.3E)

	It's Time to Sell	Levers for Puppets	Load Lifter	Hit the Bull's-Eye	Gift Boxes	Coming Together at Our Country Stall
Demonstrate safe practices during field and laboratory investigations (3.1A)	√	√	√	√	√	√
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (3.1B)	√	√	√	√	√	√
Plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (3.2A)	√	√	√	√	√	√
Collect information by observing and measuring. (3.2B)	√	√	√	√	√	√
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (3.2C)	√	√	√	√	√	√
Communicate valid conclusions. (3.2D)	√	√	√	√	√	√
Construct simple graphs, tables, maps, and charts to organize, examine, and evaluate information. (3.2E)	√	√	√	√	√	√
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (3.3A)	√	√	√	√	√	√
Draw inferences based on information related to promotional materials for products and services. (3.3B)	√	√	√	√	√	√
Represent the natural world using models and identify their limitations. (3.3C)	√	√	√	√	√	√
Evaluate the impact of research on scientific thought, society, and the environment. (3.3D)	√	√	√	√	√	√
Connect Grade 3 science concepts with the history of science and contributions of scientists. (3.3E)	√			√	√	√

Found in Other Grades Listed

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct scientific inquiry. The student is expected to:

Collect and analyze information using tools including calculators, microscopes, cameras, safety goggles, sound recorders, clocks, computers, thermometers, hand lenses, meter sticks, rulers, balances, magnets, and compasses. (3.4A)

√ It's Time to Sell
 √ Levers for Puppets
 √ Load Lifter
 √ Hit the Bull's-Eye
 √ Gift Boxes
 √ Coming Together at Our Country Stall

Demonstrate that repeated investigations may increase the reliability of results. (3.4B)

√ √ √ √ √ √

5. Science Concepts

The student knows that systems exist in the world. The student is expected to:

Observe and identify simple systems such as a sprouted seed and a wooden toy car. (3.5A)

√ √ √ √ √ √

Observe a simple system and describe the role of various parts such as a yo-yo and string. (3.5B)

√ √ √ √ √ √

6. Science Concepts

The student knows that forces cause change. The student is expected to:

Measure and record changes in the position and direction of the motion of an object to which a force such as a push or pull has been applied. (3.6A)

√ √ √ √

Identify that the surface of the earth can be changed by forces such as earthquakes and glaciers. (3.6B)

4, 5

7. Science Concepts

The student knows that matter has physical properties. The student is expected to:

Gather information including temperature, magnetism, hardness, and mass using appropriate tools to identify physical properties of matter. (3.7A)

√

Identify matter as liquids, solids, and gases. (3.7B)

1, 2, 4, 5

8. Science Concepts

The student knows that living organisms need food, water, light, air, a way to dispose of waste, and an environment in which to live. The student is expected to:

Observe and describe the habitats of organisms within an ecosystem. (3.8A)

Observe and identify organisms with similar needs that compete with one another for resources such as oxygen, water, food, or space. (3.8B)

Describe environmental changes in which some organisms would thrive, become ill, or perish. (3.8C)

4, 5

Describe how living organisms modify their physical environment to meet their needs such as beavers building a dam or humans building a home. (3.8D)

9. Science Concepts

The student knows that species have different adaptations that help them survive and reproduce in their environment. The student is expected to:

Observe and identify characteristics among species that allow each to survive and reproduce. (3.9A)

	It's Time to Sell	Levers for Puppets	Load Lifter	Hit the Bull's-Eye	Gift Boxes	Coming Together at Our Country Stall	Found in Other Grades Listed
Analyze how adaptive characteristics help individuals within a species to survive and reproduce. (3.9B)							1, 2, 5
10. Science Concepts							
<i>The student knows that many likenesses between offspring and parents are inherited from the parents. The student is expected to:</i>							
Identify some inherited traits of plants. (3.10A)							5
Identify some inherited traits of animals. (3.10B)							1, 5
11. Science Concepts							
<i>The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</i>							
Identify and describe the importance of earth materials including rocks, soil, water, and gases of the atmosphere in the local area and classify them as renewable, nonrenewable, or inexhaustible resources. (3.11A)							
Identify and record properties of soils such as color and texture, capacity to retain water, and ability to support the growth of plants. (3.11B)							
Identify the planets of our solar system and their position in relation to the sun. (3.11C)							1
Describe the characteristics of the sun. (3.11D)							1, 4, 5

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 4A A Visit to a Castle

	The Ups and Downs	Lowering Down, Raising UP	Where is the Pulley?	Heave Ho!	How Far Will It Go?	Life and Times	The Final Curtain	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:</i> Demonstrate safe practices during field and laboratory investigations (4.1A)	√	√	√	√	√		√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (4.1B)	√	√	√	√	√	√	√	
2. Scientific Processes <i>The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</i> Plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (4.2A)	√	√	√	√	√		√	
Collect information by observing and measuring. (4.2B)	√	√	√	√	√		√	
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (4.2C)	√	√	√	√	√		√	
Communicate valid conclusions. (4.2D)	√	√	√	√	√		√	5
Construct simple graphs, tables, maps, and charts to organize, examine, and evaluate information. (4.2E)	√	√	√	√	√		√	
3. Scientific Processes <i>The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:</i> Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (4.3A)	√	√	√	√	√		√	
Draw inferences based on information related to promotional materials for products and services. (4.3B)	√	√	√	√	√		√	5,6,7
Represent the natural world using models and identify their limitations. (4.3C)	√	√	√	√	√		√	
Evaluate the impact of research on scientific thought, society, and the environment. (4.3D)	√	√	√	√	√		√	
Connect Grade 4 science concepts with the history of science and contributions of scientists. (4.3E)	√	√	√	√	√		√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect and analyze information using tools including calculators, safety goggles, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, meter sticks, timing devices, balances, and compasses. (4.4A)

Demonstrate that repeated investigations may increase the reliability of results. (4.4B)

√ The Ups and Downs
√ Lowering Down, Raising UP
√ Where is the Pulley?
√ Heave Ho!
√ How Far Will It Go?
√ Life and Times
√ The Final Curtain

Found in Other Grades Listed

5. Science Concepts

The student knows that complex systems may not work if some parts are removed. The student is expected to:

Identify and describe the roles of some organisms in living systems such as plants in a schoolyard, and parts in nonliving systems such as a light bulb in a circuit. (4.5A)

Predict and draw conclusions about what happens when part of a system is removed. (4.5B)

√ √ √ √ √ √

6. Science Concepts

The student knows that change can create recognizable patterns. The student is expected to:

Identify patterns of change such as in weather, metamorphosis, and objects in the sky. (4.6A)

Illustrate that certain characteristics of an object can remain constant even when the object is rotated like a spinning top, translated like a skater moving in a straight line, or reflected on a smooth surface. (4.6B)

Use reflections to verify that a natural object has symmetry. (4.6C)

5,6

6

7. Science Concepts

The student knows that matter has physical properties. The student is expected to: Observe and record changes in the states of matter caused by the addition or reduction of heat. (4.7A)

Conduct tests, compare data, and draw conclusions about physical properties of matter including states of matter, conduction, density, and buoyancy. (4.7B)

2,5,6

8. Science Concepts

The student knows that adaptations may increase the survival of members of a species. The student is expected to:

Identify characteristics that allow members within a species to survive and reproduce. (4.8A)

Compare adaptive characteristics of various species. (4.8B)

Identify the kinds of species that lived in the past and compare them to existing species. (4.8C)

2,5,6

3,6

9. Science Concepts

The student knows that many likenesses between offspring and parents are inherited or learned. The student is expected to:

Distinguish between inherited traits and learned characteristics. (4.9A)

5,6

Identify and provide examples of inherited traits and learned characteristics. (4.9B)	The Ups and Downs Lowering Down, Raising UP Where is the Pulley? Heave Ho! How Far Will It Go? Life and Times The Final Curtain Found in Other Grades Listed	5,6
10. Science Concepts <i>The student knows that certain past events affect present and future events. The student is expected to:</i> Identify and observe effects of events that require time for changes to be noticeable including growth, erosion, dissolving, weathering, and flow. (4.10A)		
Draw conclusions about "what happened before" using fossils or charts and tables. (4.10B)		5,6
11. Science Concepts <i>The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</i> Test properties of soils including texture, capacity to retain water, and ability to support life. (4.11A)		3
Summarize the effects of the oceans on land. (4.11B)		
Identify the sun as the major source of energy for the earth and understand its role in the growth of plants, in the creation of winds, and in the water cycle. (4.11C)		2,3,5,6

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 4B Light, Sound, Action...

1. Scientific Processes

The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:

Demonstrate safe practices during field and laboratory investigations (4.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (4.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (4.2A)

Collect information by observing and measuring. (4.2B)

Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (4.2C)

Communicate valid conclusions. (4.2D)

Construct simple graphs, tables, maps, and charts to organize, examine, and evaluate information. (4.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (4.3A)

Draw inferences based on information related to promotional materials for products and services. (4.3B)

Represent the natural world using models and identify their limitations. (4.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (4.3D)

Connect Grade 4 science concepts with the history of science and contributions of scientists. (4.3E)

Da da da ... SOUND!!!
 Getting the Beat
 Sound on the Move
 Muffling and Magnifying
 Let There Be Light
 Looking Through
 Light's Magical Powers
 It's a Maze of Light
 Lights, Camera, Sound ...
 COLOUR!!!

Found in Other Grades Listed

√ √ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √ √

√ √ √ √ √ √ √ √ √

Da da da ... SOUND!!!
 Getting the Beat
 Sound on the Move
 Muffling and Magnifying
 Let There Be Light
 Looking Through
 Light's Magical Powers
 It's a Maze of Light
 Lights, Camera, Sound ...
 COLOUR!!!
 Found in Other Grades Listed

Identify and provide examples of inherited traits and learned characteristics. (4.9B)

5,6

10. Science Concepts

The student knows that certain past events affect present and future events. The student is expected to:

Identify and observe effects of events that require time for changes to be noticeable including growth, erosion, dissolving, weathering, and flow. (4.10A)

Draw conclusions about "what happened before" using fossils or charts and tables. (4.10B)

5,6

11. Science Concepts

The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:

Test properties of soils including texture, capacity to retain water, and ability to support life. (4.11A)

3

Summarize the effects of the oceans on land. (4.11B)

Identify the sun as the major source of energy for the earth and understand its role in the growth of plants, in the creation of winds, and in the water cycle. (4.11C)

√

2,3,5,6

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 4C Connecting the USA

	Getting to Know You	The Travel Tool	National Park Virtual Tour and Scavenger Hunt	East, West, North, and South	Salt Marsh	Ecosystem in Crisis?: A Look at Frogs	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:</i>							
Demonstrate safe practices during field and laboratory investigations (4.1A)	√	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (4.1B)	√	√	√	√	√	√	
2. Scientific Processes <i>The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</i>							
Plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (4.2A)	√	√	√	√	√	√	
Collect information by observing and measuring. (4.2B)		√	√	√	√	√	
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (4.2C)		√	√	√	√	√	
Communicate valid conclusions. (4.2D)	√	√	√	√	√	√	
Construct simple graphs, tables, maps, and charts to organize, examine, and evaluate information. (4.2E)	√	√	√	√	√	√	
3. Scientific Processes <i>The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:</i>							
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (4.3A)		√	√	√	√	√	
Draw inferences based on information related to promotional materials for products and services. (4.3B)	√	√	√	√	√	√	
Represent the natural world using models and identify their limitations. (4.3C)		√	√	√	√	√	
Evaluate the impact of research on scientific thought, society, and the environment. (4.3D)		√	√	√	√	√	
Connect Grade 4 science concepts with the history of science and contributions of scientists. (4.3E)	√	√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect and analyze information using tools including calculators, safety goggles, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, meter sticks, timing devices, balances, and compasses. (4.4A)

Demonstrate that repeated investigations may increase the reliability of results. (4.4B)

Getting to Know You	The Travel Tool	National Park Virtual Tour and Scavenger Hunt	East, West, North, and South	Salt Marsh	Ecosystem in Crisis?: A Look at Frogs	Found in Other Grades Listed
√	√	√	√	√	√	
√	√	√	√	√	√	

5. Science Concepts

The student knows that complex systems may not work if some parts are removed. The student is expected to:

Identify and describe the roles of some organisms in living systems such as plants in a schoolyard, and parts in nonliving systems such as a light bulb in a circuit. (4.5A)

Predict and draw conclusions about what happens when part of a system is removed. (4.5B)

√	√	√	√	√	√	
				√	√	

6. Science Concepts

The student knows that change can create recognizable patterns. The student is expected to:

Identify patterns of change such as in weather, metamorphosis, and objects in the sky. (4.6A)

Illustrate that certain characteristics of an object can remain constant even when the object is rotated like a spinning top, translated like a skater moving in a straight line, or reflected on a smooth surface. (4.6B)

Use reflections to verify that a natural object has symmetry. (4.6C)

5,6
6

7. Science Concepts

The student knows that matter has physical properties. The student is expected to: Observe and record changes in the states of matter caused by the addition or reduction of heat. (4.7A)

Conduct tests, compare data, and draw conclusions about physical properties of matter including states of matter, conduction, density, and buoyancy. (4.7B)

2,5,6

8. Science Concepts

The student knows that adaptations may increase the survival of members of a species. The student is expected to:

Identify characteristics that allow members within a species to survive and reproduce. (4.8A)

Compare adaptive characteristics of various species. (4.8B)

Identify the kinds of species that lived in the past and compare them to existing species. (4.8C)

√	√	
		√

2,5,6
3,6

9. Science Concepts

The student knows that many likenesses between offspring and parents are inherited or learned. The student is expected to:

Distinguish between inherited traits and learned characteristics. (4.9A)

5,6

	Getting to Know You	The Travel Tool	National Park Virtual Tour and Scavenger Hunt	East, West, North, and South	Salt Marsh	Ecosystem in Crisis?: A Look at Frogs	Found in Other Grades Listed
Identify and provide examples of inherited traits and learned characteristics. (4.9B)							5,6
10. Science Concepts							
<i>The student knows that certain past events affect present and future events. The student is expected to:</i>							
Identify and observe effects of events that require time for changes to be noticeable including growth, erosion, dissolving, weathering, and flow. (4.10A)				√	√	√	
Draw conclusions about "what happened before" using fossils or charts and tables. (4.10B)							5,6
11. Science Concepts							
<i>The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</i>							
Test properties of soils including texture, capacity to retain water, and ability to support life. (4.11A)							3
Summarize the effects of the oceans on land. (4.11B)							
Identify the sun as the major source of energy for the earth and understand its role in the growth of plants, in the creation of winds, and in the water cycle. (4.11C)						√	2,3,5,6

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 4D Unearthing It All

1. Scientific Processes

The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices. The student is expected to:

Demonstrate safe practices during field and laboratory investigations (4.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (4.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement descriptive investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (4.2A)

Collect information by observing and measuring. (4.2B)

Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (4.2C)

Communicate valid conclusions. (4.2D)

Construct simple graphs, tables, maps, and charts to organize, examine, and evaluate information. (4.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (4.3A)

Draw inferences based on information related to promotional materials for products and services. (4.3B)

Represent the natural world using models and identify their limitations. (4.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (4.3D)

Connect Grade 4 science concepts with the history of science and contributions of scientists. (4.3E)

	The Ever-changing Landscape -- An Introduction to Geology	Like a Rock ... But What Kind of Rock?	The Treasures of the Earth	When is a Gear Not a Gear?	Gearing Around	Found in Other Grades Listed
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	
	√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect and analyze information using tools including calculators, safety goggles, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, meter sticks, timing devices, balances, and compasses. (4.4A)

Demonstrate that repeated investigations may increase the reliability of results. (4.4B)

5. Science Concepts

The student knows that complex systems may not work if some parts are removed. The student is expected to:

Identify and describe the roles of some organisms in living systems such as plants in a schoolyard, and parts in nonliving systems such as a light bulb in a circuit. (4.5A)

Predict and draw conclusions about what happens when part of a system is removed. (4.5B)

6. Science Concepts

The student knows that change can create recognizable patterns. The student is expected to:

Identify patterns of change such as in weather, metamorphosis, and objects in the sky. (4.6A)

Illustrate that certain characteristics of an object can remain constant even when the object is rotated like a spinning top, translated like a skater moving in a straight line, or reflected on a smooth surface. (4.6B)

Use reflections to verify that a natural object has symmetry. (4.6C)

7. Science Concepts

The student knows that matter has physical properties. The student is expected to: Observe and record changes in the states of matter caused by the addition or reduction of heat. (4.7A)

Conduct tests, compare data, and draw conclusions about physical properties of matter including states of matter, conduction, density, and buoyancy. (4.7B)

8. Science Concepts

The student knows that adaptations may increase the survival of members of a species. The student is expected to:

Identify characteristics that allow members within a species to survive and reproduce. (4.8A)

Compare adaptive characteristics of various species. (4.8B)

Identify the kinds of species that lived in the past and compare them to existing species. (4.8C)

9. Science Concepts

The student knows that many likenesses between offspring and parents are inherited or learned. The student is expected to:

Distinguish between inherited traits and learned characteristics. (4.9A)

The Ever-changing Landscape -- An Introduction to Geology
 Like a Rock ... But What Kind of Rock?
 The Treasures of the Earth
 When is a Gear Not a Gear?
 Gearing Around
 Found in Other Grades Listed

√ √ √ √ √

√ √ √ √ √

√ √ √ √ √

√ √ √ √

√ √ √

5,6

√ 6

√ 2,5,6

√ √ √

√

2,5,6

√ 3,6

5,6

	The Ever-changing Landscape -- An Introduction to Geology	Like a Rock ... But What Kind of Rock?	The Treasures of the Earth	When is a Gear Not a Gear? Gearing Around	Found in Other Grades Listed
Identify and provide examples of inherited traits and learned characteristics. (4.9B)					5,6
10. Science Concepts <i>The student knows that certain past events affect present and future events. The student is expected to:</i>					
Identify and observe effects of events that require time for changes to be noticeable including growth, erosion, dissolving, weathering, and flow. (4.10A)	√	√	√		
Draw conclusions about "what happened before" using fossils or charts and tables. (4.10B)	√				5,6
11. Science Concepts <i>The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:</i>					
Test properties of soils including texture, capacity to retain water, and ability to support life. (4.11A)					3
Summarize the effects of the oceans on land. (4.11B)					
Identify the sun as the major source of energy for the earth and understand its role in the growth of plants, in the creation of winds, and in the water cycle. (4.11C)					2,3,5,6

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 5A Busy Bodies

1. Scientific Processes

The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices.

The student is expected to:

Demonstrate safe practices during field and laboratory investigations (5.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (5.1B)

2. Scientific Processes

The student uses scientific methods during field and laboratory investigations.

The student is expected to:

Plan and implement descriptive and simple experimental investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (5.2A)

Collect information by observing and measuring. (5.2B)

Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (5.2C)

Communicate valid conclusions. (5.2D)

Construct simple graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate information. (5.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (5.3A)

Draw inferences based on information related to promotional materials for products and services. (5.3B)

Represent the natural world using models and identify their limitations. (5.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (5.3D)

Connect Grade 5 science concepts with the history of science and contributions of scientists. (5.3E)

	What's in a Shape?	The Inside Story	On the Move	Carrying the Load	Quick Time	Paddle Here and There	Take a Breather	Get to the Heart of It	Cool Athletes	Water, Water Everywhere	Techie Designers	Found in Other Grades Listed
Demonstrate safe practices during field and laboratory investigations (5.1A)	√	√	√	√	√	√	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (5.1B)	√	√	√	√	√	√	√	√	√	√	√	
Plan and implement descriptive and simple experimental investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (5.2A)	√	√	√	√	√	√	√	√	√	√	√	
Collect information by observing and measuring. (5.2B)	√	√	√	√	√	√	√	√	√	√	√	
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (5.2C)	√	√	√	√	√	√	√	√	√	√	√	
Communicate valid conclusions. (5.2D)	√	√	√	√	√	√	√	√	√	√	√	
Construct simple graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate information. (5.2E)	√	√	√	√	√	√	√	√	√	√	√	
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (5.3A)	√	√	√	√	√	√	√	√	√	√	√	
Draw inferences based on information related to promotional materials for products and services. (5.3B)	√		√	√		√	√	√	√	√	√	
Represent the natural world using models and identify their limitations. (5.3C)	√	√	√	√	√	√	√	√	√	√	√	
Evaluate the impact of research on scientific thought, society, and the environment. (5.3D)	√	√	√	√	√	√	√	√	√	√	√	
Connect Grade 5 science concepts with the history of science and contributions of scientists. (5.3E)	√	√	√	√	√	√	√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect and analyze information using tools including calculators, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, compasses, balances, hot plates, meter sticks, timing devices, magnets, collecting nets, and safety goggles. (5.4A)

Demonstrate that repeated investigations may increase the reliability of results. (5.4B)

What's in a Shape?	√	√	√	√	√	√	√	√	√	√	√
The Inside Story	√	√	√	√	√	√	√	√	√	√	√
On the Move	√	√	√	√	√	√	√	√	√	√	√
Carrying the Load	√	√	√	√	√	√	√	√	√	√	√
Quick Time	√	√	√	√	√	√	√	√	√	√	√
Paddle Here and There	√	√	√	√	√	√	√	√	√	√	√
Take a Breather	√	√	√	√	√	√	√	√	√	√	√
Get to the Heart of It	√	√	√	√	√	√	√	√	√	√	√
Cool Athletes	√	√	√	√	√	√	√	√	√	√	√
Water, Water Everywhere	√	√	√	√	√	√	√	√	√	√	√
Techie Designers	√	√	√	√	√	√	√	√	√	√	√
Found in Other Grades Listed											

5. Science Concepts

The student knows that a system is a collection of cycles, structures, and processes that interact. The student is expected to:

Describe some cycles, structures, and processes that are found in a simple system. (5.5A)

Describe some interactions that occur in a simple system. (5.5B)

√	√	√	√	√	√	√	√	√	√	√	√
√	√	√	√	√	√	√	√	√	√	√	√

6. Science Concepts

The student knows that some change occurs in cycles. The student is expected to:

Identify events and describe changes that occur on a regular basis such as in daily, weekly, lunar, and seasonal cycles. (5.6A)

Identify the significance of the water, carbon, and nitrogen cycles. (5.6B)

Describe and compare life cycles of plants and animals. (5.6C)

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7. Science Concepts

The student knows that matter has physical properties. The student is expected to:

Classify matter based on its physical properties including magnetism, physical state, and the ability to conduct or insulate heat, electricity, and sound. (5.7A)

Demonstrate that some mixtures maintain the physical properties of their ingredients. (5.7B)

Identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving sugar in water. (5.7C)

Observe and measure characteristic properties of substances that remain constant such as boiling points and melting points. (5.7D)

√	√	√	√		√	√
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8. Science Concepts

The student knows that energy occurs in many forms. The student is expected to:

Differentiate among forms of energy including light, heat, electrical, and solar energy. (5.8A)

Identify and demonstrate everyday examples of how light is reflected, such as from tinted windows, and refracted, such as in cameras, telescopes, and eyeglasses. (5.8B)

Demonstrate that electricity can flow in a circuit and can produce heat, light, sound, and magnetic effects. (5.8C)

Verify that vibrating an object can produce sound. (5.8D)

	√		√	√
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9. Science Concepts

The student knows that adaptations may increase the survival of members of a species. The student is expected to:

Compare the adaptive characteristics of species that improve their ability to survive and reproduce in an ecosystem. (5.9A)

What's in a Shape?
√

The Inside Story

On the Move

Carrying the Load

Quick Time

Paddle Here and There

Take a Breather

Get to the Heart of It

Cool Athletes

Water, Water Everywhere

Techie Designers

Found in Other Grades Listed

Analyze and describe adaptive characteristics that result in an organism's unique niche in an ecosystem. (5.9B)

√

Predict some adaptive characteristics required for survival and reproduction by an organism in an ecosystem. (5.9C)

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10. Science Concepts

The student knows that likenesses between offspring and parents can be inherited or learned. The student is expected to:

Identify traits that are inherited from parent to offspring in plants and animals. (5.10A)

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Give some examples of learned characteristics that result from the influence of the environment. (5.10B)

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11. Science Concepts

The student knows that certain past events affect present and future events. The student is expected to:

Identify and observe actions that require time for changes to be measurable, including growth, erosion, dissolving, weathering, and flow. (5.11A)

Draw conclusions about "what happened before" using data such as from tree-growth rings and sedimentary rock sequences. (5.11B)

Identify past events that led to the formation of the earth's renewable, non-renewable, and inexhaustible resources. (5.11C)

12. Science Concepts

The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:

Interpret how landforms are the result of a combination of constructive and destructive forces such as deposition of sediment and weathering. (5.12A)

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Describe processes responsible for the formation of coal, oil, gas, and minerals. (5.12B)

Identify the physical characteristics of the earth and compare them to the physical characteristics of the moon. (5.12C)

6

Identify gravity as the force that keeps planets in orbit around the sun and the moon in orbit around the earth. (5.12D)

6

TEXAS

ESSENTIAL KNOWLEDGE AND SKILLS

5B It's a Matter of Change and Energy

1. Scientific Processes

The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices.

The student is expected to:

Demonstrate safe practices during field and laboratory investigations (5.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (5.1B)

2. Scientific Processes

The student uses scientific methods during field and laboratory investigations.

The student is expected to:

Plan and implement descriptive and simple experimental investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (5.2A)

Collect information by observing and measuring. (5.2B)

Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (5.2C)

Communicate valid conclusions. (5.2D)

Construct simple graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate information. (5.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (5.3A)

Draw inferences based on information related to promotional materials for products and services. (5.3B)

Represent the natural world using models and identify their limitations. (5.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (5.3D)

Connect Grade 5 science concepts with the history of science and contributions of scientists. (5.3E)

Go for Energy	State the Matter, Please	Behind the Scenes	Take Away the Heat	Some Like It Hot ...	Energy for Life	Transforming Energy	Profile of a Product	Town Hall Meeting	Wanted: Energy-Efficient Buildings!	Found in Other Grades Listed
√	√	√	√	√	√	√	√	√	√	
	√	√	√	√	√	√	√	√	√	
	√	√	√	√	√	√	√	√	√	
	√	√	√	√	√	√	√	√	√	
	√	√	√	√	√	√	√	√	√	
	√	√	√	√	√	√	√	√	√	
	√	√	√	√	√	√	√	√	√	
	√	√	√	√	√	√	√	√	√	
	√	√	√	√	√	√	√	√	√	
	√	√	√	√	√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect and analyze information using tools including calculators, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, compasses, balances, hot plates, meter sticks, timing devices, magnets, collecting nets, and safety goggles. (5.4A)

Demonstrate that repeated investigations may increase the reliability of results. (5.4B)

5. Science Concepts

The student knows that a system is a collection of cycles, structures, and processes that interact. The student is expected to:

Describe some cycles, structures, and processes that are found in a simple system. (5.5A)

Describe some interactions that occur in a simple system. (5.5B)

6. Science Concepts

The student knows that some change occurs in cycles. The student is expected to: Identify events and describe changes that occur on a regular basis such as in daily, weekly, lunar, and seasonal cycles. (5.6A)

Identify the significance of the water, carbon, and nitrogen cycles. (5.6B)

Describe and compare life cycles of plants and animals. (5.6C)

7. Science Concepts

The student knows that matter has physical properties. The student is expected to: Classify matter based on its physical properties including magnetism, physical state, and the ability to conduct or insulate heat, electricity, and sound. (5.7A)

Demonstrate that some mixtures maintain the physical properties of their ingredients. (5.7B)

Identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving sugar in water. (5.7C)

Observe and measure characteristic properties of substances that remain constant such as boiling points and melting points. (5.7D)

8. Science Concepts

The student knows that energy occurs in many forms. The student is expected to: Differentiate among forms of energy including light, heat, electrical, and solar energy. (5.8A)

Identify and demonstrate everyday examples of how light is reflected, such as from tinted windows, and refracted, such as in cameras, telescopes, and eyeglasses. (5.8B)

Demonstrate that electricity can flow in a circuit and can produce heat, light, sound, and magnetic effects. (5.8C)

Go for Energy	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
State the Matter, Please	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Behind the Scenes	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Take Away the Heat	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Some Like It Hot ...	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Energy for Life	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Transforming Energy	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Profile of a Product	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Town Hall Meeting	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Wanted: Energy-Efficient Buildings!	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Found in Other Grades Listed																			

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Verify that vibrating an object can produce sound. (5.8D)

9. Science Concepts

The student knows that adaptations may increase the survival of members of a species. The student is expected to:

Compare the adaptive characteristics of species that improve their ability to survive and reproduce in an ecosystem. (5.9A)

Analyze and describe adaptive characteristics that result in an organism's unique niche in an ecosystem. (5.9B)

Predict some adaptive characteristics required for survival and reproduction by an organism in an ecosystem. (5.9C)

4,6,7

10. Science Concepts

The student knows that likenesses between offspring and parents can be inherited or learned. The student is expected to:

Identify traits that are inherited from parent to offspring in plants and animals. (5.10A)

Give some examples of learned characteristics that result from the influence of the environment. (5.10B)

11. Science Concepts

The student knows that certain past events affect present and future events. The student is expected to:

Identify and observe actions that require time for changes to be measurable, including growth, erosion, dissolving, weathering, and flow. (5.11A)

√ √

Draw conclusions about "what happened before" using data such as from tree-growth rings and sedimentary rock sequences. (5.11B)

Identify past events that led to the formation of the earth's renewable, non-renewable, and inexhaustible resources. (5.11C)

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12. Science Concepts

The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:

Interpret how landforms are the result of a combination of constructive and destructive forces such as deposition of sediment and weathering. (5.12A)

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Describe processes responsible for the formation of coal, oil, gas, and minerals. (5.12B)

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Identify the physical characteristics of the earth and compare them to the physical characteristics of the moon. (5.12C)

6

Identify gravity as the force that keeps planets in orbit around the sun and the moon in orbit around the earth. (5.12D)

6

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 5C It's a Team Effort

1. Scientific Processes

The student conducts field and laboratory investigations following home and school safety procedures and environmentally appropriate and ethical practices.

The student is expected to:

Demonstrate safe practices during field and laboratory investigations (5.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (5.1B)

2. Scientific Processes

The student uses scientific methods during field and laboratory investigations.

The student is expected to:

Plan and implement descriptive and simple experimental investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (5.2A)

Collect information by observing and measuring. (5.2B)

Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (5.2C)

Communicate valid conclusions. (5.2D)

Construct simple graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate information. (5.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (5.3A)

Draw inferences based on information related to promotional materials for products and services. (5.3B)

Represent the natural world using models and identify their limitations. (5.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (5.3D)

Connect Grade 5 science concepts with the history of science and contributions of scientists. (5.3E)

	Let's Talk Weather	Designing the Station	Water, Water All Around	The Bridge to Weather	Taking the Load Off	Pulleys and the Gears	Rube Goldberg, Move Over	Found in Other Grades Listed
Demonstrate safe practices during field and laboratory investigations (5.1A)	√	√	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (5.1B)	√	√	√	√	√	√	√	
Plan and implement descriptive and simple experimental investigations including asking well-defined questions, formulating testable hypotheses, and selecting and using equipment and technology. (5.2A)	√	√	√	√	√	√	√	
Collect information by observing and measuring. (5.2B)	√	√	√	√	√	√	√	
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (5.2C)	√	√	√	√	√	√	√	
Communicate valid conclusions. (5.2D)	√	√	√	√	√	√	√	
Construct simple graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate information. (5.2E)	√	√	√	√	√	√	√	
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (5.3A)	√	√	√	√	√	√	√	
Draw inferences based on information related to promotional materials for products and services. (5.3B)	√	√	√	√	√	√	√	
Represent the natural world using models and identify their limitations. (5.3C)	√	√	√	√	√	√	√	
Evaluate the impact of research on scientific thought, society, and the environment. (5.3D)	√	√	√	√	√	√	√	
Connect Grade 5 science concepts with the history of science and contributions of scientists. (5.3E)	√	√	√	√	√	√	√	

	Let's Talk Weather	Designing the Station	Water, Water All Around	The Bridge to Weather	Taking the Load Off	Pulleys and the Gears	Rube Goldberg, Move Over	Found in Other Grades Listed
4. Scientific Processes <i>The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:</i> Collect and analyze information using tools including calculators, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, compasses, balances, hot plates, meter sticks, timing devices, magnets, collecting nets, and safety goggles. (5.4A)	√	√	√	√	√	√	√	
Demonstrate that repeated investigations may increase the reliability of results. (5.4B)	√	√	√	√	√	√	√	
5. Science Concepts <i>The student knows that a system is a collection of cycles, structures, and processes that interact. The student is expected to:</i> Describe some cycles, structures, and processes that are found in a simple system. (5.5A)	√	√	√	√	√	√	√	
Describe some interactions that occur in a simple system. (5.5B)	√	√	√	√	√	√	√	
6. Science Concepts <i>The student knows that some change occurs in cycles. The student is expected to:</i> Identify events and describe changes that occur on a regular basis such as in daily, weekly, lunar, and seasonal cycles. (5.6A)	√							6,7
Identify the significance of the water, carbon, and nitrogen cycles. (5.6B)			√					6,7
Describe and compare life cycles of plants and animals. (5.6C)								3,4
7. Science Concepts <i>The student knows that matter has physical properties. The student is expected to:</i> Classify matter based on its physical properties including magnetism, physical state, and the ability to conduct or insulate heat, electricity, and sound. (5.7A)	√		√	√	√		√	
Demonstrate that some mixtures maintain the physical properties of their ingredients. (5.7B)			√					
Identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving sugar in water. (5.7C)								
Observe and measure characteristic properties of substances that remain constant such as boiling points and melting points. (5.7D)								
8. Science Concepts <i>The student knows that energy occurs in many forms. The student is expected to:</i> Differentiate among forms of energy including light, heat, electrical, and solar energy. (5.8A)	√	√	√	√	√	√	√	
Identify and demonstrate everyday examples of how light is reflected, such as from tinted windows, and refracted, such as in cameras, telescopes, and eyeglasses. (5.8B)								4,6
Demonstrate that electricity can flow in a circuit and can produce heat, light, sound, and magnetic effects. (5.8C)								6
Verify that vibrating an object can produce sound. (5.8D)								4

	Let's Talk Weather	Designing the Station	Water, Water All Around	The Bridge to Weather	Taking the Load Off	Pulleys the Gears	Rube Goldberg, Move Over	Found in Other Grades Listed
9. Science Concepts <i>The student knows that adaptations may increase the survival of members of a species. The student is expected to:</i> Compare the adaptive characteristics of species that improve their ability to survive and reproduce in an ecosystem. (5.9A)	√	√	√	√	√	√	√	
Analyze and describe adaptive characteristics that result in an organism's unique niche in an ecosystem. (5.9B)	√	√	√	√	√	√	√	
Predict some adaptive characteristics required for survival and reproduction by an organism in an ecosystem. (5.9C)	√							4,6,7
10. Science Concepts <i>The student knows that likenesses between offspring and parents can be inherited or learned. The student is expected to:</i> Identify traits that are inherited from parent to offspring in plants and animals. (5.10A)								
Give some examples of learned characteristics that result from the influence of the environment. (5.10B)								
11. Science Concepts <i>The student knows that certain past events affect present and future events. The student is expected to:</i> Identify and observe actions that require time for changes to be measurable, including growth, erosion, dissolving, weathering, and flow. (5.11A)	√	√	√	√	√	√	√	
Draw conclusions about "what happened before" using data such as from tree-growth rings and sedimentary rock sequences. (5.11B)	√	√	√	√	√	√	√	
Identify past events that led to the formation of the earth's renewable, non-renewable, and inexhaustible resources. (5.11C)								
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Describe processes responsible for the formation of coal, oil, gas, and minerals. (5.12B)								
Identify the physical characteristics of the earth and compare them to the physical characteristics of the moon. (5.12C)								6
Identify gravity as the force that keeps planets in orbit around the sun and the moon in orbit around the earth. (5.12D)								6

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect and analyze information using tools including calculators, microscopes, cameras, sound recorders, computers, hand lenses, rulers, thermometers, compasses, balances, hot plates, meter sticks, timing devices, magnets, collecting nets, and safety goggles. (5.4A)

Demonstrate that repeated investigations may increase the reliability of results. (5.4B)

✓ Unearthing the Past

✓ The Past Lights Up

✓ A Colossal Undertaking

✓ Who Decides?

✓ Travelling Over the Isthmus

✓ Onward to Olympia

✓ Worthy of Immortality

Found in Other Grades Listed

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5. Science Concepts

The student knows that a system is a collection of cycles, structures, and processes that interact. The student is expected to:

Describe some cycles, structures, and processes that are found in a simple system. (5.5A)

Describe some interactions that occur in a simple system. (5.5B)

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6. Science Concepts

The student knows that some change occurs in cycles. The student is expected to:

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Identify the significance of the water, carbon, and nitrogen cycles. (5.6B)

Describe and compare life cycles of plants and animals. (5.6C)

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Demonstrate that electricity can flow in a circuit and can produce heat, light, sound, and magnetic effects. (5.8C)

Verify that vibrating an object can produce sound. (5.8D)

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9. Science Concepts

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Compare the adaptive characteristics of species that improve their ability to survive and reproduce in an ecosystem. (5.9A)

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The student knows that certain past events affect present and future events. The student is expected to:

Identify and observe actions that require time for changes to be measurable, including growth, erosion, dissolving, weathering, and flow. (5.11A)

Draw conclusions about "what happened before" using data such as from tree-growth rings and sedimentary rock sequences. (5.11B)

Identify past events that led to the formation of the earth's renewable, non-renewable, and inexhaustible resources. (5.11C)

12. Science Concepts

The student knows that the natural world includes earth materials and objects in the sky. The student is expected to:

Interpret how landforms are the result of a combination of constructive and destructive forces such as deposition of sediment and weathering. (5.12A)

4,7

Describe processes responsible for the formation of coal, oil, gas, and minerals. (5.12B)

Identify the physical characteristics of the earth and compare them to the physical characteristics of the moon. (5.12C)

6

Identify gravity as the force that keeps planets in orbit around the sun and the moon in orbit around the earth. (5.12D)

6

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 6A Airborne

	What an Uplifting Experience!	What a Blast!	Such Gravity	What a Drag!	Thrusting Ahead!	Up, Up, and Away	The Final Event	Found in Other Grades Listed
<p>1. Scientific Processes <i>The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:</i> Demonstrate safe practices during field and laboratory investigations (6.1A)</p>	√	√	√	√	√	√	√	
<p>Make wise choices in the use and conservation of resources and the disposal or recycling of materials (6.1B)</p>	√	√	√	√	√	√	√	
<p>2. Scientific Processes <i>The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</i> Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (6.2A)</p>	√	√	√	√	√	√	√	
<p>Collect data by observing and measuring. (6.2B)</p>	√	√	√	√	√	√	√	
<p>Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (6.2C)</p>	√	√	√	√	√	√	√	
<p>Communicate valid conclusions. (6.2D)</p>	√	√	√	√	√	√	√	
<p>Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (6.2E)</p>	√	√	√	√	√	√	√	
<p>3. Scientific Processes <i>The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:</i> Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (6.3A)</p>	√	√	√	√	√	√	√	
<p>Draw inferences based on data related to promotional materials for products and services. (6.3B)</p>	√	√	√	√		√	√	
<p>Represent the natural world using models and identify their limitations. (6.3C)</p>	√	√	√	√	√	√	√	
<p>Evaluate the impact of research on scientific thought, society, and the environment. (6.3D)</p>	√	√	√	√	√	√	√	
<p>Connect Grade 6 science concepts with the history of science and contributions of scientists. (6.3E)</p>	√	√	√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, analyze, and record information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, test tubes, safety goggles, spring scales, magnets, balances, microscopes, telescopes, thermometers, calculators, field equipment, compasses, computers, and computer probes. (6.4A)

Identify patterns in collected information using percent, average, range, and frequency. (6.4B)

What an Uplifting Experience!	What a Blast!	Such Gravity	What a Drag!	Thrusting Ahead!	Up, Up, and Away	The Final Event	Found in Other Grades Listed
√	√	√	√	√	√	√	
√	√	√	√	√	√	√	

5. Scientific Concepts

The student knows that systems may combine with other systems to form a larger system. The student is expected to:

Identify and describe a system that results from the combination of two or more systems such as in the solar system. (6.5A)

Describe how the properties of a system are different from the properties of its parts. (6.5B)

6. Science Concepts

The student knows that there is a relationship between force and motion. The student is expected to:

Identify and describe the changes in position, direction of motion, and speed of an object when acted upon by force. (6.6A)

Demonstrate that changes in motion can be measured and graphically represented. (6.6B)

Identify forces that shape features of the earth including uplifting, movement of water, and volcanic activity. (6.6C)

√	√	√	√	√	√	√	
√	√	√	√	√	√	√	

4,7,8

7. Science Concepts

The student knows that substances have physical and chemical properties. The student is expected to:

Demonstrate that new substances can be made when two or more substances are chemically combined and compare the properties of the new substances to the original substances. (6.7A)

Classify substances by their physical and chemical properties. (6.7B)

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5,7,8

5,7,8

8. Science Concepts

The student knows that complex interactions occur between matter and energy. The student is expected to:

Define matter and energy. (6.8A)

Explain and illustrate the interactions between matter and energy in the water cycle and in the decay of biomass such as in a compost bin. (6.8B)

Describe energy flow in living systems including food chains and food webs. (6.8C)

4,5,7,8

4,5,7,8

4,5,7,8

9. Science Concepts

The student knows that obtaining, transforming, and distributing energy affects the environment. The student is expected to:

Identify energy transformations occurring during the production of energy for human use such as electrical energy to heat energy or heat energy to electrical energy. (6.9A)

Compare methods used for transforming energy in devices such as water heaters, cooling systems, or hydroelectric and wind power plants. (6.9B)

Research and describe energy types from their source to their use and determine if the type is renewable, non-renewable, or inexhaustible. (6.9C)

10. Science Concepts

The student knows the relationship between structure and function in living systems. The student is expected to:

Differentiate between structure and function. (6.10A)

Determine that all organisms are composed of cells that carry on functions to sustain life. (6.10B)

Identify how structure complements function at different levels of organization including organs, organ systems, organisms, and populations. (6.10C)

11. Science Concepts

The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms.

The student is expected to:

Identify some changes in traits that can occur over several generations through natural occurrence and selective breeding. (6.11A)

Identify cells as structures containing genetic material. (6.11B)

Interpret the role of genes in inheritance. (6.11C)

12. Science Concepts

The student knows that the responses of organisms are caused by internal or external stimuli. The student is expected to:

Identify responses in organisms to internal stimuli such as hunger or thirst. (6.12A)

Identify responses in organisms to external stimuli such as the presence or absence of heat or light. (6.12B)

Identify components of an ecosystem to which organisms may respond. (6.12C)

13. Science Concepts

The student knows components of our solar system. The student is expected to:

Identify characteristics of objects in our solar system including the sun, planets, meteorites, comets, asteroids, and moons. (6.13A)

Describe types of equipment and transportation needed for space travel. (6.13B)

What an Uplifting Experience!

What a Blast!

Such Gravity

What a Drag!

Thrusting Ahead!

Up, Up, and Away

The Final Event

Found in Other Grades Listed

5

8

8

√

14. Science Concepts

The student knows the structures and functions of earth systems. The student is expected to:

Summarize the rock cycle. (6.14A)

Identify relationships between groundwater and surface water in a watershed. (6.14B)

Describe components of the atmosphere, including oxygen, nitrogen, and water vapor, and identify the role of atmospheric movement in weather change. (6.14C)

√	What an Uplifting Experience!	
	What a Blast!	
	Such Gravity	
	What a Drag!	
	Thrusting Ahead!	
	Up, Up, and Away	
	The Final Event	
	Found in Other Grades Listed	7
		8
		4, 5, 7, 8

TEXAS

ESSENTIAL KNOWLEDGE AND SKILLS

6B It Really Is a Small World After All

	One Starry Night	We Come in Peace	This Place Called Earth	La Luna	It's in the Stars	How Would We Survive?	Standing on the Shoulders of Giants	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:</i> Demonstrate safe practices during field and laboratory investigations (6.1A)	√	√	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (6.1B)	√	√	√	√	√	√	√	
2. Scientific Processes <i>The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</i> Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (6.2A)	√	√	√	√	√	√	√	
Collect data by observing and measuring. (6.2B)	√	√	√	√	√	√	√	
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (6.2C)	√	√	√	√	√	√	√	
Communicate valid conclusions. (6.2D)	√	√	√	√	√	√	√	
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (6.2E)	√	√	√	√	√	√	√	
3. Scientific Processes <i>The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:</i> Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (6.3A)	√	√	√	√	√	√	√	
Draw inferences based on data related to promotional materials for products and services. (6.3B)		√		√	√	√	√	
Represent the natural world using models and identify their limitations. (6.3C)		√	√	√	√	√	√	
Evaluate the impact of research on scientific thought, society, and the environment. (6.3D)	√	√	√	√	√	√	√	
Connect Grade 6 science concepts with the history of science and contributions of scientists. (6.3E)	√	√	√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, analyze, and record information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, test tubes, safety goggles, spring scales, magnets, balances, microscopes, telescopes, thermometers, calculators, field equipment, compasses, computers, and computer probes. (6.4A)

Identify patterns in collected information using percent, average, range, and frequency. (6.4B)

One Starry Night	√	√	√	√	√	√	√
We Come in Peace	√	√	√	√	√	√	√
This Place Called Earth	√	√	√	√	√	√	√
La Luna	√	√	√	√	√	√	√
It's in the Stars	√	√	√	√	√	√	√
How Would We Survive?	√	√	√	√	√	√	√
Standing on the Shoulders of Giants	√	√	√	√	√	√	√

Found in Other Grades Listed

5. Scientific Concepts

The student knows that systems may combine with other systems to form a larger system. The student is expected to:

Identify and describe a system that results from the combination of two or more systems such as in the solar system. (6.5A)

Describe how the properties of a system are different from the properties of its parts. (6.5B)

One Starry Night	√	√	√	√	√	√	√
We Come in Peace	√	√	√	√	√	√	√
This Place Called Earth	√	√	√	√	√	√	√
La Luna	√	√	√	√	√	√	√
It's in the Stars	√	√	√	√	√	√	√
How Would We Survive?	√	√	√	√	√	√	√
Standing on the Shoulders of Giants	√	√	√	√	√	√	√

6. Science Concepts

The student knows that there is a relationship between force and motion. The student is expected to:

Identify and describe the changes in position, direction of motion, and speed of an object when acted upon by force. (6.6A)

Demonstrate that changes in motion can be measured and graphically represented. (6.6B)

Identify forces that shape features of the earth including uplifting, movement of water, and volcanic activity. (6.6C)

One Starry Night							
We Come in Peace							
This Place Called Earth							
La Luna			√	√	√	√	√
It's in the Stars							
How Would We Survive?							
Standing on the Shoulders of Giants							

4,7,8

7. Science Concepts

The student knows that substances have physical and chemical properties. The student is expected to:

Demonstrate that new substances can be made when two or more substances are chemically combined and compare the properties of the new substances to the original substances. (6.7A)

Classify substances by their physical and chemical properties. (6.7B)

One Starry Night							
We Come in Peace							
This Place Called Earth							
La Luna							
It's in the Stars							
How Would We Survive?							
Standing on the Shoulders of Giants							

5,7,8

5,7,8

8. Science Concepts

The student knows that complex interactions occur between matter and energy. The student is expected to:

Define matter and energy. (6.8A)

Explain and illustrate the interactions between matter and energy in the water cycle and in the decay of biomass such as in a compost bin. (6.8B)

Describe energy flow in living systems including food chains and food webs. (6.8C)

One Starry Night							
We Come in Peace							
This Place Called Earth							
La Luna							
It's in the Stars							
How Would We Survive?							
Standing on the Shoulders of Giants							

4,5,7,8

4,5,7,8

4,5,7,8

9. Science Concepts

The student knows that obtaining, transforming, and distributing energy affects the environment. The student is expected to:

Identify energy transformations occurring during the production of energy for human use such as electrical energy to heat energy or heat energy to electrical energy. (6.9A)

Compare methods used for transforming energy in devices such as water heaters, cooling systems, or hydroelectric and wind power plants. (6.9B)

Research and describe energy types from their source to their use and determine if the type is renewable, non-renewable, or inexhaustible. (6.9C)

One Starry Night

We Come in Peace

√ This Place Called Earth

La Luna

It's in the Stars

How Would We Survive?

Standing on the Shoulders of Giants

Found in Other Grades Listed

5

10. Science Concepts

The student knows the relationship between structure and function in living systems. The student is expected to:

Differentiate between structure and function. (6.10A)

Determine that all organisms are composed of cells that carry on functions to sustain life. (6.10B)

Identify how structure complements function at different levels of organization including organs, organ systems, organisms, and populations. (6.10C)

11. Science Concepts

The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms.

The student is expected to:

Identify some changes in traits that can occur over several generations through natural occurrence and selective breeding. (6.11A)

Identify cells as structures containing genetic material. (6.11B)

8

Interpret the role of genes in inheritance. (6.11C)

8

12. Science Concepts

The student knows that the responses of organisms are caused by internal or external stimuli. The student is expected to:

Identify responses in organisms to internal stimuli such as hunger or thirst. (6.12A)

Identify responses in organisms to external stimuli such as the presence or absence of heat or light. (6.12B)

√

√

√

Identify components of an ecosystem to which organisms may respond. (6.12C)

√

13. Science Concepts

The student knows components of our solar system. The student is expected to:

Identify characteristics of objects in our solar system including the sun, planets, meteorites, comets, asteroids, and moons. (6.13A)

√

√

√

√

√

√

√

Describe types of equipment and transportation needed for space travel. (6.13B)

√

√

√

√

√

14. Science Concepts

The student knows the structures and functions of earth systems. The student is expected to:

Summarize the rock cycle. (6.14A)

Identify relationships between groundwater and surface water in a watershed. (6.14B)

Describe components of the atmosphere, including oxygen, nitrogen, and water vapor, and identify the role of atmospheric movement in weather change. (6.14C)

One Starry Night	
We Come in Peace	
This Place Called Earth	
La Luna	
It's in the Stars	
How Would We Survive?	
Standing on the Shoulders of Giants	
Found in Other Grades Listed	7
	8
	4,5,7,8

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 6C e-MOTION-ally Charged

	The Art of Designing Products	Machine Ins and Outs	Lever, Linkage, and Pneumatic Ins and Outs	Frictional Ins and Outs	Electrical Ins and Outs	Save the Earth ...The Final Event	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:</i> Demonstrate safe practices during field and laboratory investigations (6.1A)	√	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (6.1B)	√	√	√	√	√	√	
2. Scientific Processes <i>The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</i> Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (6.2A)	√	√	√	√	√	√	
Collect data by observing and measuring. (6.2B)	√	√	√	√	√	√	
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (6.2C)	√	√	√	√	√	√	
Communicate valid conclusions. (6.2D)	√	√	√	√	√	√	
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (6.2E)	√	√	√	√	√	√	
3. Scientific Processes <i>The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:</i> Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (6.3A)	√	√	√	√	√	√	
Draw inferences based on data related to promotional materials for products and services. (6.3B)	√	√	√	√	√	√	
Represent the natural world using models and identify their limitations. (6.3C)	√	√	√	√	√	√	
Evaluate the impact of research on scientific thought, society, and the environment. (6.3D)	√	√	√	√	√	√	
Connect Grade 6 science concepts with the history of science and contributions of scientists. (6.3E)	√	√	√	√	√	√	

	The Art of Designing Products	Machine Ins and Outs	Lever, Linkage, and Pneumatic Ins and Outs	Frictional Ins and Outs	Electrical Ins and Outs	Save the Earth ... The Final Event	Found in Other Grades Listed
4. Scientific Processes <i>The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:</i> Collect, analyze, and record information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, test tubes, safety goggles, spring scales, magnets, balances, microscopes, telescopes, thermometers, calculators, field equipment, compasses, computers, and computer probes. (6.4A)	√	√	√	√	√	√	
Identify patterns in collected information using percent, average, range, and frequency. (6.4B)		√	√	√	√	√	
5. Scientific Concepts <i>The student knows that systems may combine with other systems to form a larger system. The student is expected to:</i> Identify and describe a system that results from the combination of two or more systems such as in the solar system. (6.5A)	√	√	√	√	√	√	
Describe how the properties of a system are different from the properties of its parts. (6.5B)	√	√	√	√	√	√	
6. Science Concepts <i>The student knows that there is a relationship between force and motion. The student is expected to:</i> Identify and describe the changes in position, direction of motion, and speed of an object when acted upon by force. (6.6A)	√	√	√	√	√	√	
Demonstrate that changes in motion can be measured and graphically represented. (6.6B)		√	√	√	√	√	
Identify forces that shape features of the earth including uplifting, movement of water, and volcanic activity. (6.6C)							4,7,8
7. Science Concepts <i>The student knows that substances have physical and chemical properties. The student is expected to:</i> Demonstrate that new substances can be made when two or more substances are chemically combined and compare the properties of the new substances to the original substances. (6.7A)							5,7,8
Classify substances by their physical and chemical properties. (6.7B)							5,7,8
8. Science Concepts <i>The student knows that complex interactions occur between matter and energy. The student is expected to:</i> Define matter and energy. (6.8A)					√		4,5,7,8
Explain and illustrate the interactions between matter and energy in the water cycle and in the decay of biomass such as in a compost bin. (6.8B)							4,5,7,8
Describe energy flow in living systems including food chains and food webs. (6.8C)							4,5,7,8

	The Art of Designing Products			
	Machine Ins and Outs	Lever, Linkage, and Pneumatic Ins and Outs	Frictional Ins and Outs	Electrical Ins and Outs
9. Science Concepts				
<i>The student knows that obtaining, transforming, and distributing energy affects the environment. The student is expected to:</i>				
Identify energy transformations occurring during the production of energy for human use such as electrical energy to heat energy or heat energy to electrical energy. (6.9A)			√	√
Compare methods used for transforming energy in devices such as water heaters, cooling systems, or hydroelectric and wind power plants. (6.9B)				5
Research and describe energy types from their source to their use and determine if the type is renewable, non-renewable, or inexhaustible. (6.9C)			√	√
10. Science Concepts				
<i>The student knows the relationship between structure and function in living systems. The student is expected to:</i>				
Differentiate between structure and function. (6.10A)				
Determine that all organisms are composed of cells that carry on functions to sustain life. (6.10B)				
Identify how structure complements function at different levels of organization including organs, organ systems, organisms, and populations. (6.10C)				
11. Science Concepts				
<i>The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:</i>				
Identify some changes in traits that can occur over several generations through natural occurrence and selective breeding. (6.11A)				
Identify cells as structures containing genetic material. (6.11B)				8
Interpret the role of genes in inheritance. (6.11C)				8
12. Science Concepts				
<i>The student knows that the responses of organisms are caused by internal or external stimuli. The student is expected to:</i>				
Identify responses in organisms to internal stimuli such as hunger or thirst. (6.12A)				
Identify responses in organisms to external stimuli such as the presence or absence of heat or light. (6.12B)				
Identify components of an ecosystem to which organisms may respond. (6.12C)				
13. Science Concepts				
<i>The student knows components of our solar system. The student is expected to:</i>				
Identify characteristics of objects in our solar system including the sun, planets, meteorites, comets, asteroids, and moons. (6.13A)				
Describe types of equipment and transportation needed for space travel. (6.13B)				

14. Science Concepts

The student knows the structures and functions of earth systems. The student is expected to:

Summarize the rock cycle. (6.14A)

Identify relationships between groundwater and surface water in a watershed. (6.14B)

Describe components of the atmosphere, including oxygen, nitrogen, and water vapor, and identify the role of atmospheric movement in weather change. (6.14C)

The Art of Designing Products	
Machine Ins and Outs	
Lever, Linkage, and Pneumatic Ins and Outs	
Frictional Ins and Outs	
Electrical Ins and Outs	
Save the Earth ...The Final Event	
Found in Other Grades Listed	
	7
	8
	4,5,7,8

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 6D It's Alive

1. Scientific Processes

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

Demonstrate safe practices during field and laboratory investigations (6.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (6.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (6.2A)

Collect data by observing and measuring. (6.2B)

Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (6.2C)

Communicate valid conclusions. (6.2D)

Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (6.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (6.3A)

Draw inferences based on data related to promotional materials for products and services. (6.3B)

Represent the natural world using models and identify their limitations. (6.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (6.3D)

Connect Grade 6 science concepts with the history of science and contributions of scientists. (6.3E)

	Basic Needs of Living Things	It's Alive...A Classy Thing	Backbone or No Backbone? ...That Is the Question	It Was Alive...Fossil Museum	Taking a Closer Look	A Closer Look at Pond Life	Living Environments
Demonstrate safe practices during field and laboratory investigations (6.1A)	√	√	√	√	√	√	√
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (6.1B)	√	√	√	√	√	√	√
Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (6.2A)	√	√	√	√	√	√	√
Collect data by observing and measuring. (6.2B)	√	√	√	√	√	√	√
Analyze and interpret information to construct reasonable explanations from direct and indirect evidence. (6.2C)	√	√	√	√	√	√	√
Communicate valid conclusions. (6.2D)	√	√	√	√	√	√	√
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (6.2E)	√	√	√	√	√	√	√
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (6.3A)	√	√	√	√	√	√	√
Draw inferences based on data related to promotional materials for products and services. (6.3B)	√	√	√	√	√	√	√
Represent the natural world using models and identify their limitations. (6.3C)	√	√	√	√	√	√	√
Evaluate the impact of research on scientific thought, society, and the environment. (6.3D)	√	√	√	√	√	√	√
Connect Grade 6 science concepts with the history of science and contributions of scientists. (6.3E)	√	√	√	√	√	√	√

Found in Other Grades Listed

	√ Basic Needs of Living Things	√ It's Alive...A Classy Thing	√ Backbone or No Backbone? ...That Is the Question	√ It Was Alive...Fossil Museum	√ Taking a Closer Look	√ A Closer Look at Pond Life	√ Living Environments	Found in Other Grades Listed
4. Scientific Processes <i>The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:</i> Collect, analyze, and record information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, test tubes, safety goggles, spring scales, magnets, balances, microscopes, telescopes, thermometers, calculators, field equipment, compasses, computers, and computer probes. (6.4A)	√	√	√	√	√	√	√	
Identify patterns in collected information using percent, average, range, and frequency. (6.4B)	√	√	√	√	√	√	√	
5. Scientific Concepts <i>The student knows that systems may combine with other systems to form a larger system. The student is expected to:</i> Identify and describe a system that results from the combination of two or more systems such as in the solar system. (6.5A)	√	√	√	√	√	√	√	
Describe how the properties of a system are different from the properties of its parts. (6.5B)	√	√	√	√	√	√	√	
6. Science Concepts <i>The student knows that there is a relationship between force and motion. The student is expected to:</i> Identify and describe the changes in position, direction of motion, and speed of an object when acted upon by force. (6.6A)								
Demonstrate that changes in motion can be measured and graphically represented. (6.6B)								
Identify forces that shape features of the earth including uplifting, movement of water, and volcanic activity. (6.6C)								4,7,8
7. Science Concepts <i>The student knows that substances have physical and chemical properties. The student is expected to:</i> Demonstrate that new substances can be made when two or more substances are chemically combined and compare the properties of the new substances to the original substances. (6.7A)								5,7,8
Classify substances by their physical and chemical properties. (6.7B)								5,7,8
8. Science Concepts <i>The student knows that complex interactions occur between matter and energy. The student is expected to:</i> Define matter and energy. (6.8A)								4,5,7,8
Explain and illustrate the interactions between matter and energy in the water cycle and in the decay of biomass such as in a compost bin. (6.8B)								4,5,7,8
Describe energy flow in living systems including food chains and food webs. (6.8C)						√		4,5,7,8

9. Science Concepts

The student knows that obtaining, transforming, and distributing energy affects the environment. The student is expected to:

Identify energy transformations occurring during the production of energy for human use such as electrical energy to heat energy or heat energy to electrical energy. (6.9A)

Compare methods used for transforming energy in devices such as water heaters, cooling systems, or hydroelectric and wind power plants. (6.9B)

Research and describe energy types from their source to their use and determine if the type is renewable, non-renewable, or inexhaustible. (6.9C)

10. Science Concepts

The student knows the relationship between structure and function in living systems. The student is expected to:

Differentiate between structure and function. (6.10A)

Determine that all organisms are composed of cells that carry on functions to sustain life. (6.10B)

Identify how structure complements function at different levels of organization including organs, organ systems, organisms, and populations. (6.10C)

11. Science Concepts

The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms.

The student is expected to:

Identify some changes in traits that can occur over several generations through natural occurrence and selective breeding. (6.11A)

Identify cells as structures containing genetic material. (6.11B)

Interpret the role of genes in inheritance. (6.11C)

12. Science Concepts

The student knows that the responses of organisms are caused by internal or external stimuli. The student is expected to:

Identify responses in organisms to internal stimuli such as hunger or thirst. (6.12A)

Identify responses in organisms to external stimuli such as the presence or absence of heat or light. (6.12B)

Identify components of an ecosystem to which organisms may respond. (6.12C)

13. Science Concepts

The student knows components of our solar system. The student is expected to:

Identify characteristics of objects in our solar system including the sun, planets, meteorites, comets, asteroids, and moons. (6.13A)

Describe types of equipment and transportation needed for space travel. (6.13B)

Basic Needs of Living Things
It's Alive...A Classy Thing
Backbone or No Backbone?
...That Is the Question
It Was Alive...Fossil Museum
Taking a Closer Look
A Closer Look at Pond Life
Living Environments
Found in Other Grades Listed

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14. Science Concepts

The student knows the structures and functions of earth systems. The student is expected to:

Summarize the rock cycle. (6.14A)

Identify relationships between groundwater and surface water in a watershed. (6.14B)

Describe components of the atmosphere, including oxygen, nitrogen, and water vapor, and identify the role of atmospheric movement in weather change. (6.14C)

Basic Needs of Living Things	
It's Alive...A Classy Thing	
Backbone or No Backbone? ...That Is the Question	
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Taking a Closer Look	
A Closer Look at Pond Life	
Living Environments	
Found in Other Grades Listed	
	7
	8
	4, 5, 7, 8

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, analyze, and record information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, timing devices, hot plates, test tubes, safety goggles, spring scales, magnets, balances, microscopes, telescopes, thermometers, calculators, field equipment, compasses, computers, and computer probes. (6.4A)

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5. Scientific Concepts

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Classify substances by their physical and chemical properties. (6.7B)

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Define matter and energy. (6.8A)

Explain and illustrate the interactions between matter and energy in the water cycle and in the decay of biomass such as in a compost bin. (6.8B)

Describe energy flow in living systems including food chains and food webs. (6.8C)

How Are We Connected?
 The Ins and Outs of Trade
 Partners in Trade
 Connections Through Space?
 It Is a Worldwide Connection
 Getting Connected with Our Ancestors
 The Enlightened Legend
 Who Discovered Whom?
 It's in the News
 The Debate: Looking Back — Looking Forward
 Found in Other Grades Listed

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Identify responses in organisms to external stimuli such as the presence or absence of heat or light. (6.12B)

√

Identify components of an ecosystem to which organisms may respond. (6.12C)

√

13. Science Concepts

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Identify characteristics of objects in our solar system including the sun, planets, meteorites, comets, asteroids, and moons. (6.13A)

Describe types of equipment and transportation needed for space travel. (6.13B)

√

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The Ins and Outs of Trade	
Partners in Trade	
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It Is a Worldwide Connection	
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The Enlightened Legend	
Who Discovered Whom?	
It's in the News	
The Debate: Looking Back — Looking Forward	
Found in Other Grades Listed	
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	8
	4,5,7,8

TEXAS

ESSENTIAL KNOWLEDGE AND SKILLS

7A Structural Interactions

1. Scientific Processes

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

Demonstrate safe practices during field and laboratory investigations (7.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (7.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (7.2A)

Collect data by observing and measuring. (7.2B)

Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (7.2C)

Communicate valid conclusions. (7.2D)

Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (7.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (7.3A)

Draw inferences based on data related to promotional materials for products and services. (7.3B)

Represent the natural world using models and identify their limitations. (7.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (7.3D)

Connect Grade 7 science concepts with the history of science and contributions of scientists. (7.3E)

	May the Force Be With You or Against You?	Paper Structures	It's a Solid, or Is It a Frame or Shell?	Bridging the Gap	Gravity, the Centre of It All	Standing on Solid Ground	Shake, Rattle, and Roll	Structures and the Earth's Crust	Designing It All	Found in Other Grades Listed
Demonstrate safe practices during field and laboratory investigations (7.1A)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (7.1B)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (7.2A)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Collect data by observing and measuring. (7.2B)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (7.2C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Communicate valid conclusions. (7.2D)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (7.2E)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (7.3A)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Draw inferences based on data related to promotional materials for products and services. (7.3B)			✓		✓	✓	✓	✓	✓	
Represent the natural world using models and identify their limitations. (7.3C)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Evaluate the impact of research on scientific thought, society, and the environment. (7.3D)	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Connect Grade 7 science concepts with the history of science and contributions of scientists. (7.3E)	✓	✓	✓	✓	✓	✓	✓	✓	✓	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, analyze, and record information to explain a phenomenon using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, timing devices, magnets, and compasses. (7.4A)

Collect and analyze information to recognize patterns such as rates of change. (7.4B)

5. Science Concepts

The student knows that an equilibrium of a system may change. The student is expected to:

Describe how systems may reach an equilibrium such as when a volcano erupts. (7.5A)

Observe and describe the role of ecological succession in maintaining an equilibrium in an ecosystem. (7.5B)

6. Science Concepts

The student knows that there is a relationship between force and motion. The student is expected to:

Demonstrate basic relationships between force and motion using simple machines using pulleys and levers. (7.6A)

Demonstrate that an object will remain at rest or move at a constant speed and in a straight line if it is not being subjected to an unbalanced force. (7.6B)

Relate forces to basic processes in living organisms including the flow of blood and the emergence of seedlings. (7.6C)

7. Science Concepts

The student knows that substances have physical and chemical properties. The student is expected to:

Identify and demonstrate everyday examples of chemical phenomena such as rusting and tarnishing of metals and burning of wood. (7.7A)

Describe physical properties of elements and identify how they are used to position an element on the periodic table. (7.7B)

Recognize that compounds are composed of elements. (7.7C)

8. Science Concepts

The student knows that complex interactions occur between matter and energy. The student is expected to:

Illustrate examples of potential and kinetic energy in everyday life such as objects at rest, movements of geologic faults, and falling water. (7.8A)

Identify that radiant energy from the Sun is transferred into chemical energy through the process of photosynthesis. (7.8B)

May the Force Be With You or Against You?
Paper Structures
It's a Solid, or Is It a Frame or Shell?
Bridging the Gap
Gravity, the Centre of It All
Standing on Solid Ground
Shake, Rattle, and Roll
Structures and the Earth's Crust
Designing It All
Found in Other Grades Listed

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May the Force Be With You
or Against You?
Paper Structures
It's a Solid, or Is It a Frame
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Shake, Rattle, and Roll
Structures and the
Earth's Crust
Designing It All
Found in Other Grades Listed
5,6,8

9. Science Concepts

The student knows the relationship between structure and function in living systems. The student is expected to:

Identify the systems of the human organism and describe their functions. (7.9A)

Describe how organisms maintain stable internal conditions while living in changing external environments. (7.9B)

10. Science Concepts

The student knows that species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:

Identify that sexual reproduction results in more diverse offspring and asexual reproduction results in more uniform offspring. (7.10A)

Compare traits of organisms of different species that enhance their survival and reproduction. (7.10B)

Distinguish between dominant and recessive traits and recognize that inherited traits of an individual are contained in genetic material. (7.10C)

11. Science Concepts

The student knows that the responses of organisms are caused by internal or external stimuli. The student is expected to:

Analyze changes in organisms such as a fever or vomiting that may result from internal stimuli. (7.11A)

Identify responses in organisms to external stimuli found in the environment such as the presence or absence of light. (7.11B)

12. Science Concepts

The student knows that there is a relationship between organisms and the environment. The student is expected to:

Identify components of an ecosystem. (7.12A)

Observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources. (7.12B)

Describe how different environments support different varieties of organisms. (7.12C)

Observe and describe the role of ecological succession in ecosystems. (7.12D)

13. Science Concepts

The student knows components of our solar system. The student is expected to:

Identify and illustrate how the tilt of the earth on its axis as it rotates and revolves around the sun causes changes in seasons and the length of a day. (7.13A)

Relate the earth's movement and the moon's orbit to the observed cyclical phases of the moon. (7.13B)

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14. Science Concepts

The student knows that natural events and human activity can alter earth systems. The student is expected to:

Describe and predict the impact of different catastrophic events on the earth. (7.14A)

Analyze effects of regional erosional deposition and weathering. (7.14B)

Make inferences and draw conclusions about effects of human activity on earth's renewable, non-renewable, and inexhaustible resources. (7.14C)

May the Force Be With You
or Against You?

Paper Structures

It's a Solid, or Is It a Frame
or Shell?

Bridging the Gap

Gravity, the Centre of It All

✓ Standing on Solid Ground

✓ Shake, Rattle, and Roll

✓ Structures and the
Earth's Crust

✓ Designing It All

Found in Other Grades Listed

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 7B The Solution Is

1. Scientific Processes

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

Demonstrate safe practices during field and laboratory investigations (7.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (7.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (7.2A)

Collect data by observing and measuring. (7.2B)

Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (7.2C)

Communicate valid conclusions. (7.2D)

Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (7.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (7.3A)

Draw inferences based on data related to promotional materials for products and services. (7.3B)

Represent the natural world using models and identify their limitations. (7.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (7.3D)

Connect Grade 7 science concepts with the history of science and contributions of scientists. (7.3E)

	I Hate It When That Happens	Can You Concentrate?	It Dissolves Soooo Fast!	What's in There?	Pure as Gold	The Mystery of the Lost Liquid	Clean It Up!	Water, Water Everywhere ...So Why Can't I Drink?	Found in Other Grades Listed
Demonstrate safe practices during field and laboratory investigations (7.1A)	√	√	√	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (7.1B)	√	√	√	√	√	√	√	√	
Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (7.2A)	√	√	√	√	√	√	√	√	
Collect data by observing and measuring. (7.2B)	√	√	√	√	√	√	√	√	
Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (7.2C)	√	√	√	√	√	√	√	√	
Communicate valid conclusions. (7.2D)	√	√	√	√	√	√	√	√	
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (7.2E)	√	√	√	√	√	√	√	√	
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (7.3A)	√	√	√	√	√	√	√	√	
Draw inferences based on data related to promotional materials for products and services. (7.3B)	√	√	√	√	√		√	√	
Represent the natural world using models and identify their limitations. (7.3C)	√	√	√	√	√	√	√	√	
Evaluate the impact of research on scientific thought, society, and the environment. (7.3D)	√	√	√	√	√	√	√	√	
Connect Grade 7 science concepts with the history of science and contributions of scientists. (7.3E)	√	√	√	√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, analyze, and record information to explain a phenomenon using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, timing devices, magnets, and compasses. (7.4A)

Collect and analyze information to recognize patterns such as rates of change. (7.4B)

√ I Hate It When That Happens
 √ Can You Concentrate?
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√ √ √ √ √ √ √ √

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Recognize that compounds are composed of elements. (7.7C)

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The student knows that species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:
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Compare traits of organisms of different species that enhance their survival and reproduction. (7.10B)

6,8

Distinguish between dominant and recessive traits and recognize that inherited traits of an individual are contained in genetic material. (7.10C)

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Identify responses in organisms to external stimuli found in the environment such as the presence or absence of light. (7.11B)

√

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The student knows that there is a relationship between organisms and the environment. The student is expected to:
 Identify components of an ecosystem. (7.12A)

Observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources. (7.12B)

Describe how different environments support different varieties of organisms. (7.12C)

Observe and describe the role of ecological succession in ecosystems. (7.12D)

8

13. Science Concepts

The student knows components of our solar system. The student is expected to:
 Identify and illustrate how the tilt of the earth on its axis as it rotates and revolves around the sun causes changes in seasons and the length of a day. (7.13A)

5,6

Relate the earth's movement and the moon's orbit to the observed cyclical phases of the moon. (7.13B)

6

14. Science Concepts

The student knows that natural events and human activity can alter earth systems. The student is expected to:

Describe and predict the impact of different catastrophic events on the earth. (7.14A)

Analyze effects of regional erosional deposition and weathering. (7.14B)

Make inferences and draw conclusions about effects of human activity on earth's renewable, non-renewable, and inexhaustible resources. (7.14C)

I Hate It When That Happens
Can You Concentrate?
It Dissolves Soooo Fast!
What's in There?
Pure as Gold
The Mystery of
the Lost Liquid
Clean It Up!
Water, Water Everywhere
...So Why Can't I Drink?
Found in Other Grades Listed

✓ ✓

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 7C The Heat's On

	A Column of Liquid	We All Scream for Ice Cream	Changing Ice to Water	Dancing Particles	Heat It Up!	Hot Potatoes	What's Happening?	Found in Other Grades Listed
1. Scientific Processes <i>The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:</i> Demonstrate safe practices during field and laboratory investigations (7.1A)	✓	✓	✓	✓	✓	✓	✓	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (7.1B)	✓	✓	✓	✓	✓	✓	✓	
2. Scientific Processes <i>The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</i> Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (7.2A)	✓	✓	✓	✓	✓	✓	✓	
Collect data by observing and measuring. (7.2B)	✓	✓	✓	✓	✓	✓	✓	
Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (7.2C)	✓	✓	✓	✓	✓	✓	✓	
Communicate valid conclusions. (7.2D)	✓	✓	✓	✓	✓	✓	✓	
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (7.2E)	✓	✓	✓	✓	✓	✓	✓	
3. Scientific Processes <i>The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:</i> Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (7.3A)	✓	✓	✓	✓	✓	✓	✓	
Draw inferences based on data related to promotional materials for products and services. (7.3B)	✓	✓			✓		✓	
Represent the natural world using models and identify their limitations. (7.3C)	✓	✓	✓	✓	✓	✓	✓	
Evaluate the impact of research on scientific thought, society, and the environment. (7.3D)	✓	✓	✓	✓	✓	✓	✓	
Connect Grade 7 science concepts with the history of science and contributions of scientists. (7.3E)	✓	✓	✓	✓	✓	✓	✓	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, analyze, and record information to explain a phenomenon using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, timing devices, magnets, and compasses. (7.4A)

Collect and analyze information to recognize patterns such as rates of change. (7.4B)

A Column of Liquid	We All Scream for Ice Cream	Changing Ice to Water	Dancing Particles	Heat It Up!	Hot Potatoes	What's Happening?	Found in Other Grades Listed
√	√	√	√	√	√	√	
√	√	√	√	√	√	√	

5. Science Concepts

The student knows that an equilibrium of a system may change. The student is expected to:

Describe how systems may reach an equilibrium such as when a volcano erupts. (7.5A)

Observe and describe the role of ecological succession in maintaining an equilibrium in an ecosystem. (7.5B)

						√	8
							8

6. Science Concepts

The student knows that there is a relationship between force and motion. The student is expected to:

Demonstrate basic relationships between force and motion using simple machines using pulleys and levers. (7.6A)

Demonstrate that an object will remain at rest or move at a constant speed and in a straight line if it is not being subjected to an unbalanced force. (7.6B)

Relate forces to basic processes in living organisms including the flow of blood and the emergence of seedlings. (7.6C)

							5,6,8
							5,6,8

7. Science Concepts

The student knows that substances have physical and chemical properties. The student is expected to:

Identify and demonstrate everyday examples of chemical phenomena such as rusting and tarnishing of metals and burning of wood. (7.7A)

Describe physical properties of elements and identify how they are used to position an element on the periodic table. (7.7B)

Recognize that compounds are composed of elements. (7.7C)

√	√	√	√	√	√	√	
						√	
						√	

8. Science Concepts

The student knows that complex interactions occur between matter and energy. The student is expected to:

Illustrate examples of potential and kinetic energy in everyday life such as objects at rest, movements of geologic faults, and falling water. (7.8A)

Identify that radiant energy from the sun is transferred into chemical energy through the process of photosynthesis. (7.8B)

			√	√		√	
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9. Science Concepts

The student knows the relationship between structure and function in living systems. The student is expected to:

Identify the systems of the human organism and describe their functions. (7.9A)

Describe how organisms maintain stable internal conditions while living in changing external environments. (7.9B)

10. Science Concepts

The student knows that species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:

Identify that sexual reproduction results in more diverse offspring and asexual reproduction results in more uniform offspring. (7.10A)

Compare traits of organisms of different species that enhance their survival and reproduction. (7.10B)

Distinguish between dominant and recessive traits and recognize that inherited traits of an individual are contained in genetic material. (7.10C)

11. Science Concepts

The student knows that the responses of organisms are caused by internal or external stimuli. The student is expected to:

Analyze changes in organisms such as a fever or vomiting that may result from internal stimuli. (7.11A)

Identify responses in organisms to external stimuli found in the environment such as the presence or absence of light. (7.11B)

12. Science Concepts

The student knows that there is a relationship between organisms and the environment. The student is expected to:

Identify components of an ecosystem. (7.12A)

Observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources. (7.12B)

Describe how different environments support different varieties of organisms. (7.12C)

Observe and describe the role of ecological succession in ecosystems. (7.12D)

13. Science Concepts

The student knows components of our solar system. The student is expected to:

Identify and illustrate how the tilt of the earth on its axis as it rotates and revolves around the sun causes changes in seasons and the length of a day. (7.13A)

Relate the earth's movement and the moon's orbit to the observed cyclical phases of the moon. (7.13B)

A Column of Liquid	
We All Scream for Ice Cream	
Changing Ice to Water	
Dancing Particles	
Heat It Up!	
Hot Potatoes	
What's Happening?	
Found in Other Grades Listed	

5,6,8

8

6,8

√

√

8

5,6

6

14. Science Concepts

The student knows that natural events and human activity can alter earth systems. The student is expected to:

Describe and predict the impact of different catastrophic events on the earth. (7.14A)

Analyze effects of regional erosional deposition and weathering. (7.14B)

Make inferences and draw conclusions about effects of human activity on earth's renewable, non-renewable, and inexhaustible resources. (7.14C)

A Column of Liquid	✓
We All Scream for Ice Cream	
Changing Ice to Water	
Dancing Particles	
Heat It Up!	
Hot Potatoes	
What's Happening?	✓
Found in Other Grades Listed	

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 7D Natural Interactions

1. Scientific Processes

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

Demonstrate safe practices during field and laboratory investigations (7.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (7.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (7.2A)

Collect data by observing and measuring. (7.2B)

Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (7.2C)

Communicate valid conclusions. (7.2D)

Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (7.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (7.3A)

Draw inferences based on data related to promotional materials for products and services. (7.3B)

Represent the natural world using models and identify their limitations. (7.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (7.3D)

Connect Grade 7 science concepts with the history of science and contributions of scientists. (7.3E)

	At the Top of the Web	As It Roils	Cycles in a Bottle	What's the Dirt?	To Be or Not to Be?	BIG City — Small Cities	Food for Thought	A Change Over Time
Demonstrate safe practices during field and laboratory investigations (7.1A)	√	√	√	√	√	√	√	√
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (7.1B)	√	√	√	√	√	√	√	√
Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (7.2A)	√	√	√	√	√	√	√	√
Collect data by observing and measuring. (7.2B)	√	√	√	√	√	√	√	√
Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (7.2C)	√	√	√	√	√	√	√	√
Communicate valid conclusions. (7.2D)	√	√	√	√	√	√	√	√
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (7.2E)	√	√	√	√	√	√	√	√
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (7.3A)	√	√	√	√	√	√	√	√
Draw inferences based on data related to promotional materials for products and services. (7.3B)	√	√			√	√		√
Represent the natural world using models and identify their limitations. (7.3C)	√	√	√	√	√	√	√	√
Evaluate the impact of research on scientific thought, society, and the environment. (7.3D)	√	√	√	√	√	√	√	√
Connect Grade 7 science concepts with the history of science and contributions of scientists. (7.3E)	√	√	√	√	√	√	√	√

Found in Other Grades Listed

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, analyze, and record information to explain a phenomenon using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, timing devices, magnets, and compasses. (7.4A)

Collect and analyze information to recognize patterns such as rates of change. (7.4B)

√ At the Top of the Web
 √ As It Rot
 √ Cycles in a Bottle
 √ What's the Dirt?
 √ To Be or Not to Be?
 √ BIG City — Small Cities
 √ Food for Thought
 √ A Change Over Time
 Found in Other Grades Listed

√ √ √ √ √ √ √ √

5. Science Concepts

The student knows that an equilibrium of a system may change. The student is expected to:

Describe how systems may reach an equilibrium such as when a volcano erupts. (7.5A)

Observe and describe the role of ecological succession in maintaining an equilibrium in an ecosystem. (7.5B)

8
 √ 8

6. Science Concepts

The student knows that there is a relationship between force and motion. The student is expected to:

Demonstrate basic relationships between force and motion using simple machines using pulleys and levers. (7.6A)

Demonstrate that an object will remain at rest or move at a constant speed and in a straight line if it is not being subjected to an unbalanced force. (7.6B)

Relate forces to basic processes in living organisms including the flow of blood and the emergence of seedlings. (7.6C)

5,6,8
 5,6,8

7. Science Concepts

The student knows that substances have physical and chemical properties. The student is expected to:

Identify and demonstrate everyday examples of chemical phenomena such as rusting and tarnishing of metals and burning of wood. (7.7A)

Describe physical properties of elements and identify how they are used to position an element on the periodic table. (7.7B)

Recognize that compounds are composed of elements. (7.7C)

√ √ √ √

8. Science Concepts

The student knows that complex interactions occur between matter and energy. The student is expected to:

Illustrate examples of potential and kinetic energy in everyday life such as objects at rest, movements of geologic faults, and falling water. (7.8A)

Identify that radiant energy from the sun is transferred into chemical energy through the process of photosynthesis. (7.8B)

√ √

	At the Top of the Web	As It Rots	Cycles in a Bottle	What's the Dirt?	To Be or Not to Be?	BIG City — Small Cities	Food for Thought	A Change Over Time	Found in Other Grades Listed
9. Science Concepts									
<i>The student knows the relationship between structure and function in living systems. The student is expected to:</i>									
Identify the systems of the human organism and describe their functions. (7.9A)									5,6,8
Describe how organisms maintain stable internal conditions while living in changing external environments. (7.9B)					√		√	√	
10. Science Concepts									
<i>The student knows that species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:</i>									
Identify that sexual reproduction results in more diverse offspring and asexual reproduction results in more uniform offspring. (7.10A)									8
Compare traits of organisms of different species that enhance their survival and reproduction. (7.10B)									6,8
Distinguish between dominant and recessive traits and recognize that inherited traits of an individual are contained in genetic material. (7.10C)									
11. Science Concepts									
<i>The student knows that the responses of organisms are caused by internal or external stimuli. The student is expected to:</i>									
Analyze changes in organisms such as a fever or vomiting that may result from internal stimuli. (7.11A)								√	
Identify responses in organisms to external stimuli found in the environment such as the presence or absence of light. (7.11B)			√	√	√	√	√	√	
12. Science Concepts									
<i>The student knows that there is a relationship between organisms and the environment. The student is expected to:</i>									
Identify components of an ecosystem. (7.12A)	√	√	√	√	√	√	√	√	
Observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources. (7.12B)	√	√	√	√	√	√	√	√	
Describe how different environments support different varieties of organisms. (7.12C)	√	√	√	√	√	√	√	√	
Observe and describe the role of ecological succession in ecosystems. (7.12D)								√	8
13. Science Concepts									
<i>The student knows components of our solar system. The student is expected to:</i>									
Identify and illustrate how the tilt of the earth on its axis as it rotates and revolves around the sun causes changes in seasons and the length of a day. (7.13A)									5,6
Relate the earth's movement and the moon's orbit to the observed cyclical phases of the moon. (7.13B)									6

14. Science Concepts

The student knows that natural events and human activity can alter earth systems. The student is expected to:

Describe and predict the impact of different catastrophic events on the earth. (7.14A)

Analyze effects of regional erosional deposition and weathering. (7.14B)

Make inferences and draw conclusions about effects of human activity on earth's renewable, non-renewable, and inexhaustible resources. (7.14C)

	At the Top of the Web	As It Rots	Cycles in a Bottle	What's the Dirt?	To Be or Not to Be?	BIG City — Small Cities	Food for Thought	A Change Over Time	Found in Other Grades Listed
					✓			✓	
			✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	✓	✓	✓	✓	

TEXAS

ESSENTIAL KNOWLEDGE AND SKILLS

8A Simple and Not So Simple Machines

1. Scientific Processes

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

Demonstrate safe practices during field and laboratory investigations (8.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (8.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (8.2A)

Collect data by observing and measuring. (8.2B)

Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (8.2C)

Communicate valid conclusions. (8.2D)

Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (8.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (8.3A)

Draw inferences based on data related to promotional materials for products and services. (8.3B)

Represent the natural world using models and identify their limitations. (8.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (8.3D)

Connect Grade 8 science concepts with the history of science and contributions of scientists. (8.3E)

	Pulley Power	Gears and Gadgets	Wheels and Motion	The Deal with Wheels	Pressure Tactics	Power Play — Pneumatics	Power Place — Hydraulics	Simple and Not So Simple Machines
Demonstrate safe practices during field and laboratory investigations (8.1A)	✓	✓	✓	✓	✓	✓	✓	✓
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (8.1B)	✓	✓	✓	✓	✓	✓	✓	✓
Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (8.2A)	✓	✓	✓	✓	✓	✓	✓	✓
Collect data by observing and measuring. (8.2B)	✓	✓	✓	✓	✓	✓	✓	✓
Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (8.2C)	✓	✓	✓	✓	✓	✓	✓	✓
Communicate valid conclusions. (8.2D)								
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (8.2E)	✓	✓	✓	✓	✓	✓	✓	✓
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (8.3A)	✓	✓	✓	✓	✓	✓	✓	✓
Draw inferences based on data related to promotional materials for products and services. (8.3B)		✓	✓		✓		✓	✓
Represent the natural world using models and identify their limitations. (8.3C)	✓	✓	✓	✓	✓	✓	✓	✓
Evaluate the impact of research on scientific thought, society, and the environment. (8.3D)	✓	✓	✓	✓	✓	✓	✓	✓
Connect Grade 8 science concepts with the history of science and contributions of scientists. (8.3E)	✓	✓	✓	✓	✓	✓	✓	✓

Found in Other Grades Listed

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, record, and analyze information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, water test kits, and timing devices. (8.4A)

Extrapolate from collected information to make predictions. (8.4B)

✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓

5. Scientific Processes

The student knows that relationships exist between science and technology. The student is expected to:

Identify a design problem and propose a solution. (8.5A)

Design and test a model to solve the problem. (8.5B)

Evaluate the model and make recommendations for improving the model. (8.5C)

✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓

6. Science Concepts

The student knows that interdependence occurs among living systems. The student is expected to:

Describe interactions among systems in the human organism. (8.6A)

Identify feedback mechanisms that maintain equilibrium of systems such as body temperature, turgor pressure, and chemical reactions. (8.6B)

Describe interactions within ecosystems. (8.6C)

7. Science Concepts

The student knows that there is a relationship between force and motion. The student is expected to:

Demonstrate how unbalanced forces cause changes in the speed or direction of an object's motion. (8.7A)

Recognize that waves are generated and can travel through different media. (8.7B)

✓	✓	✓	✓	✓	✓	✓	✓
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8. Science Concepts

The student knows that matter is composed of atoms. The student is expected to:
Describe the structure and parts of an atom. (8.8A)

Identify the properties of an atom including mass and electrical charge. (8.8B)

6,7

6,7

9. Science Concepts

The student knows that substances have chemical and physical properties. The student is expected to:

Demonstrate that substances may react chemically to form new substances. (8.9A)

Interpret information on the periodic table to understand that physical properties are used to group elements. (8.9B)

7

7

Found in Other Grades Listed

Recognize the importance of formulas and equations to express what happens in a chemical reaction. (8.9C)

Identify that physical and chemical properties influence the development and application of everyday materials such as cooking surfaces, insulation, adhesives, and plastics. (8.9D)

10. Science Concepts

The student knows that complex interactions occur between matter and energy.

The student is expected to:

Illustrate interactions between matter and energy including specific heat. (8.10A)

Describe interactions among solar, weather, and ocean systems. (8.10B)

Identify and demonstrate that loss or gain of heat energy occurs during exothermic and endothermic chemical reactions. (8.10C)

11. Science Concepts

The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms.

The student is expected to:

Identify that change in environmental conditions can affect the survival of individuals and of species. (8.11A)

Distinguish between inherited traits and other characteristics that result from interactions with the environment. (8.11B)

Make predictions about possible outcomes of various genetic combinations of inherited characteristics. (8.11C)

12. Science Concepts

The student knows that cycles exist in earth systems. The student is expected to:

Analyze and predict the sequence of events in the lunar and rock cycles. (8.12A)

Relate the role of oceans to climatic changes. (8.12B)

Predict the results of modifying the earth's nitrogen, water, and carbon cycles. (8.12C)

13. Science Concepts

The student knows characteristics of the universe. The student is expected to:

Describe characteristics of the universe such as stars and galaxies. (8.13A)

Explain the use of light years to describe distances in the universe. (8.13B)

Research and describe historical scientific theories of the origin of the universe. (8.13C)

14. Science Concepts

The student knows that natural events and human activity can alter earth systems.

The student is expected to:

Predict land features resulting from gradual changes such as mountain building, beach erosion, land subsidence, and continental drift. (8.14A)

Analyze how natural or human events may have contributed to the extinction of some species. (8.14B)

Describe how human activities have modified soil, water, and air quality. (8.14C)

Pulley Power	
Gears and Gadgets	
Wheels and Motion	
The Deal with Wheels	
Pressure Tactics	
Power Play — Pneumatics	
Power Place — Hydraulics	
Simple and Not So Simple Machines	
Found in Other Grades Listed	6,7

TEXAS

ESSENTIAL KNOWLEDGE AND SKILLS

8B Liquids and Gas...I Now Pronounce You...Fluids

	Go With the Flow	Oil Slicks and Smog	The Pressure Is ON!	Some Things Just Won't Float	Why???	Found in Other Grades Listed
<p>1. Scientific Processes <i>The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:</i> Demonstrate safe practices during field and laboratory investigations (8.1A)</p>	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (8.1B)	√	√	√	√	√	
<p>2. Scientific Processes <i>The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:</i> Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (8.2A)</p>	√	√	√	√	√	
Collect data by observing and measuring. (8.2B)	√	√	√	√	√	
Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (8.2C)	√	√	√	√	√	
Communicate valid conclusions. (8.2D)						
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (8.2E)	√	√	√	√	√	
<p>3. Scientific Processes <i>The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:</i> Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (8.3A)</p>	√	√	√	√	√	
Draw inferences based on data related to promotional materials for products and services. (8.3B)	√	√		√		
Represent the natural world using models and identify their limitations. (8.3C)	√	√	√	√	√	
Evaluate the impact of research on scientific thought, society, and the environment. (8.3D)	√	√	√	√	√	
Connect Grade 8 science concepts with the history of science and contributions of scientists. (8.3E)	√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, record, and analyze information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, water test kits, and timing devices. (8.4A)

Extrapolate from collected information to make predictions. (8.4B)

✓	✓	✓	✓	✓
✓	✓	✓	✓	✓

5. Scientific Processes

The student knows that relationships exist between science and technology. The student is expected to:

Identify a design problem and propose a solution. (8.5A)

Design and test a model to solve the problem. (8.5B)

Evaluate the model and make recommendations for improving the model. (8.5C)

✓	✓	✓	✓	✓
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓

6. Science Concepts

The student knows that interdependence occurs among living systems. The student is expected to:

Describe interactions among systems in the human organism. (8.6A)

Identify feedback mechanisms that maintain equilibrium of systems such as body temperature, turgor pressure, and chemical reactions. (8.6B)

Describe interactions within ecosystems. (8.6C)

7. Science Concepts

The student knows that there is a relationship between force and motion. The student is expected to:

Demonstrate how unbalanced forces cause changes in the speed or direction of an object's motion. (8.7A)

Recognize that waves are generated and can travel through different media. (8.7B)

✓	✓	✓	✓	✓
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8. Science Concepts

The student knows that matter is composed of atoms. The student is expected to:

Describe the structure and parts of an atom. (8.8A)

Identify the properties of an atom including mass and electrical charge. (8.8B)

6,7

6,7

9. Science Concepts

The student knows that substances have chemical and physical properties. The student is expected to:

Demonstrate that substances may react chemically to form new substances. (8.9A)

Interpret information on the periodic table to understand that physical properties are used to group elements. (8.9B)

✓

7

7

Found in Other Grades Listed

	Go With the Flow	Oil Slicks and Smog	The Pressure Is ON!	Some Things Just Won't Float	Why???	Found in Other Grades Listed
Recognize the importance of formulas and equations to express what happens in a chemical reaction. (8.9C)						7
Identify that physical and chemical properties influence the development and application of everyday materials such as cooking surfaces, insulation, adhesives, and plastics. (8.9D)			√			
10. Science Concepts <i>The student knows that complex interactions occur between matter and energy. The student is expected to:</i> Illustrate interactions between matter and energy including specific heat. (8.10A)	√		√			
Describe interactions among solar, weather, and ocean systems. (8.10B)						
Identify and demonstrate that loss or gain of heat energy occurs during exothermic and endothermic chemical reactions. (8.10C)						7
11. Science Concepts <i>The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:</i> Identify that change in environmental conditions can affect the survival of individuals and of species. (8.11A)						6,7
Distinguish between inherited traits and other characteristics that result from interactions with the environment. (8.11B)						6
Make predictions about possible outcomes of various genetic combinations of inherited characteristics. (8.11C)						
12. Science Concepts <i>The student knows that cycles exist in earth systems. The student is expected to:</i> Analyze and predict the sequence of events in the lunar and rock cycles. (8.12A)						7
Relate the role of oceans to climatic changes. (8.12B)						
Predict the results of modifying the earth's nitrogen, water, and carbon cycles. (8.12C)						7
13. Science Concepts <i>The student knows characteristics of the universe. The student is expected to:</i> Describe characteristics of the universe such as stars and galaxies. (8.13A)						6
Explain the use of light years to describe distances in the universe. (8.13B)						6
Research and describe historical scientific theories of the origin of the universe. (8.13C)						6

14. Science Concepts

*The student knows that natural events and human activity can alter earth systems.
The student is expected to:*

Predict land features resulting from gradual changes such as mountain building, beach erosion, land subsidence, and continental drift. (8.14A)

Analyze how natural or human events may have contributed to the extinction of some species. (8.14B)

Describe how human activities have modified soil, water, and air quality. (8.14C)

Go With the Flow

Oil Slicks and Smog

The Pressure Is ON!

Some Things Just Won't Float

Why???

Found in Other Grades Listed

6,7

√

TEXAS ESSENTIAL KNOWLEDGE AND SKILLS 8C All Cells Are Not Phones

1. Scientific Processes

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

Demonstrate safe practices during field and laboratory investigations (8.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (8.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (8.2A)

Collect data by observing and measuring. (8.2B)

Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (8.2C)

Communicate valid conclusions. (8.2D)

Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (8.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (8.3A)

Draw inferences based on data related to promotional materials for products and services. (8.3B)

Represent the natural world using models and identify their limitations. (8.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (8.3D)

Connect Grade 8 science concepts with the history of science and contributions of scientists. (8.3E)

	What Do You Mean I'm Like A...?	Teeny Tiny Things	A Microscopic Look	A Closer Look at Cells	On the Move — Watch for Road Blocks	Can You Feel the Beat?	It All Fits Together Like a Puzzle	Diet + Exercise = Healthy Body?	Found in Other Grades Listed
Demonstrate safe practices during field and laboratory investigations (8.1A)	✓	✓	✓	✓	✓	✓	✓	✓	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (8.1B)	✓	✓	✓	✓	✓	✓	✓	✓	
Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (8.2A)	✓	✓	✓	✓	✓	✓	✓	✓	
Collect data by observing and measuring. (8.2B)	✓	✓	✓	✓	✓	✓	✓	✓	
Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (8.2C)	✓	✓	✓	✓	✓	✓	✓	✓	
Communicate valid conclusions. (8.2D)	✓	✓	✓	✓	✓	✓	✓	✓	
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (8.2E)	✓	✓	✓	✓	✓	✓	✓	✓	
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (8.3A)	✓	✓	✓	✓	✓	✓	✓	✓	
Draw inferences based on data related to promotional materials for products and services. (8.3B)			✓		✓	✓	✓	✓	
Represent the natural world using models and identify their limitations. (8.3C)	✓	✓	✓	✓	✓	✓	✓	✓	
Evaluate the impact of research on scientific thought, society, and the environment. (8.3D)	✓	✓	✓	✓	✓	✓	✓	✓	
Connect Grade 8 science concepts with the history of science and contributions of scientists. (8.3E)	✓	✓	✓	✓	✓	✓	✓	✓	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, record, and analyze information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, water test kits, and timing devices. (8.4A)

Extrapolate from collected information to make predictions. (8.4B)

What Do You Mean I'm Like A...?	Teeny Tiny Things	A Microscopic Look	A Closer Look at Cells	On the Move — Watch for Road Blocks	Can You Feel the Beat?	It All Fits Together Like a Puzzle	Diet + Exercise = Healthy Body?	Found in Other Grades Listed
√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	

5. Scientific Processes

The student knows that relationships exist between science and technology. The student is expected to:

Identify a design problem and propose a solution. (8.5A)

Design and test a model to solve the problem. (8.5B)

Evaluate the model and make recommendations for improving the model. (8.5C)

√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	

6. Science Concepts

The student knows that interdependence occurs among living systems. The student is expected to:

Describe interactions among systems in the human organism. (8.6A)

Identify feedback mechanisms that maintain equilibrium of systems such as body temperature, turgor pressure, and chemical reactions. (8.6B)

Describe interactions within ecosystems. (8.6C)

					√	√	√	
√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	

7. Science Concepts

The student knows that there is a relationship between force and motion. The student is expected to:

Demonstrate how unbalanced forces cause changes in the speed or direction of an object's motion. (8.7A)

Recognize that waves are generated and can travel through different media. (8.7B)

8. Science Concepts

The student knows that matter is composed of atoms. The student is expected to:

Describe the structure and parts of an atom. (8.8A)

Identify the properties of an atom including mass and electrical charge. (8.8B)

6,7

6,7

9. Science Concepts

The student knows that substances have chemical and physical properties. The student is expected to:

Demonstrate that substances may react chemically to form new substances. (8.9A)

Interpret information on the periodic table to understand that physical properties are used to group elements. (8.9B)

7

7

	What Do You Mean I'm Like A...?	Teeney Tiny Things	A Microscopic Look	A Closer Look at Cells	On the Move — Watch for Road Blocks	Can You Feel the Beat?	It All Fits Together Like a Puzzle	Diet + Exercise = Healthy Body?	Found in Other Grades Listed
Recognize the importance of formulas and equations to express what happens in a chemical reaction. (8.9C)									7
Identify that physical and chemical properties influence the development and application of everyday materials such as cooking surfaces, insulation, adhesives, and plastics. (8.9D)									
10. Science Concepts									
<i>The student knows that complex interactions occur between matter and energy.</i>									
<i>The student is expected to:</i>									
Illustrate interactions between matter and energy including specific heat. (8.10A)	√	√	√	√	√	√	√	√	
Describe interactions among solar, weather, and ocean systems. (8.10B)									
Identify and demonstrate that loss or gain of heat energy occurs during exothermic and endothermic chemical reactions. (8.10C)									7
11. Science Concepts									
<i>The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms.</i>									
<i>The student is expected to:</i>									
Identify that change in environmental conditions can affect the survival of individuals and of species. (8.11A)	√								6,7
Distinguish between inherited traits and other characteristics that result from interactions with the environment. (8.11B)									6
Make predictions about possible outcomes of various genetic combinations of inherited characteristics. (8.11C)									
12. Science Concepts									
<i>The student knows that cycles exist in earth systems. The student is expected to:</i>									
Analyze and predict the sequence of events in the lunar and rock cycles. (8.12A)									7
Relate the role of oceans to climatic changes. (8.12B)									
Predict the results of modifying the earth's nitrogen, water, and carbon cycles. (8.12C)									7
13. Science Concepts									
<i>The student knows characteristics of the universe. The student is expected to:</i>									
Describe characteristics of the universe such as stars and galaxies. (8.13A)									6
Explain the use of light years to describe distances in the universe. (8.13B)									6
Research and describe historical scientific theories of the origin of the universe. (8.13C)									6

14. Science Concepts

*The student knows that natural events and human activity can alter earth systems.
The student is expected to:*

Predict land features resulting from gradual changes such as mountain building, beach erosion, land subsidence, and continental drift. (8.14A)

Analyze how natural or human events may have contributed to the extinction of some species. (8.14B)

Describe how human activities have modified soil, water, and air quality. (8.14C)

What Do You Mean
I'm Like A...?

Teeney Tiny Things

A Microscopic Look

A Closer Look at Cells

On the Move — Watch for
Road Blocks

Can You Feel the Beat?

It All Fits Together Like
a Puzzle

Diet + Exercise = Healthy
Body?

Found in Other Grades Listed

6,7

TEXAS

ESSENTIAL KNOWLEDGE AND SKILLS

8D Smoke and Mirrors (The Eyes Have It)

1. Scientific Processes

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

Demonstrate safe practices during field and laboratory investigations (8.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (8.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (8.2A)

Collect data by observing and measuring. (8.2B)

Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (8.2C)

Communicate valid conclusions. (8.2D)

Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (8.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (8.3A)

Draw inferences based on data related to promotional materials for products and services. (8.3B)

Represent the natural world using models and identify their limitations. (8.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (8.3D)

Connect Grade 8 science concepts with the history of science and contributions of scientists. (8.3E)

Light Rules	Light Relations	Where Does Light Come From?	Get Out of the Way!	Back to Some Basics	Mirror, Mirror on the ...	Tools of the Trade	Light and Its Additions and Subtractions	Showtime	Found in Other Grades Listed
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	
√	√	√	√	√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, record, and analyze information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, water test kits, and timing devices. (8.4A)

Extrapolate from collected information to make predictions. (8.4B)

✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓

5. Scientific Processes

The student knows that relationships exist between science and technology. The student is expected to:

Identify a design problem and propose a solution. (8.5A)

Design and test a model to solve the problem. (8.5B)

Evaluate the model and make recommendations for improving the model. (8.5C)

✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓	✓

6. Science Concepts

The student knows that interdependence occurs among living systems. The student is expected to:

Describe interactions among systems in the human organism. (8.6A)

Identify feedback mechanisms that maintain equilibrium of systems such as body temperature, turgor pressure, and chemical reactions. (8.6B)

Describe interactions within ecosystems. (8.6C)

✓	✓	✓	✓
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7. Science Concepts

The student knows that there is a relationship between force and motion. The student is expected to:

Demonstrate how unbalanced forces cause changes in the speed or direction of an object's motion. (8.7A)

Recognize that waves are generated and can travel through different media. (8.7B)

✓	✓	✓	✓	✓	✓	✓	✓	✓
---	---	---	---	---	---	---	---	---

8. Science Concepts

The student knows that matter is composed of atoms. The student is expected to:
Describe the structure and parts of an atom. (8.8A)

Identify the properties of an atom including mass and electrical charge. (8.8B)

6,7

6,7

9. Science Concepts

The student knows that substances have chemical and physical properties. The student is expected to:

Demonstrate that substances may react chemically to form new substances. (8.9A)

Interpret information on the periodic table to understand that physical properties are used to group elements. (8.9B)

✓	7
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7

Found in Other Grades Listed

	Light Rules	Light Relations	Where Does Light Come From?	Get Out of the Way!	Back to Some Basics	Mirror, Mirror on the ...	Tools of the Trade	Light and Its Additions and Subtractions	Showtime	Found in Other Grades Listed
Recognize the importance of formulas and equations to express what happens in a chemical reaction. (8.9C)										7
Identify that physical and chemical properties influence the development and application of everyday materials such as cooking surfaces, insulation, adhesives, and plastics. (8.9D)	√	√	√	√	√	√	√	√	√	
10. Science Concepts										
<i>The student knows that complex interactions occur between matter and energy. The student is expected to:</i>										
Illustrate interactions between matter and energy including specific heat. (8.10A)										
Describe interactions among solar, weather, and ocean systems. (8.10B)										
Identify and demonstrate that loss or gain of heat energy occurs during exothermic and endothermic chemical reactions. (8.10C)										7
11. Science Concepts										
<i>The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms. The student is expected to:</i>										
Identify that change in environmental conditions can affect the survival of individuals and of species. (8.11A)				√						6,7
Distinguish between inherited traits and other characteristics that result from interactions with the environment. (8.11B)				√			√			6
Make predictions about possible outcomes of various genetic combinations of inherited characteristics. (8.11C)										
12. Science Concepts										
<i>The student knows that cycles exist in earth systems. The student is expected to:</i>										
Analyze and predict the sequence of events in the lunar and rock cycles. (8.12A)										7
Relate the role of oceans to climatic changes. (8.12B)										
Predict the results of modifying the earth's nitrogen, water, and carbon cycles. (8.12C)										7
13. Science Concepts										
<i>The student knows characteristics of the universe. The student is expected to:</i>										
Describe characteristics of the universe such as stars and galaxies. (8.13A)										6
Explain the use of light years to describe distances in the universe. (8.13B)										6
Research and describe historical scientific theories of the origin of the universe. (8.13C)										6

14. Science Concepts

The student knows that natural events and human activity can alter earth systems.

The student is expected to:

Predict land features resulting from gradual changes such as mountain building, beach erosion, land subsidence, and continental drift. (8.14A)

Analyze how natural or human events may have contributed to the extinction of some species. (8.14B)

Describe how human activities have modified soil, water, and air quality. (8.14C)

Light Rules

Light Relations

Where Does Light
Come From?

Get Out of the Way!

Back to Some Basics

Mirror, Mirror on the ...

Tools of the Trade

Light and Its Additions
and Subtractions

Showtime

Found in Other Grades Listed

6,7

TEXAS

ESSENTIAL KNOWLEDGE AND SKILLS

8E Water Systems — The Flow

1. Scientific Processes

The student conducts field and laboratory investigations using safe, environmentally appropriate, and ethical practices. The student is expected to:

Demonstrate safe practices during field and laboratory investigations (8.1A)

Make wise choices in the use and conservation of resources and the disposal or recycling of materials (8.1B)

2. Scientific Processes

The student uses scientific inquiry methods during field and laboratory investigations. The student is expected to:

Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (8.2A)

Collect data by observing and measuring. (8.2B)

Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (8.2C)

Communicate valid conclusions. (8.2D)

Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (8.2E)

3. Scientific Processes

The student uses critical thinking and scientific problem solving to make informed decisions. The student is expected to:

Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (8.3A)

Draw inferences based on data related to promotional materials for products and services. (8.3B)

Represent the natural world using models and identify their limitations. (8.3C)

Evaluate the impact of research on scientific thought, society, and the environment. (8.3D)

Connect Grade 8 science concepts with the history of science and contributions of scientists. (8.3E)

	Water, Water, Everywhere!	Salt Water and Fresh Water	Waves, Tides, and Coastal Erosion	Geological Formations	Cool Technology	Highways Made of Water	Water and Climate: What's the Connection?	Humans and Water: A Good Combination?	Found in Other Grades Listed
Demonstrate safe practices during field and laboratory investigations (8.1A)	√	√	√	√	√	√	√	√	
Make wise choices in the use and conservation of resources and the disposal or recycling of materials (8.1B)	√	√	√	√	√	√	√	√	
Plan and implement investigative procedures including asking questions, formulating testable hypotheses, and selecting and using equipment and technology. (8.2A)	√	√	√	√	√	√	√	√	
Collect data by observing and measuring. (8.2B)	√	√	√	√	√	√	√	√	
Organize, analyze, make inferences, and predict trends from direct and indirect evidence. (8.2C)	√	√	√	√	√	√	√	√	
Communicate valid conclusions. (8.2D)	√	√	√	√	√	√	√	√	
Construct graphs, tables, maps, and charts using tools including computers to organize, examine, and evaluate data (8.2E)	√	√	√	√	√	√	√	√	
Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. (8.3A)	√	√	√	√	√	√	√	√	
Draw inferences based on data related to promotional materials for products and services. (8.3B)									√
Represent the natural world using models and identify their limitations. (8.3C)	√	√	√	√	√	√	√	√	
Evaluate the impact of research on scientific thought, society, and the environment. (8.3D)	√	√	√	√	√	√	√	√	
Connect Grade 8 science concepts with the history of science and contributions of scientists. (8.3E)	√	√	√	√	√	√	√	√	

4. Scientific Processes

The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to:

Collect, record, and analyze information using tools including beakers, petri dishes, meter sticks, graduated cylinders, weather instruments, hot plates, dissecting equipment, test tubes, safety goggles, spring scales, balances, microscopes, telescopes, thermometers, calculators, field equipment, computers, computer probes, water test kits, and timing devices. (8.4A)

Extrapolate from collected information to make predictions. (8.4B)

Water, Water, Everywhere!	✓
Salt Water and Fresh Water	✓
Waves, Tides, and Coastal Erosion	✓
Geological Formations	✓
Cool Technology	✓
Highways Made of Water	✓
Water and Climate: What's the Connection?	✓
Humans and Water: A Good Combination?	✓

Found in Other Grades Listed

5. Scientific Processes

The student knows that relationships exist between science and technology. The student is expected to:

Identify a design problem and propose a solution. (8.5A)

Design and test a model to solve the problem. (8.5B)

Evaluate the model and make recommendations for improving the model. (8.5C)

✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	✓	✓

6. Science Concepts

The student knows that interdependence occurs among living systems. The student is expected to:

Describe interactions among systems in the human organism. (8.6A)

Identify feedback mechanisms that maintain equilibrium of systems such as body temperature, turgor pressure, and chemical reactions. (8.6B)

Describe interactions within ecosystems. (8.6C)

✓	✓	✓	✓	✓	✓	✓	✓
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7. Science Concepts

The student knows that there is a relationship between force and motion. The student is expected to:

Demonstrate how unbalanced forces cause changes in the speed or direction of an object's motion. (8.7A)

Recognize that waves are generated and can travel through different media. (8.7B)

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8. Science Concepts

The student knows that matter is composed of atoms. The student is expected to:
Describe the structure and parts of an atom. (8.8A)

Identify the properties of an atom including mass and electrical charge. (8.8B)

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9. Science Concepts

The student knows that substances have chemical and physical properties. The student is expected to:

Demonstrate that substances may react chemically to form new substances. (8.9A)

Interpret information on the periodic table to understand that physical properties are used to group elements. (8.9B)

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Water, Water, Everywhere!
 Salt Water and Fresh Water
 Waves, Tides, and Coastal Erosion
 Geological Formations
 Cool Technology
 Highways Made of Water
 Water and Climate: What's the Connection?
 Humans and Water: A Good Combination?
 Found in Other Grades Listed

Recognize the importance of formulas and equations to express what happens in a chemical reaction. (8.9C)

Identify that physical and chemical properties influence the development and application of everyday materials such as cooking surfaces, insulation, adhesives, and plastics. (8.9D)

10. Science Concepts

The student knows that complex interactions occur between matter and energy. The student is expected to:

Illustrate interactions between matter and energy including specific heat. (8.10A)

Describe interactions among solar, weather, and ocean systems. (8.10B)

Identify and demonstrate that loss or gain of heat energy occurs during exothermic and endothermic chemical reactions. (8.10C)

11. Science Concepts

The student knows that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms.

The student is expected to:

Identify that change in environmental conditions can affect the survival of individuals and of species. (8.11A)

Distinguish between inherited traits and other characteristics that result from interactions with the environment. (8.11B)

Make predictions about possible outcomes of various genetic combinations of inherited characteristics. (8.11C)

12. Science Concepts

The student knows that cycles exist in earth systems. The student is expected to:

Analyze and predict the sequence of events in the lunar and rock cycles. (8.12A)

Relate the role of oceans to climatic changes. (8.12B)

Predict the results of modifying the earth's nitrogen, water, and carbon cycles. (8.12C)

13. Science Concepts

The student knows characteristics of the universe. The student is expected to:

Describe characteristics of the universe such as stars and galaxies. (8.13A)

Explain the use of light years to describe distances in the universe. (8.13B)

Research and describe historical scientific theories of the origin of the universe. (8.13C)

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14. Science Concepts

The student knows that natural events and human activity can alter earth systems.

The student is expected to:

Predict land features resulting from gradual changes such as mountain building, beach erosion, land subsidence, and continental drift. (8.14A)

Analyze how natural or human events may have contributed to the extinction of some species. (8.14B)

Describe how human activities have modified soil, water, and air quality. (8.14C)

	Water, Water, Everywhere!	
	Salt Water and Fresh Water	
	Waves, Tides, and Coastal Erosion	✓
	Geological Formations	✓
	Cool Technology	✓
	Highways Made of Water	✓
	Water and Climate: What's the Connection?	
	Humans and Water: A Good Combination?	
	Found in Other Grades Listed	6,7
		✓