

## 2<sup>nd</sup> Grade Science Scope and Sequence 2021-2022

## TEKS Distribution among Units

**Priority Standards are Bold**

## Process Standards

[illegible]

## Content Standards

[illegible]

## 2<sup>nd</sup> Grade Science Scope and Sequence 2021-2022

### Process Standards:

- 2.1A Identify, discuss, and demonstrate safe and healthy practices as outlined in Texas Education agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately
- 2.1B Identify and demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reuse or recycling of paper, plastic, and metal
- 2.2A Ask questions about organisms, objects, and events during observations and investigations
- 2.2B Plan and conduct descriptive investigations
- 2.2C Collect data from observations using scientific tools
- 2.2D Record and organize data using pictures, numbers, and words
- 2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations
- 2.2F Compare results of investigations with what students and scientists know about the world
- 2.3A Identify and explain a problem and propose a task and solution for the problem
- 2.3B Make predictions based on observable patterns
- 2.3C Identify what a scientist is and explore what different scientists do
- 2.4A collect, record, and compare information using tools, including computers, hand lenses, rulers, plastic beakers, magnets, collecting nets, notebooks, and safety goggles or chemical splash goggles, as appropriate ; timing devices; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquarium
- 2.4B Measure and compare organisms and objects

### Grading Period 1

#### Unit 1: Matter

Estimated Date Range: 8/11/21 – 10/6/21  
Includes 2 Days for Re-engagement and Assessment

| Concepts within the Unit                | TEKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| Concept #1: Safety<br>Suggested Days: 3 | <u>Important Standards</u><br>2.1A Identify, describe, and demonstrate safe practices as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately<br><u>Integrated Standards</u><br>2.4A Collect, record, and compare information using tools, including computers, hand lenses, rulers, plastic beakers, magnets, collecting nets, notebooks, and safety goggles or chemical splash goggles, as appropriate; |

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|                                                                                                                                                                              | timing devices; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Concept #2: Scientific Practices<br>Suggested Days: 3                                                                                                                        | <u>Integrated Standards</u><br>2.2A Ask questions about organisms, objects, and events during observations and investigations<br>2.2B Plan and conduct descriptive investigations<br>2.2C Collect data from observations using scientific tools<br>2.2D Record and organize data using pictures, numbers, and words<br>2.4A Collect, record, and compare information using tools, including computers, hand lenses, rulers, plastic beakers, magnets, collecting nets, notebooks, and safety goggles or chemical splash goggles, as appropriate; timing devices; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums<br>2.4B Measure and compare organisms and objects                                                                                                                                                                                                             |
| Concept #3: Scientific Explanations<br>Suggested Days: 4                                                                                                                     | <u>Integrated Standards</u><br>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations<br>2.2F Compare results of investigations with what students and scientists know about the world                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Concept #4: Physical Properties of Matter<br>Suggested Days: 14<br><br><b>Fall District Learning Assessment Window 9/3/21 - 9/14/21</b><br><b>Reporting Due Date 9/21/21</b> | <u>Priority Standards</u><br><b>2.5A Classify matter by physical properties, including relative temperature, texture, flexibility, and whether material is a solid or liquid</b><br><u>Integrated Standards</u><br>2.2A Ask questions about organisms, objects, and events during observations and investigations<br>2.2C Collect data from observations using scientific tools<br>2.2D Record and organize data using pictures, numbers, and words<br>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations<br>2.4A collect, record, and compare information using tools, including computers, hand lenses, rulers, plastic beakers, magnets, collecting nets, notebooks, and safety goggles or chemical splash goggles, as appropriate; timing devices; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums |
| Concept #5: Changing Matter<br>Suggested Days: 7                                                                                                                             | <u>Important Standards</u><br>2.5B Compare changes in materials caused by heating and cooling<br>2.5C Demonstrate that things can be done to materials such as cutting, folding, sanding, and melting to change their physical properties<br><u>Integrated Standards</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

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|                                                                 | <p>2.2D Record and organize data using pictures, numbers, and words</p> <p>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations</p> <p>2.3A Identify and explain a problem and propose a task and solution for the problem</p>                                                                                                                                                                                                                                                                                                                                                        |
| <p>Concept #6: Combining Materials</p> <p>Suggested Days: 6</p> | <p><u>Important Standards</u></p> <p>2.5D Combine materials that when put together can do things that they cannot do by themselves such as building a tower or a bridge and justify the selection of those materials based on their physical properties</p> <p><u>Integrated Standards</u></p> <p>2.2B Plan and conduct descriptive investigations</p> <p>2.2D Record and organize data using pictures, numbers, and words</p> <p>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations</p> <p>2.3A Identify and explain a problem and propose a task and solution for the problem</p> |

## Grading Period 2

### Unit 2: Force, Motion, and Energy

Estimated Date Range: 10/12/21 – 11/12/21

Includes 2 Days for Re-engagement and Assessment

| <p>Concept #1: Increasing/Decreasing Energy<br/>Suggested Days: 8</p>                                                                  | <p><u>Important Standards</u><br/>2.6A Investigate the effects on objects by increasing or decreasing amounts of light, heat, and sound energy such as how the color of an object appears different in dimmer light or how heat melts butter</p> <p><u>Integrated Standards</u><br/>2.2A Ask questions about organisms, objects, and events during observations and investigations<br/>2.2C Collect data from observations using scientific tools<br/>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations</p> |
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| <p>Concept #2: Magnets in Everyday Life<br/>Suggested Days: 4</p>                                                                      | <p><u>Important Standards</u><br/>2.6B Observe and identify how magnets are used in everyday life</p> <p><u>Integrated Standards</u><br/>2.2A Ask questions about organisms, objects, and events during observations and investigations<br/>2.2C Collect data from observations using scientific tools<br/>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations<br/>2.3A Identify and explain a problem and propose a task and solution for the problem</p>                                                    |
| <p>Concept #3: Patterns of Movement<br/>Suggested Days: 10</p>                                                                         | <p><u>Priority Standards</u><br/><b>2.6C Trace and compare patterns of movement of objects such as sliding, rolling, and spinning over time</b></p> <p><u>Integrated Standards</u><br/>2.2A Ask questions about organisms, objects, and events during observations and investigations<br/>2.2C Collect data from observations using scientific tools<br/>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations</p>                                                                                              |
| <h3>Unit 3: Earth's Surface</h3> <p>Estimated Date Range: 11/15/21 – 12/17/21<br/>Includes 2 Days for Re-engagement and Assessment</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Concepts within the Unit                                                                                                               | TEKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p>Concept #1: Rocks<br/>Suggested Days: 8</p>                                                                                         | <p><u>Priority Standards</u><br/><b>2.7A observe, describe, and compare rocks by size, texture, and color</b></p> <p><u>Integrated Standards</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|                                                                           | <p>2.2C Collect data from observations using scientific tools</p> <p>2.2D Record and organize data using pictures, numbers, and words</p> <p>2.4B Measure and compare organisms and objects</p>                                                                                                                                                                                                                               |
| <p>Concept #2: Fresh and Saltwater</p> <p>Suggested Days: 5</p>           | <p><u>Important Standards</u></p> <p>2.7B Identify and compare the properties of natural sources of freshwater and saltwater</p> <p><u>Integrated Standards</u></p> <p>2.2C Collect data from observations using scientific tools</p> <p>2.2D Record and organize data using pictures, numbers, and words</p> <p>2.4B Measure and compare organisms and objects 4.3B Represent the natural world using models such as the</p> |
| <p>Concept #3: Natural and Manmade Resources</p> <p>Suggested Days: 5</p> | <p><u>Important Standards</u></p> <p>2.7C Distinguish between natural and manmade resources</p> <p><u>Integrated Standards</u></p> <p>2.2A Ask questions about organisms, objects, and events during observations and investigations</p> <p>2.2D Record and organize data using pictures, numbers, and words</p>                                                                                                              |

### Grading Period 3

#### Unit 4: Patterns in the Natural World

Estimated Date Range: 1/5/22 – 2/11/22  
Includes 2 Days for Re-engagement and Assessment

| Concepts within the Unit                                                                                                                                           | TEKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| Concept #1: Weather<br>Suggested Days: 8                                                                                                                           | <u>Important Standards</u><br>2.8A Measure, record, and graph weather information, including temperature, wind conditions, precipitation, and cloud coverage, in order to identify patterns in the data<br><u>Integrated Standards</u><br>2.2C Collect data from observations using scientific tools<br>2.2D Record and organize data using pictures, numbers, and words                                                                                                                                                                                       |
| Concept #2: Seasons<br>Suggested Days: 5                                                                                                                           | <u>Important Standards</u><br>2.8B: Identify the importance of weather and seasonal information to make choices in clothing, activities, and transportation<br><u>Integrated Standards</u><br>2.2A Ask questions about organisms, objects, and events during observations and investigations<br>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations<br>2.3B Make predictions based on observable patterns<br>2.3C Identify what a scientist is and explore what different scientists do |
| Concept #3: Objects in the Sky<br>Suggested Days: 12<br><br><b>Spring District Learning Assessment Window 2/2/22 - 2/9/22</b><br><b>Reporting Due Date 2/16/22</b> | <u>Priority Standards</u><br><b>2.8C Observe, describe, and record patterns of objects in the sky, including the appearance of the Moon</b><br><u>Integrated Standards</u><br>2.2D Record and organize data using pictures, numbers, and words<br>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations<br>2.3B: Make predictions based on observable patterns<br>2.2F Compare results of investigations with what students and scientists know about the world                           |

#### Unit 5: Ecosystems

Estimated Date Range: 2/14/22– 3/11/22

| Concepts within the Unit                     | TEKS                                                                                                             |
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| Concept #1: Basic Needs<br>Suggested Days: 8 | <u>Important Standards</u><br>2.9A Identify the basic needs of plants and animals<br><u>Integrated Standards</u> |

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|                                                                   | <p>2.2A Ask questions about organisms, objects, and events during observations and investigations</p> <p>2.2B Plan and conduct descriptive investigations</p> <p>2.2C Collect data from observations using scientific tools</p> <p>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations</p>                                                                                                                                                                                                                                                                                         |
| <p>Concept #2: Food Chains</p> <p>Suggested Days: 5</p>           | <p><u>Important Standards</u></p> <p>2.9C Compare the ways living organisms depend on each other and on their environments such as through food chains.</p> <p><u>Integrated Standards</u></p> <p>2.2A Ask questions about organisms, objects, and events during observations and investigations</p> <p>2.2D Record and organize data using pictures, numbers, and words</p> <p>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations</p> <p>2.3B Make predictions based on observable patterns</p> <p>2.4B Measure and compare organisms and objects</p>                            |
| <p>Concept #3: Environmental Factors</p> <p>Suggested Days: 5</p> | <p><u>Priority Standards</u></p> <p><b>2.9B Identify factors in the environment, including temperature and precipitation, that affect growth and behavior such as migration, hibernation, and dormancy of living things</b></p> <p><u>Integrated Standards</u></p> <p>2.2D Record and organize data using pictures, numbers, and words</p> <p>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations</p> <p>2.3A Identify and explain a problem and propose a task and solution for the problem</p> <p>2.3C Identify what a scientist is and explore what different scientists do</p> |



## Grading Period 4

### Unit 5: Ecosystems (Continued)

Estimated Date Range: 3/21/22– 4/1/22  
Includes 2 Days for Re-engagement and Assessment

Concept #3: Environmental Factors  
(Continued)  
Suggested Days: 8

#### Priority Standards

**2.9B Identify factors in the environment, including temperature and precipitation, that affect growth and behavior such as migration, hibernation, and dormancy of living things**

#### Integrated Standards

2.2D Record and organize data using pictures, numbers, and words

2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations

2.3A Identify and explain a problem and propose a task and solution for the problem

2.3C Identify what a scientist is and explore what different scientists do

### Unit 6: Organisms

Estimated Date Range: 4/4/22 – 5/13/22  
Includes 2 Days for Re-engagement and Assessment

#### Concepts within the Unit

#### TEKS

Concept #1: Physical Characteristics and Behaviors of Animals  
Suggested Days: 13

#### Priority Standards

**2.10A Observe, record, and compare how the physical characteristics and behaviors of animals help them meet their basic needs**

#### Integrated Standards

2.2A Ask questions about organisms, objects, and events during observations and investigations

2.2D Record and organize data using pictures, numbers, and words

2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations

2.3A Identify and explain a problem and propose a task and solution for the problem

2.3C Identify what a scientist is and explore what different scientists do

2.4B Measure and compare organisms and objects

Concept #2: Physical Characteristics of Plants  
Suggested Days: 7

#### Priority Standards

**2.10B observe, record, and compare how the physical characteristics of plants help them meet their basic needs such as stems carry water throughout the plant**

#### Integrated Standards

2.2A Ask questions about organisms, objects, and events during observations and investigations

2.2D Record and organize data using pictures, numbers, and words

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|                                                                                                                                  | <p>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations</p> <p>2.3A Identify and explain a problem and propose a task and solution for the problem</p> <p>2.3C Identify what a scientist is and explore what different scientists do</p> <p>2.4B Measure and compare organisms and objects</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p>Concept #3: Life Cycle of Insects</p> <p>Suggested Days: 6</p>                                                                | <p><u>Important Standards</u></p> <p>2.10C Investigate and record some of the unique stages that insects such as grasshoppers and butterflies undergo during their life cycle</p> <p><u>Integrated Standards</u></p> <p>2.2A Ask questions about organisms, objects, and events during observations and investigations</p> <p>2.2B Plan and conduct descriptive investigations</p> <p>2.2C Collect data from observations using scientific tools</p> <p>2.2D Record and organize data using pictures, numbers, and words</p> <p>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations</p> <p>2.2F Compare results of investigations with what students and scientists know about the world</p> <p>2.3B Make predictions based on observable patterns</p>                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>Unit 7: STEM</b></p> <p>Estimated Date Range: 5/16/22– 5/26/22</p> <p>Includes 2 Days for Re-engagement and Assessment</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Concepts within the Unit</b>                                                                                                  | <b>TEKS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p>Concept #1: STEM</p> <p>Suggested Days: 7</p>                                                                                 | <p><u>Integrated Standards</u></p> <p>2.1A Identify, describe, and demonstrate safe practices as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately</p> <p>2.1B Identify and demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reuse or recycling of paper, plastic, and metal</p> <p>2.2A Ask questions about organisms, objects, and events during observations and investigations</p> <p>2.2B Plan and conduct descriptive investigations</p> <p>2.2C Collect data from observations using scientific tools</p> <p>2.2D Record and organize data using pictures, numbers, and words</p> <p>2.2E Communicate observations and justify explanations using student-generated data from simple descriptive investigations</p> <p>2.2F Compare results of investigations with what students and scientists know about the world</p> <p>2.3A Identify and explain a problem and propose a task and solution for the problem</p> |

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|  | <p>2.3B Make predictions based on observable patterns</p> <p>2.3C Identify what a scientist is and explore what different scientists do</p> <p>2.4A Collect, record, and compare information using tools, including computers, hand lenses, rulers, plastic beakers, magnets, collecting nets, notebooks, and safety goggles or chemical splash goggles, as appropriate; timing devices; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums</p> <p>2.4B Measure and compare organisms and objects</p> |
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