

## Scope and Sequence

**Subject:** Science

**Grade:** 3rd Grade



| Unit 1 Title: Engineering and Technology                                                                                                                                                                                                                                                                                                                                                                   | Unit 2 Title: Forces and Motion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Unit 3 Title: Life Cycles and Inherited Traits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Time Frame:</b><br>Weeks 1-7, 7 Weeks                                                                                                                                                                                                                                                                                                                                                                   | <b>Time Frame:</b><br>Weeks 8-20, 12 Weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Time Frame:</b><br>Weeks 21-30, 9 Weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description:</b><br>In this unit, scholars will enhance their understanding of the engineering design process. For example, they will design a solution while considering criteria and constraints. They will also work with others to determine which of several solutions best meets the determined criteria and constraints.                                                                         | <b>Description:</b><br>In Unit 1, students explored how engineers use the design process to solve problems. Students observed how forces may cause problems, such as the wind's effect on bridges, or may provide solutions, such as gravity's effect on drip irrigation. In this unit, students will explore gravity and other types of forces, the effects those forces have on objects, and the ways some forces act on objects from a distance. They will also observe how patterns in motion can be used to predict future motion. | <b>Description:</b><br>In Unit 2, students explored the effects of forces on objects by planning and carrying out investigations. By exploring the patterns in cause-and effect relationships between forces and motion, students learned to predict future motion. In this unit, students explore the patterns in life cycles of various organisms. As they study these organisms, they observe similarities in traits that help identify parent-offspring relationships. Students then explore the strategies that organisms use to survive in their environments. |
| <b>Resources:</b><br>Teacher Guide (PDF), Student Interactive Lessons, Interactive Assessments, Hands on Activity Video, Hands on Activity Worksheet, Simulation & Activities<br><br><b>Assessments:</b><br>Beginning of the Year Readiness Check Assessment<br>Unit 1 Readiness Check; Engineering & Technology<br>Lesson Quiz 1: Design a Solution to a Problem<br>Unit 1 Test: Engineering & Technology | <b>Resources:</b><br>Teacher Guide (PDF), Student Interactive Lessons, Interactive Assessments, Hands on Activity Video, Hands on Activity Worksheet, Simulation & Activities<br><br><b>Assessments:</b><br>Unit 2 Readiness Check: Forces and Motion<br>Lesson Quiz 1 : Forces<br>Lesson Quiz 2: Motion<br>Lesson Quiz 3: Forces That Act From a Distance<br>Unit 2 Test: Forces and Motion                                                                                                                                            | <b>Resources:</b><br>Teacher Guide (PDF), Student Interactive Lessons, Interactive Assessments, Hands on Activity Video, Hands on Activity Worksheet, Simulation & Activities<br><br><b>Assessments:</b><br>Unit 3 Readiness Check: Life Cycles and Inherited Traits<br>Lesson Quiz 1 : All Organisms Have a Life Cycle<br>Lesson Quiz 2: Plants and Animals Inherit Traits from Their Parents<br>Lesson Quiz 3: Strategies to Be Successful in Their Environment<br>Unit 3 Test: Life Cycles and Inherited Traits                                                   |

| Unit 1 Title: Engineering and Technology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Unit 2 Title: Forces and Motion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Unit 3 Title: Life Cycles and Inherited Traits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Time Frame:</b><br>Weeks 1-7, 7 Weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>Time Frame:</b><br>Weeks 8-20, 12 Weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Time Frame:</b><br>Weeks 21-30, 9 Weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Description:</b><br>In this unit, scholars will enhance their understanding of the engineering design process. For example, they will design a solution while considering criteria and constraints. They will also work with others to determine which of several solutions best meets the determined criteria and constraints.                                                                                                                                                                                                               | <b>Description:</b><br>In Unit 1, students explored how engineers use the design process to solve problems. Students observed how forces may cause problems, such as the wind's effect on bridges, or may provide solutions, such as gravity's effect on drip irrigation. In this unit, students will explore gravity and other types of forces, the effects those forces have on objects, and the ways some forces act on objects from a distance. They will also observe how patterns in motion can be used to predict future motion. | <b>Description:</b><br>In Unit 2, students explored the effects of forces on objects by planning and carrying out investigations. By exploring the patterns in cause-and effect relationships between forces and motion, students learned to predict future motion. In this unit, students explore the patterns in life cycles of various organisms. As they study these organisms, they observe similarities in traits that help identify parent-offspring relationships. Students then explore the strategies that organisms use to survive in their environments.                                                                                                                                                                                                                                                                                       |
| <b>Standards:</b><br>3-5-ETS1-1 Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.<br><br>3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.<br><br>3-5-ETS-3: Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved. | <b>Standards:</b><br>3-PS2-1 Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.<br><br>3-PS2-3 Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.<br><br>3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets.*                                                                                         | <b>Standards:</b><br>LS1.B: Growth and Development of Organisms<br><br>LS2.D: Social Interactions and Group Behavior<br>Being part of a group helps animals obtain food, defend themselves, and cope with changes. Groups may serve different functions and vary dramatically in size (3-LS2-1)<br><br>LS3.A: Inheritance of Traits<br>Many characteristics of organisms are inherited from their parents. (3- LS3-1) Other characteristics result from individuals' interactions with the environment, which can range from diet to learning. Many characteristics involve both inheritance and environment. (3-LS3-2)<br><br>LS3.B: Variation of Traits Different organisms vary in how they look and function because they have different inherited information. (3-LS3-1) The environment also affects the traits that an organism develops. (3-LS3-2) |

| Unit 1 Title: Engineering and Technology                                                                                                                                                                                                                                                                                           | Unit 2 Title: Forces and Motion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Unit 3 Title: Life Cycles and Inherited Traits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Time Frame:</b><br>Weeks 1-7, 7 Weeks                                                                                                                                                                                                                                                                                           | <b>Time Frame:</b><br>Weeks 8-20, 12 Weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Time Frame:</b><br>Weeks 21-30, 9 Weeks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description:</b><br>In this unit, scholars will enhance their understanding of the engineering design process. For example, they will design a solution while considering criteria and constraints. They will also work with others to determine which of several solutions best meets the determined criteria and constraints. | <b>Description:</b><br>In Unit 1, students explored how engineers use the design process to solve problems. Students observed how forces may cause problems, such as the wind's effect on bridges, or may provide solutions, such as gravity's effect on drip irrigation. In this unit, students will explore gravity and other types of forces, the effects those forces have on objects, and the ways some forces act on objects from a distance. They will also observe how patterns in motion can be used to predict future motion. | <b>Description:</b><br>In Unit 2, students explored the effects of forces on objects by planning and carrying out investigations. By exploring the patterns in cause-and effect relationships between forces and motion, students learned to predict future motion. In this unit, students explore the patterns in life cycles of various organisms. As they study these organisms, they observe similarities in traits that help identify parent–offspring relationships. Students then explore the strategies that organisms use to survive in their environments. |
|                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |