

Long Beach Island Consolidated School District Pacing Guide 2018-2019

Unit 1 Title: *Engineering and Technology*

September-October

Target Course/Grade Level: 4th Grade Science

Interdisciplinary Connections: Integrated throughout the unit are connections to New Jersey Student Learning Standards for ELA, Math, and Technology.

Standards

3-5-ETS1-1: Define a simple design problem reflecting a need or want that includes specified criteria for success and constraints on materials, time, or cost.

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.

3-5-ETS1-3: 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.

Lesson and Assessment	Days for Instruction and Assessment
Lesson 1: “How Do Engineers Define Problems?”	4
Lesson 2: “How Do Engineers Design Solutions?”	4
Lesson 3: “How Do Engineers Test and Improve Prototypes?”	4
You Solve It (digital)*	1
Unit 1 Performance Task*	1
Performance-Based Assessment*	1
Unit 1 Review and Unit Test	2
Unit 1 Project*	2
Total Days	19

*Omit for core path of instruction

Long Beach Island Consolidated School District
Grade 4 Science Pacing Guide 2018-2019

Unit 2 Title: *Energy*

October-November

Target Course/Grade Level: 4th Grade Science

Interdisciplinary Connections: Integrated throughout the unit are connections to New Jersey Student Learning Standards for ELA, Math, and Technology.

Standards

4-PS3-3: Ask questions and predict outcomes about the changes in energy that occur when objects collide.

4-PS3-4: Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.

Lesson and Assessment	Days for Instruction and Assessment
Lesson 1: “What is Energy?”	4
Lesson 2: “How is Energy Transferred?”	4
Lesson 3: “How Do Collisions Show Energy?”	4
You Solve It (digital)*	1
Unit 2 Performance Task*	1
Performance-Based Assessment*	1
Unit 2 Review and Unit Test	2
Unit 2 Project*	2
Total Days	19

*Omit for core path of instruction

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Unit 3 Title: *Waves and Information Transfer*
November-December

Target Course/Grade Level: 4th Grade Science

Interdisciplinary Connections: Integrated throughout the unit are connections to New Jersey Student Learning Standards for ELA, Math, and Technology.

Standards:

4-PS4-1: Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.

4-PS4-2: Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.

4-PS4-3: Generate and compare multiple solutions that use patterns to transfer information.

Lesson and Assessment	Days for Instruction and Assessment
Lesson 1: "What are Waves?"	4
Lesson 2: "How Does Light Reflect?"	4
Lesson 3: "How is Information Transferred from Place to Place?"	4
You Solve It (digital)*	1
Unit 3 Performance Task*	1
Performance-Based Assessment*	1
Unit 3 Review and Unit Test	2
Unit 3 Project*	2
Total Days	19

*Omit for core path of instruction

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Unit 4 Title: *Plant Structure and Function*

December-January

Target Course/Grade Level: 4th Grade Science

Interdisciplinary Connections: Integrated throughout the unit are connections to New Jersey Student Learning Standards for ELA, Math, and Technology.

Standards:

4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

Lesson and Assessment	Days for Instruction and Assessment
Lesson 1: “What are Some Plant Parts and How Do They Function?”	4
Lesson 2: “How Do Plants Grow and Reproduce?”	4
You Solve It (digital)*	1
Unit 4 Performance Task*	1
Performance-Based Assessment*	1
Unit 4 Review and Unit Test	2
Unit 4 Project*	2
Total Days	15

*Omit for core path of instruction

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Unit 5 Title: *Animal Structure and Function*

January-February

Target Course/Grade Level: 4th Grade Science

Interdisciplinary Connections: Integrated throughout the unit are connections to New Jersey Student Learning Standards for ELA, Math, and Technology.

Standards:

4-LS1-1: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

4-LS1-2: Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

Lesson and Assessment	Days for Instruction and Assessment
Lesson 1: “What are Some External Structures of Animals?”	4
Lesson 2: “What are Some Internal Structures of Animals?”	4
Lesson 3: “How Do Senses Work?”	4
You Solve It (digital)*	1
Unit 5 Performance Task*	1
Performance-Based Assessment*	1
Unit 5 Review and Unit Test	2
Unit 5 Project*	2
Total Days	19

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Unit 6 Title: *Changes to Earth's Surface*

February-March

Target Course/Grade Level: 4th Grade Science

Interdisciplinary Connections: Integrated throughout the unit are connections to New Jersey Student Learning Standards for ELA, Math, and Technology.

Standards:

4-ESS2-1: Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind or vegetation.

4-ESS2-2: Analyze and interpret data from maps to describe patterns of Earth's features.

Lesson and Assessment	Days for Instruction and Assessment
Lesson 1: "How Does Water Shape Earth's Surface?"	4
Lesson 2: "How Do Other Factors Shape Earth's Surface?"	4
Lesson 3: "How Can Maps Help Us to Learn about Earth's Surface?"	4
Lesson 4: "What Patterns Do Maps Show Us?"	4
You Solve It (digital)*	1
Unit 5 Performance Task*	1
Performance-Based Assessment*	1
Unit 5 Review and Unit Test	2
Unit 5 Project*	2
Total Days	23

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Unit 7 Title: *Rocks and Fossils*
March-April

Target Course/Grade Level: 4th Grade Science

Interdisciplinary Connections: Integrated throughout the unit are connections to New Jersey Student Learning Standards for ELA, Math, and Technology.

Standards:

4-ESS1-1: Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.

Lesson and Assessment	Days for Instruction and Assessment
Lesson 1: “How do Rock Layers Change?”	4
Lesson 2: “What do Fossils Tell Us About Ancient Environments?”	4
Lesson 3: “What are Some Patterns Fossils Show Us?”	4
You Solve It (digital)*	1
Unit 5 Performance Task*	1
Performance-Based Assessment*	1
Unit 5 Review and Unit Test	2
Unit 5 Project*	2
Total Days	19

*Core path of instruction

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Unit 8 Title: *Natural Resources and Hazards*
May-June

Target Course/Grade Level: 4th Grade Science

Interdisciplinary Connections: Integrated throughout the unit are connections to New Jersey Student Learning Standards for ELA, Math, and Technology.

Standards:

4-ESS3-1: Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

4-ESS3-2: Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.

Lesson and Assessment	Days for Instruction and Assessment
Lesson 1: “What Nonrenewable Resources are Used for Energy?”	4
Lesson 2: “What Renewable Resources are Used for Energy?”	4
Lesson 3: “How Can People Reduce the Impact of Land-Based Hazards?”	4
Lesson 4: “How Can People Reduce the Impact of Water-Based Hazards?”	4
You Solve It (digital)*	1
Unit 5 Performance Task*	1
Performance-Based Assessment*	1
Unit 5 Review and Unit Test	2
Unit 5 Project*	2
Total Days	23

*Core path of instruction