Online Resources

Life Cycles, Traits, and Variations

Click on each section link to access its online resources. Page numbers refer to pages in the Teacher Guide. Some links provide access to files created by the Core Knowledge Foundation, including PDF documents that you can download and view with the appropriate software (such as Adobe Reader).

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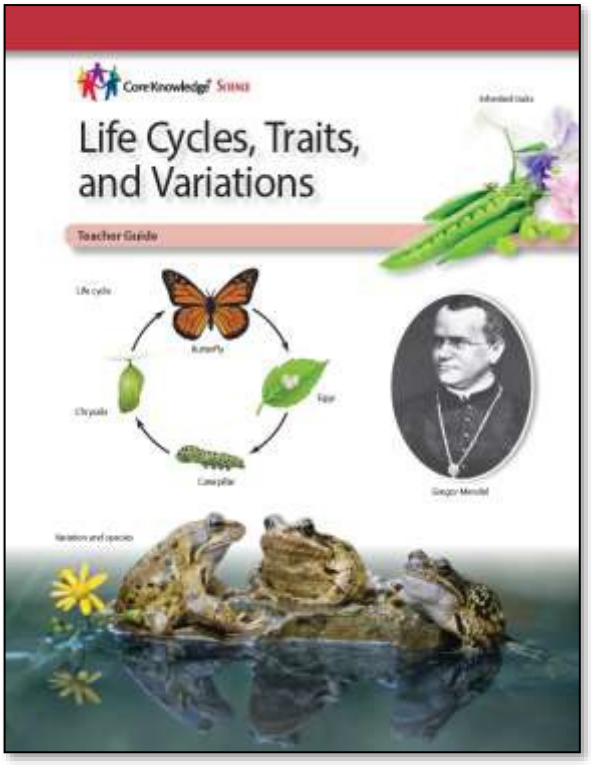

Extend and customize this unit for your students using the CKSci Additional Activities

About This Unit

Page	Resource Links

1	Note to Teachers and Curriculum Planners:
	• The learning progressions of the following Disciplinary Core Ideas offer guidance regarding the scope and sequence of learning about traits in the elementary grades and beyond:
	  ○ LS1.B Growth and Development of Organisms
	  ○ LS3.A Inheritance of Traits
	  ○ LS3.B Variation of Traits
	  ○ LS4.B Natural Selection
	• Learn more about these core ideas and their related content by reading the corresponding sections of *A Framework for K–12 Science Education*.
	See also the Teacher Resources section of this guide.

2	Notes to Core Knowledge Teachers: *2019 Core Knowledge Science Sequence* for this unit: Domain—Life Cycles, Traits, and Variations CKSci correlations to the *2010 Core Knowledge Sequence*— • GRADE 3 • GRADE 4 • GRADE 5 • Interactive graphic of these correlations
3	This unit has been informed by the following Next Generation Science Standards (NGSS) Performance Expectations: Topic—3. Inheritance and Variation of Traits: Life Cycles and Traits • 3-LS1-1 • 3-LS3-1 • 3-LS3-2 • 3-LS4-2
10	Resources for Effective & Safe Classroom Activities
11	Materials Supply List: Grade 3 Unit 2 Life Cycles, Traits, and Variations
14	Pacing Guides for CKSci Grades 3–5

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Part A: Organisms Have Life Cycles

Lesson 1

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19	Disciplinary Core Idea: LS1.B *Growth and Development of Organisms* • From the *Framework*: Middle of pg. 145–147
	Crosscutting Concept: *Patterns* • From the *Framework*: Bottom of pg. 85–87
	Science and Engineering Practice: *Developing and Using Models* • From the *Framework:* pg. 56-59
25	[VIDEO/GIF OPTION] • Time-lapse of plant germination and growth

Lesson 2

Page	Resource Links
26	Disciplinary Core Idea: LS1.B *Growth and Development of Organisms* • From the *Framework*: Middle of pg. 145–147
	Crosscutting Concept: *Patterns* • From the *Framework*: Bottom of pg. 85–87
	Science and Engineering Practice: *Developing and Using Models* • From the *Framework:* pg. 56-59
28	[VIDEO] Life Cycle of Mosquitos

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Lesson 3

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33	Disciplinary Core Idea: LS1.B *Growth and Development of Organisms* • From the *Framework*: Middle of pg. 145–147
	Crosscutting Concept: *Patterns* • From the *Framework*: Bottom of pg. 85–87
	Science and Engineering Practice: *Developing and Using Models* • From the *Framework:* pg. 56-59

Lesson 4

Page	Resource Links
39	Performance Expectation: • 3-LS1-1 • Evidence Statements for 3-LS1-1
	Disciplinary Core Idea: LS1.B *Growth and Development of Organisms* • From the *Framework*: Middle of pg. 145–147
	Crosscutting Concept: *Patterns* • From the *Framework*: Bottom of pg. 85–87
	Science and Engineering Practice: *Developing and Using Models* • From the *Framework:* pg. 56-59

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Part B: Organisms Have Traits

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49	Disciplinary Core Ideas: • LS3.A *Inheritance of Traits* From the *Framework*: pg. 158–159 • LS3.B *Variation of Traits* From the *Framework*: pg. 160–161
	Crosscutting Concept: *Patterns* • From the *Framework*: Middle of pg. 85-87
	Science and Engineering Practice: *Analyzing and Interpreting Data* • From the *Framework:* Bottom of pg. 61-63
53	[VIDEO OPTIONS] • Amazing Animals • For example: Walruses or Wildebeests Also for more information: • Animal Types

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Part B:

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49	Disciplinary Core Ideas: • LS3.A *Inheritance of Traits* From the *Framework*: pg. 158–159 • LS3.B *Variation of Traits* From the *Framework*: pg. 160–161
	Crosscutting Concept: *Patterns* • From the *Framework*: Middle of pg. 85-87
	Science and Engineering Practice: *Analyzing and Interpreting Data* • From the *Framework:* Bottom of pg. 61-63
57	[VIDEO]Puppy Paws

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	Crosscutting Concept: *Patterns* • From the *Framework*: • Middle of pg. 85-87
	Science and Engineering Practice: *Analyzing and Interpreting Data* • From the *Framework:* Bottom of pg. 61-63
64	[IMAGE]Cat with kittens
65	[IMAGE]Cheetah [VIDEO]Cheetah 101

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69	Disciplinary Core Ideas: • LS3.A *Inheritance of Traits* From the *Framework*: pg. 158–159 • LS3.B *Variation of Traits* From the *Framework*: pg. 160–161
	Crosscutting Concept: *Patterns* • From the *Framework*: Middle of pg. 85-87
	Science and Engineering Practice: *Analyzing and Interpreting Data* • From the *Framework:* Bottom of pg. 61-63
73	[VIDEO]Mustang herd
74	[IMAGE]Seashell variations

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Part C: The Environment Affects Traits

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78	Disciplinary Core Ideas: • LS3.A *Inheritance of Traits* From the *Framework*: pg. 158–159 • LS3.B *Variation of Traits* From the *Framework*: • pg. 160–161
	Crosscutting Concept: *Cause and Effect* • From the *Framework*: • Middle of pg. 87-89
	Science and Engineering Practice: *Constructing Explanations and Designing Solutions* • From the *Framework:* Bottom of pg. 67-71

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	Crosscutting Concept: *Cause and Effect* • From the *Framework*: Middle of pg. 87-89
	Science and Engineering Practice: *Constructing Explanations and Designing Solutions* • From the *Framework:* Bottom of pg. 67-71
88	[VIDEO OPTIONS] • Flooded crops • City monkeys

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90	Disciplinary Core Ideas: • LS3.A *Inheritance of Traits* From the *Framework*: pg. 158–159 • LS3.B *Variation of Traits* From the *Framework*: • pg. 160–161
	Crosscutting Concept: *Cause and Effect* • From the *Framework*: Middle of pg. 87-89
	Science and Engineering Practice: *Constructing Explanations and Designing Solutions* • From the *Framework:* Bottom of pg. 67-71

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Part D: Advantages of Specific Variations

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96	Disciplinary Core Ideas: • LS3.A *Inheritance of Traits* From the *Framework*: pg. 163–164
	Crosscutting Concept: *Cause and Effect* • From the *Framework*: Middle of pg. 87-89
	Science and Engineering Practice: *Constructing Explanations and Designing Solutions* • From the *Framework:* Bottom of pg. 67-71
102	[VIDEO]Polar bear

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Lesson 13

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104	Disciplinary Core Ideas: • LS3.A *Inheritance of Traits* From the *Framework*: pg. 163–164
	Crosscutting Concept: *Cause and Effect* • From the *Framework*: Middle of pg. 87-89
	Science and Engineering Practice: *Constructing Explanations and Designing Solutions* • From the *Framework:* Bottom of pg. 67-71
109	[VIDEO]Snowshoe hare traits

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111	Disciplinary Core Ideas: • LS3.A *Inheritance of Traits* From the *Framework*: pg. 163–164
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116	NGSS Performance Expectations addressed by this unit: Topic—3. Inheritance and Variation of Traits: Life Cycles and Traits • 3-LS1-1 • 3-LS3-1 • 3-LS3-2 • 3-LS4-2

Culminating Unit Assessment

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110	Unit Assessment: Teacher Evaluation Guide

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Teacher Resources

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10	Resources for Effective & Safe Classroom Activities *(also, see below re: page 116)*
11	Materials Supply List: Grade 3 Unit 2 Life Cycles
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	Teacher Guide Appendices: • Appendix A – Glossary • Appendix B – Safety for Activities • Appendix C – Strategies for Acquiring Materials • Appendix D – Advance Preparation • Appendix E – Unexpected Activity Results

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