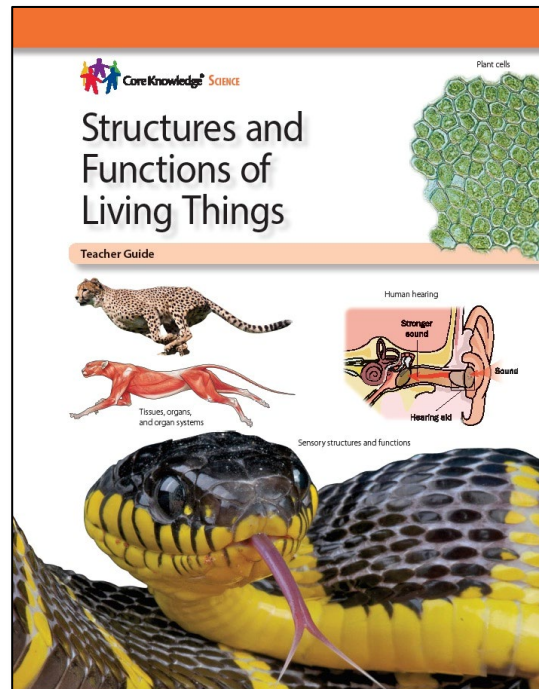


Structures and Functions of Living Things

Click on each lesson 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](#)).

| | |
|--------------------------------|---------------------------------------|
| | About This Unit |
| Part A | Lesson 1 |
| | Lesson 2 |
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| | Culminating Resources |
| | Teacher Resources |



Extend and customize this unit for your students using the [CKSci Additional Activities](#)

About This Unit

| Page | Resource Links |
|------|--|
| 1 | <p>Note to Teachers and Curriculum Planners</p> <ul style="list-style-type: none"> The learning progressions of Disciplinary Core Ideas offer guidance regarding the scope and sequence of learning about structures and functions in living things in the elementary grades and beyond: <ul style="list-style-type: none"> PS4.A: Wave Properties PS4.B: Electromagnetic Radiation LS1.A: Structure and Function LS1.D: Information Processing Learn more about these core ideas and their related content by reading the corresponding section of A Framework for K–12 Science Education. <p>See also the Teachers Resources section of this guide.</p> |
| 2 | <p>Notes to Core Knowledge Teachers:</p> <p>2019 Core Knowledge Science Sequence for this unit:</p> <p>Domain—Structures and Functions of Living Things</p> <p>CKSci correlations to the 2010 Core Knowledge Sequence—</p> <ul style="list-style-type: none"> GRADE 3 GRADE 4 GRADE 5 |
| 3 | <p>This unit has been informed by the following Next Generation Science Standards (NGSS) Performance Expectations:</p> <p>Topic—4.Structure, Function, and Information Processing</p> <ul style="list-style-type: none"> 4-PS4-2 4-LS1-1 4-LS1-2 |
| 11 | Resources for Effective and Safe Classroom Activities |
| 12 | Materials Supply List: Grade 3 Unit 3 Habitats and Change |
| 14 | Pacing Guides for CKSci Grades 3–5 |

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Part A: STRUCTURE IS RELATED TO FUNCTION

Lesson 1

| Page | Resource Links |
|------|---|
| 19 | Disciplinary Core Idea: LS1.A <i>Structure and Function</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 179-182 |
| | Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 91-94 |
| | Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 71-74 |

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Lesson 2

| Page | Resource Links |
|------|---|
| 24 | Disciplinary Core Idea: LS1.A <i>Structure and Function</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 179-182 |
| | Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 91-94 |
| | Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 71-74 |
| 25 | [VIDEO] What is a cell? |
| 30 | [VIDEO] Structure and organization of living things |

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Lesson 3

| Page | Resource Links |
|------|---|
| 32 | Disciplinary Core Idea: <i>LS1.A Structure and Function</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 179-182 |
| | Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 91-94 |
| | Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 71-74 |
| 33 | [VIDEO] Cells, tissues, organs, organ systems |

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Lesson 4

| Page | Resource Links |
|------|---|
| 39 | Disciplinary Core Idea: <i>LS1.A Structure and Function</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 179-182 |
| | Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 91-94 |
| | Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 71-74 |

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Lesson 5

| Page | Resource Links |
|------|---|
| 45 | Disciplinary Core Idea: LS1.A <i>Structure and Function</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 179-182 |
| | Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 91-94 |
| | Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 71-74 |
| 47 | [IMAGE OPTIONS] Dog Cat Horse Pigeon Goldfish Mole Tapir Hummingbird Angelfish |

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Lesson 6

| Page | Resource Links |
|------|--|
| 53 | Disciplinary Core Idea: LS1.A <i>Structure and Function</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 179-182 |
| | Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 91-94 |
| | Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 71-74 |
| 57 | [Web link]Tropisms [VIDEO OPTIONS] Phototropisms Geotropism/gravitropism Hydrotropism Thigmotropism |

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Lesson 7

| Page | Resource Links |
|------|---|
| 60 | <p>Disciplinary Core Idea: LS1.A <i>Structure and Function</i></p> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 179-182 <p>Crosscutting Concept: <i>Systems and System Models</i></p> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 91-94 <p>Science and Engineering Practices: <i>Engaging in Argument from Evidence</i></p> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 71-74 |
| 63 | <p>[Web links]</p> <p>National Geographic</p> <p>Encyclopedia Britannica</p> <p>U.S. Department of Agriculture-Animal</p> <p>U.S. Department of Agriculture-Plants</p> <p>PBS Learning Media</p> <p>Smithsonian Institute</p> |

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Part B: STRUCTURE AND FUNCTIONS OF EYES AND EARS

Lesson 8

| Page | Resource Links |
|------|---|
| 69 | Disciplinary Core Idea: PS4.A <i>Wave Properties</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 131-133 |
| | Crosscutting Concept: <i>Cause and Effect</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 87-89 |
| | Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 56-59 |
| 70 | [VIDEO] Eyeball function |

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Lesson 9

| Page | Resource Links |
|------|---|
| 74 | Disciplinary Core Idea: PS4.B <i>Electromagnetic Radiation</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 133-136 |
| | Crosscutting Concept: <i>Cause and Effect</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 87-89 |
| | Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 56-59 |

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Lesson 10

| Page | Resource Links |
|------|---|
| 79 | Disciplinary Core Idea: PS4.B <i>Electromagnetic Radiation</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 133-136 |
| | Crosscutting Concept: <i>Cause and Effect</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 87-89 |
| | Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 56-59 |

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Part C: SENSORY STRUCTURES, FUNCTIONS, AND SURVIVAL

Lesson 11

| Page | Resource Links |
|------|---|
| 85 | Disciplinary Core Idea: LS1.D <i>Information Processing</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 149-150 |
| | Crosscutting Concept: <i>Cause and Effect</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 87-89 |
| | Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 56-59 |
| 86 | [VIDEO] Stimulus response |
| 89 | [VIDEO] Plant stimulus response |

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Lesson 12

| Page | Resource Links |
|------|---|
| 90 | Disciplinary Core Idea: <i>LS1.D Information Processing</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 149-150 |
| | Crosscutting Concept: <i>System and System Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 91-94 |
| | Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 56-59 |
| 94 | [VIDEO] Snake senses |
| 97 | [VIDEO] Shark senses |

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Lesson 13

| Page | Resource Links |
|------|--|
| 98 | Disciplinary Core Idea: LS1.D <i>Information Processing</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 149-150 |
| | Crosscutting Concept: <i>System and System Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 91-94 |
| | Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 56-59 |
| 101 | [VIDEO] Time lapse of pea shoot growing |
| 102 | [VIDEO OPTIONS] Option 1: Plant response to temperature Option 2: Plant response to touch Option 3: Plant vining to another plant |

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Lesson 14

| Page | Resource Links |
|------|--|
| 104 | Disciplinary Core Idea: <i>LS1.D Information Processing</i> <ul style="list-style-type: none"> From the <i>Framework</i>: pg. 149-150 |
| | Crosscutting Concept: <i>System and System Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 91-94 |
| | Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> From the <i>Framework</i>: Page 56-59 |
| 106 | [VIDEO OPTIONS] Bat senses Dolphin senses Bee senses Mole senses [WEBLINK] Encyclopedia Britannica National Geographic Smithsonian Institute PBS Learning Media |

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 [Unit Review →](#)

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Unit Review and Assessment

UR Lesson

| Page | Resource Links |
|------|---|
| 108 | Performance Expectation: <ul style="list-style-type: none"> • 4-LS1-1 • Evidence Statements for 4-LS1-1 |
| | Performance Expectation: <ul style="list-style-type: none"> • 4-PS4-2 • Evidence Statements for 4-PS4-2 |
| | Performance Expectation: <ul style="list-style-type: none"> • 4-LS1-2 • Evidence Statements for 4-LS1-2 |
| 113 | [VIDEO OPTIONS] 3-D printed hands Gorilla sign language Helen Keller |

Culminating Unit Assessment

| Page | Resource Links |
|------|---|
| 164 | Unit Assessment: Teacher Evaluation Guide |

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 [Teacher Resources →](#)

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Teacher Resources

| Page | Resource Links |
|------|---|
| 10 | Resources for Effective & Safe Classroom Activities (also, see below re: page 116) |
| 11 | Materials Supply List: Grade 3 Unit 3 Structures and Functions of Living Things |
| 108 | Activity Pages Answer Key |
| 110 | Unit Assessment: Teacher Evaluation Guide |
| 116 | Safety in the Science Classroom: <ul style="list-style-type: none"> • NSTA Safety Resources • Safety Resources for Elementary Teachers |
| | Teacher Guide Appendices: <ul style="list-style-type: none"> • 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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