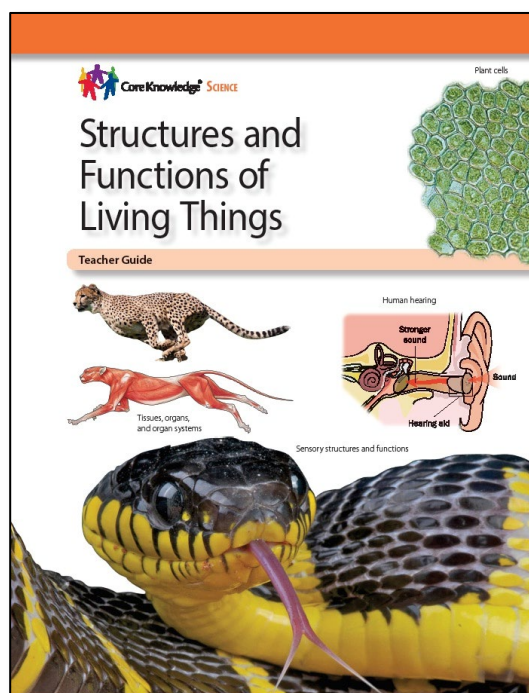


## Structures and Functions of Living Things

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](#)).

	<a href="#">About This Unit</a>
Part A	<a href="#">Lesson 1</a>
	<a href="#">Lesson 2</a>
	<a href="#">Lesson 3</a>
	<a href="#">Lesson 4</a>
	<a href="#">Lesson 5</a>
	<a href="#">Lesson 6</a>
	<a href="#">Lesson 7</a>
Part B	<a href="#">Lesson 8</a>
	<a href="#">Lesson 9</a>
	<a href="#">Lesson 10</a>
Part C	<a href="#">Lesson 11</a>
	<a href="#">Lesson 12</a>
	<a href="#">Lesson 13</a>
	<a href="#">Lesson 14</a>
Unit Review & Assessment	<a href="#">UR Lesson</a>
	<a href="#">Culminating Resources</a>
	<a href="#">Teacher Resources</a>



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"> <li>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"> <li><a href="#">PS4.A: Wave Properties</a></li> <li><a href="#">PS4.B: Electromagnetic Radiation</a></li> <li><a href="#">LS1.A: Structure and Function</a></li> <li><a href="#">LS1.D: Information Processing</a></li> </ul> </li> <li>Learn more about these core ideas and their related content by reading the corresponding section of <a href="#">A Framework for K–12 Science Education</a>.</li> </ul> <p>See also the <a href="#">Teachers Resources</a> 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—<a href="#">Structures and Functions of Living Things</a></p> <p>CKSci correlations to the 2010 Core Knowledge Sequence—</p> <ul style="list-style-type: none"> <li><a href="#">GRADE 3</a></li> <li><a href="#">GRADE 4</a></li> <li><a href="#">GRADE 5</a></li> <li><a href="#">Interactive graphic of these correlations</a></li> </ul>
3	<p>This unit has been informed by the following Next Generation Science Standards (NGSS) Performance Expectations:</p> <p>Topic—<a href="#">4.Structure, Function, and Information Processing</a></p> <ul style="list-style-type: none"> <li><a href="#">4-PS4-2</a></li> <li><a href="#">4-LS1-1</a></li> <li><a href="#">4-LS1-2</a></li> </ul>
11	<a href="#">Resources for Effective and Safe Classroom Activities</a>
12	<a href="#">Materials Supply List: Grade 3 Unit 3 Habitats and Change</a>
14	<a href="#">Pacing Guides for CKSci Grades 3–5</a>

[← Table of Contents](#)

[Next Lesson →](#)

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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"> <li>From the <i>Framework</i>: <a href="#">pg. 179-182</a></li> </ul>
	Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">pg. 91-94</a></li> </ul>
	Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">pg. 71-74</a></li> </ul>

[← Table of Contents](#)
[Next Lesson →](#)

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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"> <li>From the <i>Framework</i>: <a href="#">pg. 179-182</a></li> </ul>
	Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">pg. 91-94</a></li> </ul>
	Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">pg. 71-74</a></li> </ul>
25	[VIDEO] <a href="#">What is a cell?</a>
30	[VIDEO] <a href="#">Structure and organization of living things</a>

[← Table of Contents](#)
[Next Lesson →](#)

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## Lesson 3

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

[← Table of Contents](#)
[Next Lesson →](#)

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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"> <li>From the <i>Framework</i>: <a href="#">pg. 179-182</a></li> </ul>
	Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">pg. 91-94</a></li> </ul>
	Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">pg. 71-74</a></li> </ul>

[← Table of Contents](#)
[Next Lesson →](#)

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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"> <li>From the <i>Framework</i>: <a href="#">pg. 179–182</a></li> </ul>
	Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">pg. 91–94</a></li> </ul>
	Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">pg. 71–74</a></li> </ul>
47	[IMAGE OPTIONS] <a href="#">Dog</a> <a href="#">Cat</a> <a href="#">Horse</a> <a href="#">Pigeon</a> <a href="#">Goldfish</a> <a href="#">Mole</a> <a href="#">Tapir</a> <a href="#">Hummingbird</a> <a href="#">Angelfish</a>

[← Table of Contents](#)
[Next Lesson →](#)

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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"> <li>From the <i>Framework</i>: <a href="#">pg. 179-182</a></li> </ul>
	Crosscutting Concept: <i>Systems and System Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">pg. 91-94</a></li> </ul>
	Science and Engineering Practices: <i>Engaging in Argument from Evidence</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">pg. 71-74</a></li> </ul>
57	[Web link] <a href="#">Tropisms</a> [VIDEO OPTIONS] <a href="#">Phototropisms</a> <a href="#">Geotropism/gravitropism</a> <a href="#">Hydrotropism</a> <a href="#">Thigmotropism</a>

[← Table of Contents](#)
[Next Lesson →](#)

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## Lesson 7

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

[← Table of Contents](#)
[Next Lesson →](#)

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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"> <li>From the <i>Framework</i>: <a href="#">pg. 131-133</a></li> </ul>
	Crosscutting Concept: <i>Cause and Effect</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">Page 87-89</a></li> </ul>
	Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">Page 56-59</a></li> </ul>
70	[VIDEO] <a href="#">Eyeball function</a>

[← Table of Contents](#)
[Next Lesson →](#)

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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"> <li>From the <i>Framework</i>: <a href="#">pg. 133-136</a></li> </ul>
	Crosscutting Concept: <i>Cause and Effect</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">Page 87-89</a></li> </ul>
	Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">Page 56-59</a></li> </ul>

[← Table of Contents](#)
[Next Lesson →](#)

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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"> <li>From the <i>Framework</i>: <a href="#">pg. 133-136</a></li> </ul>
	Crosscutting Concept: <i>Cause and Effect</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">Page 87-89</a></li> </ul>
	Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">Page 56-59</a></li> </ul>

[← Table of Contents](#)
[Next Lesson →](#)

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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"> <li>From the <i>Framework</i>: <a href="#">pg. 149–150</a></li> </ul>
	Crosscutting Concept: <i>Cause and Effect</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">Page 87-89</a></li> </ul>
	Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">Page 56-59</a></li> </ul>
86	[VIDEO] <a href="#">Stimulus response</a>
89	[VIDEO] <a href="#">Plant stimulus response</a>

[← Table of Contents](#)
[Next Lesson →](#)

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## Lesson 12

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

[← Table of Contents](#)
[Next Lesson →](#)

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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"> <li>From the <i>Framework</i>: <a href="#">pg. 149-150</a></li> </ul>
	Crosscutting Concept: <i>System and System Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">Page 91-94</a></li> </ul>
	Science and Engineering Practices: <i>Developing and Using Models</i> <ul style="list-style-type: none"> <li>From the <i>Framework</i>: <a href="#">Page 56-59</a></li> </ul>
101	[VIDEO] <a href="#">Time lapse of pea shoot growing</a>
102	[VIDEO OPTIONS] <a href="#">Option 1: Plant response to temperature</a> <a href="#">Option 2: Plant response to touch</a> <a href="#">Option 3: Plant vining to another plant</a>

[← Table of Contents](#)
[Next Lesson →](#)

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## Lesson 14

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

[← Table of Contents](#)
[Unit Review →](#)

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## Unit Review and Assessment

### UR Lesson

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

## Culminating Unit Assessment

Page	Resource Links
164	<a href="#">Unit Assessment: Teacher Evaluation Guide</a>

[← Table of Contents](#)
[Teacher Resources →](#)

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## Teacher Resources

Page	Resource Links
10	<a href="#">Resources for Effective &amp; Safe Classroom Activities</a> (also, see below re: page 116)
11	<a href="#">Materials Supply List: Grade 3 Unit 3 Structures and Functions of Living Things</a>
108	<a href="#">Activity Pages Answer Key</a>
110	<a href="#">Unit Assessment: Teacher Evaluation Guide</a>
116	Safety in the Science Classroom: <ul style="list-style-type: none"> <li>• <a href="#">NSTA Safety Resources</a></li> <li>• <a href="#">Safety Resources for Elementary Teachers</a></li> </ul>
	<b>Teacher Guide Appendices:</b> <ul style="list-style-type: none"> <li>• <a href="#">Appendix A – Glossary</a></li> <li>• <a href="#">Appendix B – Safety for Activities</a></li> <li>• <a href="#">Appendix C – Strategies for Acquiring Materials</a></li> <li>• <a href="#">Appendix D – Advance Preparation</a></li> <li>• <a href="#">Appendix E – Unexpected Activity Results</a></li> </ul>

← [Table of Contents](#)

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