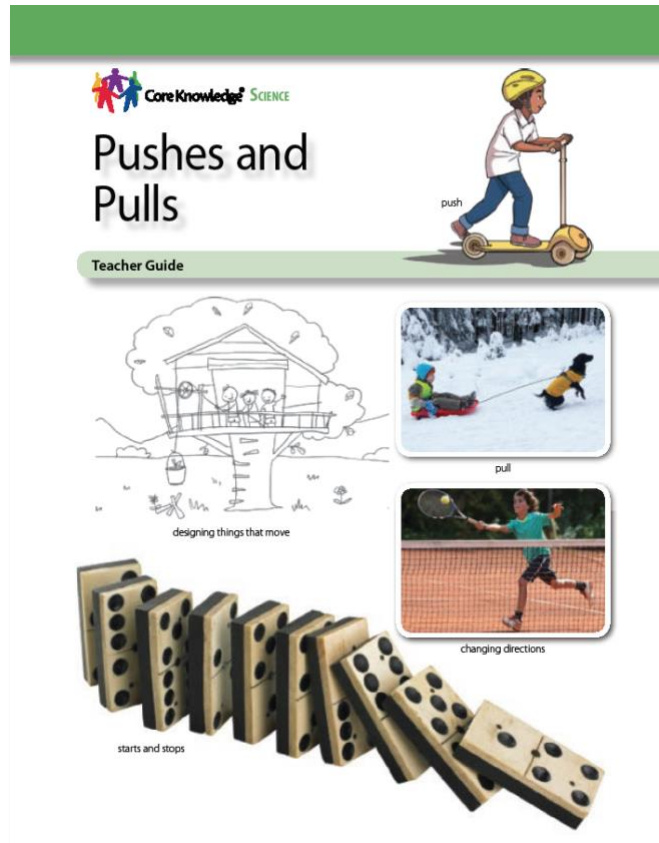


Pushes and Pulls

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 Acrobat Reader DC](#)).

	About this Unit
Unit Opener	Unit Opener
Lesson 1	Segment 1
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Lesson 2	Segment 1
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Lesson 3	Segment 1
	Segment 2
	Segment 3
Unit Supplement	Unit Supplement
	Teacher Resources



About this Unit

Page	Resource Links
2	<p>Note to Teachers and Curriculum Planners</p> <ul style="list-style-type: none"> The learning progressions of Disciplinary Core Ideas PS2.A and PS2.B offers guidance regarding the scope and sequence of learning about forces and motion as well as types of interactions in the elementary grades and beyond. Learn more about this core idea and its 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> <p>See an overview of the entire Core Knowledge Science program.</p>
3	<p>This unit has been informed by the following Next Generation Science Standards (NGSS) Performance Expectations:</p> <ul style="list-style-type: none"> K-PS2-1 K-PS2-2
9	<p>CKSci Online Resources</p> <p>Recommended Science Trade Books</p>
11	<p>NGSS References</p> <ul style="list-style-type: none"> DCI CCC SEP
12	<ul style="list-style-type: none"> Resources for Effective and Safe Classroom Activities Materials Supply List: Grade K Unit 1 Pushes and Pulls

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Unit Opener

Page	Resource Links
17	Disciplinary Core Idea: <i>PS2.A Forces and Motion</i> <ul style="list-style-type: none"> From the Framework: Pages 114-116
	Science and Engineering Practice: <i>1 Asking Questions and Defining Problems</i> <ul style="list-style-type: none"> From the Framework: Pages 54-56
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> From the Framework: Pages 87-89
20	[VIDEO] Put Your Finger In the Air

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Lesson 1 Opener

Page	Resource Links
25	NGSS References <ul style="list-style-type: none"> • DCI • CCC • SEP

Lesson 1, Segment 1

Page	Resource Links
26	Disciplinary Core Idea: <i>PS2.A Forces and Motion</i> <ul style="list-style-type: none"> • From the Framework: Pages 114–116
	Science and Engineering Practice: <i>1 Asking Questions and Defining Problems</i> <ul style="list-style-type: none"> • From the Framework: Pages 54–56
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> • From the Framework: Pages 87–89

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Lesson 1, Segment 2

Page	Resource Links
31	Performance Expectation: <ul style="list-style-type: none"> • K-PS2-1 Evidence Statements for K-PS2-1
	Disciplinary Core Idea: PS2.A <i>Forces and Motion</i> <ul style="list-style-type: none"> • From the Framework: Pages 114–116
	Science and Engineering Practice: <i>3 Planning and Carrying Out Investigations</i> <ul style="list-style-type: none"> • From the Framework: Pages 59–61
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> • From the Framework: Pages 87–89

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Lesson 1, Segment 3

Page	Resource Links
39	<p>Disciplinary Core Idea: PS2.A <i>Forces and Motion</i></p> <ul style="list-style-type: none"> From the Framework: Pages 114–116 <hr/> <p>Science and Engineering Practice: <i>1 Asking Questions and Defining Problems</i></p> <ul style="list-style-type: none"> From the Framework: Pages 54–56 <p><i>4 Analyzing and Interpreting Data</i></p> <ul style="list-style-type: none"> From the Framework: Pages 61–63 <p><i>8 Obtaining, Evaluating, and Communicating Information</i></p> <ul style="list-style-type: none"> From the Framework: Pages 74–77 <hr/> <p>Crosscutting Concept: <i>2 Cause and Effect</i></p> <ul style="list-style-type: none"> From the Framework: Pages 87–89
44	[VIDEO] Push and Pull Forces

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Lesson 1, Segment 4

Page	Resource Links
53	Disciplinary Core Idea: PS2.A <i>Forces and Motion</i> <ul style="list-style-type: none"> From the Framework: Pages 114–116
	Science and Engineering Practice: <i>1 Asking Questions and Defining Problems</i> <ul style="list-style-type: none"> From the Framework: Pages 54–56
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> From the Framework: Pages 87–89
55	[VIDEO] Kicking a Goal in Soccer

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Lesson 1, Segment 5

Page	Resource Links
58	Performance Expectation: <ul style="list-style-type: none"> • K-PS2-1 Evidence Statements for K-PS2-1
	Disciplinary Core Idea: PS2.A <i>Forces and Motion</i> <ul style="list-style-type: none"> • From the Framework: Pages 114-116
	Science and Engineering Practice: <i>1 Asking Questions and Defining Problems</i> <ul style="list-style-type: none"> • From the Framework: Pages 54-56
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> • From the Framework: Pages 87-89

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Lesson 2 Opener

Page	Resource Links
64	NGSS References <ul style="list-style-type: none"> • DCI • CCC • SEP

Lesson 2, Segment 1

Page	Resource Links
65	Disciplinary Core Idea: <i>PS2.A Forces and Motion</i> <ul style="list-style-type: none"> • From the Framework: Pages 114–116
	Science and Engineering Practice: <i>4 Analyzing and Interpreting Data</i> <ul style="list-style-type: none"> • From the Framework: Pages 61–63
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> • From the Framework: Pages 87–89
67	[VIDEO] Famous Baseball Catches [VIDEO] More Famous Baseball Catches

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Lesson 2, Segment 2

Page	Resource Links
70	Performance Expectation: <ul style="list-style-type: none"> • K-PS2-2 Evidence Statements for K-PS2-2
	Disciplinary Core Idea: PS2.A <i>Forces and Motion</i> <ul style="list-style-type: none"> • From the Framework: Pages 114–116
	Science and Engineering Practice: <i>4 Analyzing and Interpreting Data</i> <ul style="list-style-type: none"> • From the Framework: Pages 61–63 <i>3 Planning and Carrying Out Investigations</i> <ul style="list-style-type: none"> • From the Framework: Pages 59–61 <i>6 Constructing Explanations and Designing Solutions</i> <ul style="list-style-type: none"> • From the Framework: Pages 67–71
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> • From the Framework: Pages 87–89
72	[VIDEO] Homemade Miniature Golf Course

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Lesson 2, Segment 3

Page	Resource Links
76	Disciplinary Core Idea: <i>PS2.A Forces and Motion</i> <ul style="list-style-type: none"> From the Framework: Pages 114–116
	Science and Engineering Practice: <i>1 Asking Questions and Defining Problems</i> <ul style="list-style-type: none"> From the Framework: Pages 54–56 <i>8 Obtaining, Evaluating, and Communicating Information</i> <ul style="list-style-type: none"> From the Framework: Pages 74–77
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> From the Framework: Pages 87–89

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Lesson 2, Segment 4

Page	Resource Links
99	<p>Performance Expectation:</p> <ul style="list-style-type: none"> • K-PS2-2 Evidence Statements for K-PS2-2 <p>Disciplinary Core Idea: PS2.A <i>Forces and Motion</i></p> <ul style="list-style-type: none"> • From the Framework: Pages 114–116 <p>Science and Engineering Practice:</p> <p><i>1 Asking Questions and Defining Problems</i></p> <ul style="list-style-type: none"> • From the Framework: Pages 54–56 <p><i>4 Analyzing and Interpreting Data</i></p> <ul style="list-style-type: none"> • From the Framework: Pages 61–63 <p>Crosscutting Concept: <i>2 Cause and Effect</i></p> <ul style="list-style-type: none"> • From the Framework: Pages 87–89

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Lesson 3 Opener

Page	Resource Links
105	NGSS References <ul style="list-style-type: none"> • DCI • CCC • SEP

Lesson 3, Segment 1

Page	Resource Links
106	Disciplinary Core Idea: <i>PS2.A Forces and Motion</i> <ul style="list-style-type: none"> • From the Framework: Pages 114–116
	Science and Engineering Practice: <i>1 Asking Questions and Defining Problems</i> <ul style="list-style-type: none"> • From the Framework: Pages 54–56 <i>4 Analyzing and Interpreting Data</i> <ul style="list-style-type: none"> • From the Framework: Pages 61–63
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> • From the Framework: Pages 87–89
111	[VIDEO] Magnets

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Lesson 3, Segment 2

Page	Resource Links
112	Disciplinary Core Idea: <i>PS2.A Forces and Motion</i> <ul style="list-style-type: none"> From the Framework: Pages 114–116
	Science and Engineering Practice: <i>1 Asking Questions and Defining Problems</i> <ul style="list-style-type: none"> From the Framework: Pages 54–56 <i>8 Obtaining, Evaluating, and Communicating Information</i> <ul style="list-style-type: none"> From the Framework: Pages 74–77
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> From the Framework: Pages 87–89
116	[VIDEO] Giant Magnets

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Lesson 3, Segment 3

Page	Resource Links
122	Performance Expectation: <ul style="list-style-type: none"> • K-PS2-2 Evidence Statements for K-PS2-2
	Disciplinary Core Idea: PS2.A <i>Forces and Motion</i> <ul style="list-style-type: none"> • From the Framework: Pages 114-116 ETS1.A <i>Defining Engineering Problems</i> <ul style="list-style-type: none"> • From the Framework: Pages 204-206
	Science and Engineering Practice: <i>4 Analyzing and Interpreting Data</i> <ul style="list-style-type: none"> • From the Framework: Pages 61-63
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> • From the Framework: Pages 87-89

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Online Resources Unit Supplement

Page	Resource Links
128	Science and Engineering Practices: <i>1 Asking Questions and Defining Problems</i> <ul style="list-style-type: none"> From the Framework: Pages 54–56
	Understandings about the Nature of Science <ul style="list-style-type: none"> Science Is a Way of Knowing Scientific Investigations Use a Variety of Methods Scientific Knowledge Is Based on Empirical Evidence
	Crosscutting Concept: <i>2 Cause and Effect</i> <ul style="list-style-type: none"> From the Framework: Pages 87–89

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[Teacher Resources →](#)

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Teacher Resources

Page	Resource Links
12	Resources for Effective and Safe Classroom Activities
13	Materials Supply List: Grade K Unit 1 <i>Pushes and Pulls</i>
156	Activity Pages Answer Key
160	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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