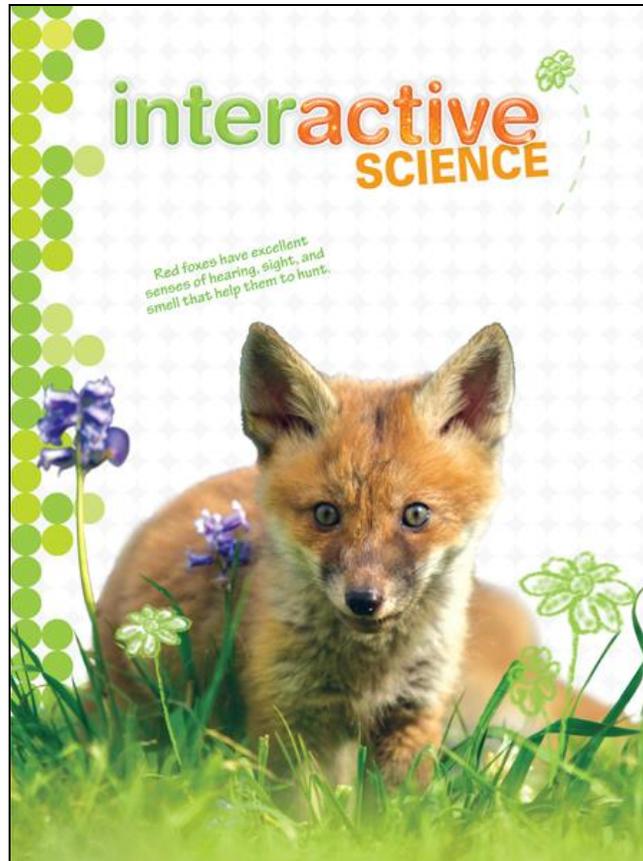A Correlation of

Interactive Science
Grade 2, ©2016

To the

Arkansas Science Standards Learning Progressions by Topic

Introduction

The following document demonstrates the close alignment of *Interactive Science,* **©2016, Grade 2** to the Arkansas Grade 2 Science Standards Learning Progressions by topic. Correlation references are to the Student Edition and Teacher's Edition.

Interactive Science is an elementary science program that makes learning personal, engaging, and relevant for today's student. The program features an innovative Write-in Student Edition that enables students to become active participants in their learning and truly connect the Big Ideas of science to their world.

The 2016 edition of *Interactive Science* supports the Next Generation Science Standards (NGSS) in several ways. In the Student Edition, lessons provide interactive opportunities for students to acquire the Disciplinary Core Ideas that are the building blocks of the NGSS Performance Expectations at each grade level. STEM Activities, Apply It! activities, Design It! Activities, and Performance-Based Assessments enable students to research, investigate, and apply Science and Engineering Practices to real-world problems in a meaningful way. Science and Engineering Practices are further emphasized at each grade level in the Skills Handbook portion of the Student Edition. In the Teacher's Edition, the NGSS Cross-Cutting Concepts that link across grade levels and across disciplines within grade levels are noted at the chapter level, and a detailed and focused Performance Expectation Activity is provided for each NGSS standard.

Interactive Science Grade 2 Table of Contents

Chapter 1 – Energy
Chapter 2 – Plants and Animals
Chapter 3 – Patterns in Space

Skills Handbook Part 1 – The Nature of Science
Skills Handbook Part 2 – Technology and Tools

Arkansas Science Standards Learning Progressions by Topic	Interactive Science Grade 2, ©2016
Structure and Properties of Matter	

Students who demonstrate understanding can:

2-PS1-1   Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. [Clarification Statement: Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.]

2-PS1-2   Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.* [Clarification Statement: Examples of properties could include, strength, flexibility, hardness, texture, and absorbency.] [Assessment Boundary: Assessment of quantitative measurements is limited to length.]

2-PS1-3   Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object. [Clarification Statement: Examples of pieces could include blocks, building bricks, or other assorted small objects.]

2-PS1-4   Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. [Clarification Statement: Examples of reversible changes could include materials such as water or butter at different temperatures. Examples of irreversible changes could include cooking an egg, freezing a plant leaf, and heating paper.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Disciplinary Core Ideas

PS1.A: Structure and Properties of Matter

• Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. (2-PS1-1)	**SE/TE:** 16-23, 24-27, 29, 36, 38, 41, 56, 59, 60, 178, 181 **TE only:** 23a, 29a, 43, 49, 61a, 118G
• Different properties are suited to different purposes. (2-PS1-2, 2-PS1-3)	**SE/TE:** 6-15, 40, 41, 42-43, 44, 46, 47, 55 **TE only:** 2G-2H, 2, 23b, 61b, 61c
• A great variety of objects can be built up from a small set of pieces. (2-PS1-3)	**SE/TE:** 32, 34, 40, 42-43, 44, 45, 46, 47, 55, 57, 61 **TE only:** 2G-2H, 2, 35a, 35b, 47a, 47b

PS1.B: Chemical Reactions

• Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not. (2-PS1-4)	**SE/TE:** 5, 33, 38, 39, 50, 56, 60 **TE only:** 2G-2H, 39b, 61d

Connections to other DCIs in second grade: N/A

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Arkansas Science Standards Learning Progressions by Topic	Interactive Science Grade 2, ©2016
Connections to other DCIs across grade levels: **4.ESS2.A** (2-PS1-3); **5.PS1.A** (2-PS1-1, 2-PS1-2, 2-PS1-3); **5.PS1.B** (2-PS1-4); **5.LS2.A** (2-PS1-3)	
Common Core State Standards Connections: *ELA/Literacy –* **RI.2.1** Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. (2-PS1-4) **RI.2.3** Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2-PS1-4) **RI.2.8** Describe how reasons support specific points the author makes in a text. (2-PS1-2, 2-PS1-4) **W.2.1** Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section. (2-PS1-4) **W.2.7** Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). (2-PS1-1, 2-PS1-2, 2-PS1-3) **W.2.8** Recall information from experiences or gather information from provided sources to answer a question. (2-PS1-1, 2-PS1-2, 2-PS1-3) *Mathematics –* **MP.2** Reason abstractly and quantitatively. (2-PS1-2) **MP.4** Model with mathematics. (2-PS1-1, 2-PS1-2) **MP.5** Use appropriate tools strategically. (2-PS1-2) **2.MD.D.10** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (2-PS1-1, 2-PS1-2)	
Crosscutting Concepts	
Patterns	
• Patterns in the natural and human designed world can be observed. (2-PS1-1)	**SE/TE:** 38, 39, 194, 196-197 **TE only:** 118G-118H, 197a, 197b, 197c
Cause and Effect	
• Events have causes that generate observable patterns. (2-PS1-4)	**SE/TE:** 4, 38, 148-149, 222 **TE only:** 62, 143
• Simple tests can be designed to gather evidence to support or refute student ideas about causes. (2-PS1-2)	**SE/TE:** 4, 38, 148-149, 222 **TE only:** 149a, 149b, 149c, 149d, 225
Energy and Matter	
• Objects may break into smaller pieces and be put together into larger pieces, or change shapes. (2-PS1-3)	**SE/TE:** 30, 31, 32-33, 34-35, 48-49, 51-54, 55 **TE only:** 2, 35a, 35b, 61c

Arkansas Science Standards Learning Progressions by Topic	Interactive Science Grade 2, ©2016
Connections to Engineering, Technology, and Applications of Science	
Influence of Engineering, Technology, and Science on Society and the Natural World	
• Every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world. (2-PS1-2) •	**SE/TE:** 6-15, 45, 122-131
Science and Engineering Practices	
Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.	
• Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. (2-PS1-1)	**SE/TE:** 3, 48-49, 148-149, 196-197 **TE only:** 49a-49c, 61a, 197a, 197b, 197c
Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.	
• Analyze data from tests of an object or tool to determine if it works as intended. (2-PS1-2)	**SE/TE:** 49, 149, 197 **TE only:** 49b, 61b
Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.	
• Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena. (2-PS1-3) •	**SE/TE:** 4, 18, 27, 48-49 **TE only:** 49a-49c, 61c
Engaging in Argument from Evidence Engaging in argument from evidence in K–2 builds on prior experiences and progresses to comparing ideas and representations about the natural and designed world(s).	
• Construct an argument with evidence to support a claim. (2-PS1-4)	**SE/TE:** 188-191 **TE only:** 61d, 191a-191b
Connections to Nature of Science	
Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena	
• Scientists search for cause and effect relationships to explain natural events. (2-PS1-4)	**SE/TE:** 4, 141, 142, 143 **TE only:** 61d

SE = Student Edition   TE = Teacher's Edition

Arkansas Science Standards Learning Progressions by Topic	Interactive Science Grade 2, ©2016
Interdependent Relationships in Ecosystems	
Students who demonstrate understanding can: **2-LS2-1 Plan and conduct an investigation to determine if plants need sunlight and water to grow.** [Assessment Boundary: Assessment is limited to testing one variable at a time.] **2-LS2-2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.*** **2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.** [Clarification Statement: Emphasis is on the diversity of living things in a variety of habitats.] [Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.]	
The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:	
Disciplinary Core Ideas	
LS2.A: Interdependent Relationships in Ecosystems	
• Plants depend on water and light to grow. (2-LS2-1)	**SE/TE:** 64, 77, 96, 97, 99, 101, 104-105, 116 **TE only:** 62G-62H, 105a, 117a
• Plants depend on animals for pollination or to move their seeds around. (2-LS2-2)	**SE/TE:** 79, 81 **TE only:** 117b
LS4.D: Biodiversity and Humans	
• There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)	**SE/TE:** 76, 82, 94-99, 107-110, 111, 113, 116, 117 **TE only:** 62G-62H, 117c
ETS1.B: Developing Possible Solutions	
• Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (2-LS2-2)	**SE/TE:** 67, 69, 71, 72, 73, 75, 79, 87, 88, 94, 100, 116, 117 **TE only:** 117b, 117c
Connections to other DCIs in second grade: N/A	
Connections to other DCIs across grade levels: **K.LS1.C** (2-LS2-1); **K-ESS3.A** (2-LS2-1); **K-2.ETS1.A** (2-LS2-2); **3.LS4.C** (2-LS4-1); **3.LS4.D** (2-LS4-1); **5.LS1.C** (2-LS2-1); **5.LS2.A** (2-LS2-2, 2-LS4-1)	

Arkansas Science Standards Learning Progressions by Topic	Interactive Science Grade 2, ©2016
Common Core State Standards Connections: ELA/Literacy – **W.2.7** Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). (2-LS2-1, 2-LS4-1) **W.2.8** Recall information from experiences or gather information from provided sources to answer a question. (2-LS2-1, 2-LS4-1) **SL.2.5** Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (2-LS2-2) *Mathematics –* **MP.2** Reason abstractly and quantitatively. (2-LS2-1, 2-LS4-1) **MP.4** Model with mathematics. (2-LS2-1, 2-LS2-2, 2-LS4-1) **MP.5** Use appropriate tools strategically. (2-LS2-1) **2.MD.D.10** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems. (2-LS2-2, 2-LS4-1)	
Crosscutting Concepts	
Cause and Effect	
• Events have causes that generate observable patterns. (2-LS2-1)	**SE/TE:** 64, 77, 79, 104-105, 116 **TE only:** 62, 117a
Structure and Function	
• The shape and stability of structures of natural and designed objects are related to their function(s). (2-LS2-2)	**SE/TE:** 78-79, 84-85, 86-87, 90-91, 232-233 **TE only:** 63, 108, 117b
Science and Engineering Practices	
Developing and Using Models Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.	
• Develop a simple model based on evidence to represent a proposed object or tool. (2-LS2-2)	**SE/TE:** 88, 100, 208-217, 232 **TE only:** 63, 93b, 117b
Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.	
• Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. (2-LS2-1)	**SE/TE:** 63, 104-105, 114, 116 **TE only:** 61a, 117a
• Make observations (firsthand or from media) to collect data that can be used to make comparisons. (2-LS4-1	**SE/TE:** 88, 180 **TE only:** 61a, 93a, 117c

Arkansas Science Standards Learning Progressions by Topic	Interactive Science Grade 2, ©2016
Connections to Nature of Science	
Scientific Knowledge is Based on Empirical Evidence	
• Scientists look for patterns and order when making observations about the world. (2-LS4-1)	**SE/TE:** 100, 101, 102, 103 **TE only:** 117c
Earth's Systems: Processes that Shape the Earth	
Students who demonstrate understanding can: **2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.** [Clarification Statement: Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly.] [Assessment Boundary: Assessment does not include quantitative measurements of timescales.] **2-ESS2-1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.*** [Clarification Statement: Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land.] **2-ESS2-2 Develop a model to represent the shapes and kinds of land and bodies of water in an area.** [Assessment Boundary: Assessment does not include quantitative scaling in models.] **2-ESS2-3 Obtain information to identify where water is found on Earth and that it can be solid or liquid.**	
The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:	
Disciplinary Core Ideas	
ESS1.C: The History of Planet Earth	
• Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1)	**SE/TE:** 138-142, 153, 156, 158 **TE only:** 138B, 143b, 152, 155b, 155d
ESS2.A: Earth Materials and Systems	
• Wind and water can change the shape of the land. (2-ESS2-1)	**SE/TE:** 133, 139, 141-143, 151, 153, 154, 155, 158 **TE only:** 118D, 118G, 118, 138B, 140, 143b, 152, 155a, 155b, 155d, 159a
ESS2.B: Plate Tectonics and Large-Scale System Interactions	
• Maps show where things are located. One can map the shapes and kinds of land and water in any area. (2-ESS2-2)	**SE/TE:** 133, 159 **TE only:** 134, 135, 159a, 159c, 176
ESS2.C: The Roles of Water in Earth's Surface Processes	
• Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form. (2-ESS2-3)	**SE/TE:** 120, 133, 135-137, 151, 153, 154, 159 **TE only:** 132B, 137b, 159c, 159d

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Arkansas Science Standards Learning Progressions by Topic	Interactive Science Grade 2, ©2016
ETS1.C: Optimizing the Design Solution	
• Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (2-ESS2-1)	**SE/TE:** 122-131, 158, 159
Connections to other DCIs in second grade: **2.PS1.A** (2-ESS2-3)	
Connections to other DCIs across grade levels: **K-2.ETS1.A** (2-ESS2-1); **3.LS2.C** (2-ESS1-1); **4.ESS1.C** (2-ESS1-1); **4.ESS2.A** (2-ESS1-1, 2-ESS2-1); **4.ESS2.B** (2-ESS2-2); **3-5.ETS1.A** (2-ESS2-1); **3-5.ETS1.B** (2-ESS2-1); **3-5.ETS1.C** (2-ESS2-1); **5.ESS2.A** (2-ESS2-1); **5.ESS2.C** (2-ESS2-2, 2-ESS2-3)	
Common Core State Standards Connections: ELA/Literacy – **RI.2.1** Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. (2-ESS1-1) **RI.2.3** Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2-ESS1-1, 2-ESS2-1) **RI.2.9** Compare and contrast the most important points presented by two texts on the same topic. (2-ESS2-1) **W.2.6** With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (2-ESS1-1, 2-ESS2-3) **W.2.7** Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). (2-ESS1-1) **W.2.8** Recall information from experiences or gather information from provided sources to answer a question. (2-ESS1-1, 2-ESS2-3) **SL.2.2** Recount or describe key ideas or details from a text read aloud or information presented orally or through other media. (2-ESS1-1) **SL.2.5** Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (2-ESS2-2)	
Mathematics – **MP.2** Reason abstractly and quantitatively. (2-ESS2-1, 2-ESS2-1, 2-ESS2-2) **MP.4** Model with mathematics. (2-ESS1-1, 2-ESS2-1, 2-ESS2-2) **MP.5** Use appropriate tools strategically. (2-ESS2-1) **2.NBT.A** Understand place value. (2-ESS1-1) **2.NBT.A.3** Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. (2-ESS2-2) **2.MD.B.5** Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. (2-ESS2-1)	
Crosscutting Concepts	
Patterns	
• Patterns in the natural world can be observed. (2-ESS2-2, 2-ESS2-3)	**SE/TE:** 48-149, 194 **TE only:** 118G-118H, 197c, 203c

Arkansas Science Standards Learning Progressions by Topic	Interactive Science Grade 2, ©2016
Stability and Change	
• Things may change slowly or rapidly. (2-ESS1-1, 2-ESS2-1)	**SE/TE:** 138-142, 153, 158 **TE only:** 138B, 143b, 152, 155b, 155d, 159a
Connections to Engineering, Technology, and Applications of Science	
Influence of Engineering, Technology, and Science on Society and the Natural World	
• Developing and using technology has impacts on the natural world. (2-ESS2-1)	**SE/TE:** 205, 207, 218-221, 236, 239, 240 **TE only:** 160G-160H, 204, 221a, 221b
Connections to Nature of Science	
Science Addresses Questions About the Natural and Material World	
• Scientists study the natural and material world. (2-ESS2-1)	**SE/TE:** 150, 161, 174-177, 179-181, 189-191, 193-195, 198, 199-200, 201, 202, 203 **TE only:** 160G-160H, 160, 177a, 177b, 181a, 181b, 187a, 187b, 188b, 191a, 191b, 195a, 195b
Science and Engineering Practices	
Developing and Using Models Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.	
• Develop a model to represent patterns in the natural world. (2-ESS2-2)	**SE/TE:** 138, 141, 144, 146, 194 **TE only:** 118G-118H, 197c, 203c
Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.	
• Make observations from several sources to construct an evidence-based account for natural phenomena. (2-ESS1-1)	**SE/TE:** 138, 141, 148-149 **TE only:** 117c, 119, 159a
• Compare multiple solutions to a problem. (2-ESS2-1)	**SE/TE:** 122-131 **TE only:** 159b

Arkansas Science Standards Learning Progressions by Topic	Interactive Science Grade 2, ©2016
Obtaining, Evaluating, and Communicating Information Obtaining, evaluating, and communicating information in K–2 builds on prior experiences and uses observations and texts to communicate new information.	
• Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question. (2-ESS2-3)	**SE/TE:** 153, 190-191 **TE only:** 117c, 140, 159c, 159d, 220, 227, 243
Engineering, Technology, and Applications of Science	
Students who demonstrate understanding can: **2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.** **2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.** **2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.**	
The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:	
Disciplinary Core Ideas	
ETS1.A: Defining and Delimiting Engineering Problems	
• A situation that people want to change or create can be approached as a problem to be solved through engineering. (2-ETS1-1)	**SE/TE:** 6-15, 66-75, 122-131, 164-173, 208-217, 223-227, 234-235, 242-247 **TE only:** 160G-160H, 227a, 227b
• Asking questions, making observations, and gathering information are helpful in thinking about problems. (2-ETS1-1)	**SE/TE:** 6, 7, 66, 67, 122, 123, 164, 165, 208, 209 **TE only:** 160G-160H
• Before beginning to design a solution, it is important to clearly understand the problem. (2-ETS1-1)	**SE/TE:** 6-8, 66- 68, 122- 124, 164-166, 208-210, 223-224, 242
ETS1.B: Developing Possible Solutions	
• Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people. (2-ETS1-2)	**SE/TE:** 7, 11, 12, 67, 69, 71, 72, 73, 75, 128, 130, 165, 166, 169, 170, 173, 210, 211, 213, 214, 217 **TE only:** 160G-160H

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ETS1.C: Optimizing the Design Solution	
• Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (2-ETS1-3)	**SE/TE:** 9, 12-15, 72-75, 128-131, 165, 170-173
Connections to K-2-ETS1.A: Defining and Delimiting Engineering Problems include: **Kindergarten:** (K-PS2-2, K-ESS3-2) *Connections to K-2-ETS1.B: Developing Possible Solutions to Problems include:* **Kindergarten:** (K-ESS3-3); **First Grade:** (1-PS4-4); **Second Grade:** (2-LS2-2) *Connections to K-2-ETS1.C: Optimizing the Design Solution include:* **Second Grade:** (2-ESS2-1)	
Connections to other DCIs across grade levels: **3-5.ETS1.A** (2-ETS1-1, 2-ETS1-2, 2-ETS1-3); **3-5.ETS1.B** (2-ETS1-2, 2-ETS1-3); **3-5.ETS1.C** (2-ETS1-1, 2-ETS1-2, 2-ETS1-3)	
Common Core State Standards Connections: ELA/Literacy – **RI.2.1** Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text. (2-ETS1-1) **W.2.6** With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (2-ETS1-1, 2-ETS1-3) **W.2.8** Recall information from experiences or gather information from provided sources to answer a question. (2-ETS1-1, 2-ETS1-3) **SL.2.5** Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (2-ETS1-2) *Mathematics –* **MP.2** Reason abstractly and quantitatively. (2-ETS1-1, 2-ETS1-3) **MP.4** Model with mathematics. (2-ETS1-1, 2-ETS1-3) **MP.5** Use appropriate tools strategically. (2-ETS1-1, 2-ETS1-3) **2.MD.D.10** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (2-ETS1-1, 2-ETS1-3)	
Crosscutting Concepts	
Structure and Function	
• The shape and stability of structures of natural and designed objects are related to their function(s). (2-ETS1-2)	**SE/TE:** 45, 47, 182, 183-185, 232-233 **TE only:** 47a, 63, 108, 117b, 187, 187a
Science and Engineering Practices	
Asking Questions and Defining Problems Asking questions and defining problems in K–2 builds on prior experiences and progresses to simple descriptive questions.	
• Ask questions based on observations to find more information about the natural and/or designed world. (2-ETS1-1)	**SE/TE:** 58, 156, 160-161, 174-177, 190 **TE only:** 117a, 143, 197a

SE = Student Edition   TE = Teacher's Edition

Arkansas Science Standards Learning Progressions by Topic	Interactive Science Grade 2, ©2016
• Define a simple problem that can be solved through the development of a new or improved object or tool. (2-ETS1-1)	**SE/TE:** 6-15, 66-75, 122-131, 164-173, 208-217, 242-243 **TE only:** 3, 63, 119, 161
Developing and Using Models Modeling in K–2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions.	
• Develop a simple model based on evidence to represent a proposed object or tool. (2-ETS1-2)	**SE/TE:** 6-15, 40, 47, 88, 144, 159, 232 **TE only:** 47a, 63, 93a, 135, 147a
Analyzing and Interpreting Data Analyzing data in K–2 builds on prior experiences and progresses to collecting, recording, and sharing observations.	
• Analyze data from tests of an object or tool to determine if it works as intended. (2-ETS1-3)	**SE/TE:** 49, 105, 114-115, 149, 197, 203, 235 **TE only:** 49b, 61b, 105b, 105c, 105d

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