PACING GUIDE FOR SCIENCE
Grade 2nd

Topic	Unit	Marking Period	Number of Days
Matter and Its Interactions	Physical Science	Marking Period 1	20-25 days
Ecosystems: Interactions, Energy and Dynamics	Life Science	Marking Period 2	10 days
Biological Evolution: Unity and Diversity	Life Science	Marking Period 2	10 days
Earth's Place in the Universe	Earth Science	Marking Period 3	10 days
Earth's Systems	Earth Science	Marking Period 3-4	17 days
Engineering Design	Earth Science	Marking Period 4	10 days

Aug 2021
Reapproved by Board with updates Aug 2026

Alpha Public School
Science Curriculum Map

Grade: 2nd

Standard: 2-PS1	**Content Topic:** Matter and its Interactions

Strand	Disciplinary Core Ideas / Essential Statement	Objective / Essential Question	Science & Engineering Practices / Skills & Lesson
2-PS1-1	---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 (PS1.A)	plan and conduct an investigation to describe and classify different kinds of materials by their observable properties How can I describe and classify different kinds of materials by their observable properties?	plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question
2-PS1-2	---Different properties are suited to different purposes (PS1.A)	analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose How can I test different materials to determine which materials have the best properties that are suited for my purpose?	analyze data from tests of an object or tool to determine if it works as intended
2-PS1-3	---Different properties are suited to different purposes (PS1.A) ---A great variety of objects can be built up from a small set of pieces (PS1.A)	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 What constitutes a scientific system?	make observations (firsthand or from media) to construct an evidence-based account for natural phenomena
2-PS1-4	---Heating or cooling a substance may cause changes that can be observed. Sometimes these changes are reversible, and sometimes they are not (PS1.B)	construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot How can some changes caused by heating be reversed? How can some changes caused by cooling be reversed?	construct an argument with evidence to support a claim

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Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
Science journal Lab-Sorting Mat Lab- Physical Properties Lab- Oops I spilled Inquiry Lab- Inquiry Reflection Sheet Better Lessons- Tools Not Toys Lab- Is it Hot or Not? Measuring Temperature Lab- How to Use a Thermometer Lab- How to Measure Water Temperature? Lab- Cooling and Heating Lab- Irreversible Changes Teacher created; guideline 5-10 questions Alternative Assessment: Performance Task	Assessment Rubric (pg 132) Sorting Activity- Tools Not Toys Evaluation Sheet Is It a System Sheet Assessment Rubric (pg 104) Assessment Rubric (pg 172	Knowing Science- Physical Science Unit 2-1 Knowing Science Literature Knowing Science Vocabulary Flashcards Better Lessons- Tools not Toys Better Lessons- Systems Book- Og the Dog and the Uninventor Knowing Science- Physical Science Unit 1.4 and 2.3 Mystery Science Holt: Science

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
Mystery Science Material Magic mysteries 1-5 Slide Show Google Classroom- Internet Research	patterns in the natural and human designed world can be observed ---simple tests can be designed to gather evidence to support or refute student ideas about causes ---every human-made product is designed by applying some knowledge of the natural world and is built using materials derived from the natural world objects may break into smaller pieces and be put together into larger pieces or change shapes ---events have causes that generate observable patterns ---scientists search for cause and effect relationships to explain natural events **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)

Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
Visual aids Sentence Frames Modeling Anchor charts Modify rubric Teacher directed grouping	Pre-teach vocabulary Non-linguistic cues Sentence frames Visual aids Manipulatives Graphic organizers Use of educational websites: www.khanacademy.org www.colorincolorado.org/	http://education.jlab.org/vocabhangman/ Science content vocabulary hangman http://kids.nationalgeographic.com/ National Geographic online http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml Interactive science activities http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive

Alpha Public School
Science Curriculum Map

21st Century Education	Career Education
THEMES: Global Awareness Financial, Economic, Business and Entrepreneurial Literacy Civic Literacy Health Literacy SKILLS: Creativity and Innovation Critical Thinking and Problem Solving Communication and Collaboration Information Literacy Media Literacy ICT Literacy Life and Career Skills	Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study. CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP9. Model integrity, ethical leadership and effective management. CRP10. Plan education and career paths aligned to personal goals. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

Alpha Public School
Science Curriculum Map

Standard: 2-LS2	**Content Topic:** Ecosystems: Interactions, Energy and Dynamics

Strand	Disciplinary Core Ideas / Essential Statement	Objective / Essential Question	Science & Engineering Practices / Skills & Lesson
2-LS2-1	plants depend on water and light to grown (LS2.A)	plan and conduct an investigation to determine if plants need sunlight and water to grow Do plants need sunlight and water to grow?	plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question
2-LS2-2	---plants depend on animals for pollination or to move their seeds around (LS2.A) ----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 (ETS1.B)	develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants How do animals help plants disperse their seeds?	develop a simple model based on evidence to represent a proposed object or tool

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
Science journal Lab- Terence- Real/Not Real Lab- Plant Parts Reading Lab- Basic Plant Needs Investigation Lab- Basic Plant Needs Inquiry Plant Observation Journal Lab- Plants help animals help plants Lab- Pollination Station Teacher created; guideline 5-10 questions Alternative Assessment: Performance Task	Assessment Rubric (pg 16) Assessment Rubric (pg 67)	Knowing Science- Life Science Unit 1.1 Knowing Science Literature Knowing Science Vocabulary Flashcards Mystery Science Holt: Science Knowing Science- Life Science Unit 1.3

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
Mystery Science Plant Adventures mysteries 1-5 Google Classroom- Internet Research	events have causes that generate observable patterns the shape and stability of structures of natural and designed objects are related to their function **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) W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-LS2-1) 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) MP.4 Model with mathematics. (2-LS2-1),(2-LS2-2) 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)

Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
Visual aids Sentence Frames Modeling Anchor charts Modify rubric Teacher directed grouping	Pre-teach vocabulary Non-linguistic cues Sentence frames Visual aids Manipulatives Graphic organizers Use of educational websites: www.khanacademy.org www.colorincolorado.org/	http://education.jlab.org/vocabhangman/ Science content vocabulary hangman http://kids.nationalgeographic.com/ National Geographic online http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml Interactive science activities http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive

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Science Curriculum Map

Standard: 2-LS4	**Content Topic:** Biological Evolution: Unity and Diversity

Strand	Disciplinary Core Ideas / Essential Statement	Objective / Essential Question	Science & Engineering Practices / Skills & Lesson
2-LS4-1	there are many different kinds of living things in any area, and they exist in different places on land and in water (LS4.D)	make observations of plants and animals to compare the diversity of life in different habitats. What kind of animals live in all of the different habitats?	make observations (firsthand or from media) to collect data that can be used to make comparisons

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
Science journal Lab- Introducing Habitats Lab- Comparing Basic Needs Lab Me and My Habitat Lab- Forest Habitats Lab- Desert and Tundra Lab-Ocean and Freshwater Lab- Ecosystem Details Teacher created; guideline 5-10 questions Alternative Assessment: Performance Task	Assessment Rubric (pg 35)	Knowing Science- Life Science Unit 1.2 Knowing Science Literature Knowing Science Vocabulary Flashcards Mystery Science Holt: Science

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
Mystery Science Plant Adventures mysteries 2,4,5 Mystery Science Animal Adventures mystery 1-3	scientists look for patterns and order when making observations about the world **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-LS4-1) W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-LS4-1)

	Mathematics – MP.2 Reason abstractly and quantitatively. (2-LS4-1) MP.4 Model with mathematics. (2-LS4-1) 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-LS4-1)

Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
Visual aids Sentence Frames Modeling Anchor charts Modify rubric Teacher directed grouping	Pre-teach vocabulary Non-linguistic cues Sentence frames Visual aids Manipulatives Graphic organizers Use of educational websites: www.khanacademy.org www.colorincolorado.org/	http://education.jlab.org/vocabhangman/ Science content vocabulary hangman http://kids.nationalgeographic.com/ National Geographic online http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml Interactive science activities http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive

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Alpha Public School
Science Curriculum Map

Standard: 2-ESS1	**Content Topic:** Earth's Place in the Universe

Strand	Disciplinary Core Ideas / Essential Statement	Objective / Essential Question	Science & Engineering Practices / Skills & Lesson
2-ESS1-1	some events happen very quickly; others occur very slowly, over a time period much longer than one can observe (ESS1.C)	Use information from several sources to provide evidence that Earth events can occur quickly or slowly How can you provide evidence to show that some changes occur slowly and some changes occur quickly to Earth?	make observations from several sources to construct an evidence based account for natural phenomena

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
Science journal Lab- Weather Reading Graphic Organizer Lab- Sandcastle Weathering Lab- Erosion Reading Lab- Erosion Demonstrations Lab- Fast Changes Teacher created; guideline 5-10 questions Alternative Assessment: Performance Task	Assessment Rubric (pg 48)	Knowing Science- Earth Science Unit 1.2 Knowing Science Literature Knowing Science Vocabulary Flashcards Mystery Science Holt: Science

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
Mystery Science Work of Water mystery 3 Google Classroom- Internet Research	things may change slowly or rapidly **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) 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) 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) 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) **Mathematics – MP.2** Reason abstractly and quantitatively. (2-ESS1-1) MP.4 Model with mathematics. (2-ESS1-1) 2.NBT.A Understand place value. (2-ESS1-1)

Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
Visual aids Sentence Frames Modeling Anchor charts Modify rubric Teacher directed grouping	Pre-teach vocabulary Non-linguistic cues Sentence frames Visual aids Manipulatives Graphic organizers Use of educational websites: www.khanacademy.org www.colorincolorado.org/	http://education.jlab.org/vocabhangman/ Science content vocabulary hangman http://kids.nationalgeographic.com/ National Geographic online http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml Interactive science activities http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive

21st Century Education	Career Education
THEMES: Global Awareness Financial, Economic, Business and Entrepreneurial Literacy Civic Literacy Health Literacy SKILLS: Creativity and Innovation Critical Thinking and Problem Solving Communication and Collaboration Information Literacy Media Literacy ICT Literacy Life and Career Skills	Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study. CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP9. Model integrity, ethical leadership and effective management.

	CRP10. Plan education and career paths aligned to personal goals. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

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Standard: 2-ESS2	**Content Topic:** Earth's Systems

Strand	Disciplinary Core Ideas / Essential Statement	Objective / Essential Question	Science & Engineering Practices / Skills & Lesson
2-ESS2-1	---wind and water can change the shape of the land (ESS2.A) ---because there is always more than one possible solution to a problem, it is useful to compare and test designs (ETS1.C)	Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land How can we design and compare multiple solutions to prevent or slow water to change the shape of the land?	compare multiple solutions to a problem
2-ESS2-2	maps show where things are located. One can map the shapes and kinds of land and water in any area (ESS2.B)	develop a model to represent the shapes and kinds of land and bodies of water in an area How can I develop a model to develop the shapes and kinds of water in an area?	develop a model to represent patterns in the natural world
2-ESS2-3	Water is found in the ocean, rivers, lakes and ponds. Water exists as solid ice and in liquid form (ESS2.C)	obtain information to identify where water is found on Earth and that it can be solid or liquid How can we design and compare multiple solutions to prevent or slow water to change the shape of the land?	obtain information using various texts, text features, (e.g., headings, table of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
Science journal Lab- Erosion Prevention Design Project Lab- Saving Soil Lab- World Physical Map Lab- Continents and Oceans Lab- Where is the Water Lab- Salt in the Water	Assessment Rubric (pg 72) Assessment Rubric (pg 19)	Knowing Science- Earth Science Unit 1.3 Knowing Science Literature Knowing Science Vocabulary Flashcards Mystery Science Holt: Science Knowing Science- Earth Science Unit 1.1

Lab- What are Landforms Model Planning Sheet My Model Relief Map Teacher created; guideline 5-10 questions Alternative Assessment: Performance Task		

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
Mystery Science Work of Water mystery 3 Mystery Science Work of Water mysteries 1-3 Mystery Science Work of Water mystery 1	---things can change slowly or rapidly ----developing and using technology has impacts on the natural world ----scientists study the natural and material world patterns in the natural world can be observed **ELA/Literacy – 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-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-ESS2-3) W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (2-ESS2-3) 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-ESS2-2) **Mathematics – MP.2** Reason abstractly and quantitatively. (2-ESS2-1),(2-ESS2-2) MP.4 Model with mathematics. (2-ESS2-1),(2-ESS2-2) MP.5 Use appropriate tools strategically. (2-ESS2-1) 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)

Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
Visual aids Sentence Frames Modeling Anchor charts Modify rubric Teacher directed grouping	Pre-teach vocabulary Non-linguistic cues Sentence frames Visual aids Manipulatives Graphic organizers Use of educational websites: www.khanacademy.org www.colorincolorado.org/	http://education.jlab.org/vocabhangman/ Science content vocabulary hangman http://kids.nationalgeographic.com/ National Geographic online http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml Interactive science activities http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive

21st Century Education	Career Education
THEMES: Global Awareness Financial, Economic, Business and Entrepreneurial Literacy Civic Literacy Health Literacy SKILLS: Creativity and Innovation Critical Thinking and Problem Solving Communication and Collaboration Information Literacy Media Literacy ICT Literacy Life and Career Skills	Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of study. CRP1. Act as a responsible and contributing citizen and employee. CRP2. Apply appropriate academic and technical skills. CRP3. Attend to personal health and financial well-being. CRP4. Communicate clearly and effectively and with reason. CRP5. Consider the environmental, social and economic impacts of decisions. CRP6. Demonstrate creativity and innovation. CRP7. Employ valid and reliable research strategies. CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP9. Model integrity, ethical leadership and effective management. CRP10. Plan education and career paths aligned to personal goals. CRP11. Use technology to enhance productivity. CRP12. Work productively in teams while using cultural global competence.

Alpha Public School
Science Curriculum Map

Standard: K-2-ETS1	**Content Topic:** Engineering Design

Strand	Disciplinary Core Ideas / Essential Statement	Objective	Science & Engineering Practices / Skills & Lesson
K-2-ETS-1	--- a situation that people want to change or create can be approached as a problem to be solved through engineering (ETS1.A) ---ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved object or tool (ETS1.A) ---before beginning to design a solution, it is important to clearly understand the problem (ETS1.A)	ask questions, make observations, and gather information about a situation people want to change (e.g., climate change) to define a simple problem that can be solved through the development of a new or improved object or tool.	---ask questions based on observations to find more information about the natural and / or designed world ---define a simple problem that can be solved through the development of a new or improved object or tool
K-2-ETS-2	designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions, such as climate change, to other people (ETS1.B)	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	develop a simple model based on evidence to represent a proposed object or tool
K-2-ETS-3	because there is always more than one possible solution to a problem, it is useful to compare and test designs (ETS1.C)	analyze data from tests of two objects designed to solve the same problems to compare the strength and weaknesses of how each performs	analyze data from tests of an object or tool to determine if it works as intended

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Science Curriculum Map

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
Science journal Teacher created; guideline 5-10 questions Alternative Assessment: Performance Task	Covered Under Erosion Design Project	Knowing Science- Earth Science Unit 1.3 Knowing Science Literature Knowing Science Vocabulary Flashcards Mystery Science Holt: Science

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1)
Mystery Science Animal Adventures mystery 3 Mystery Science Work of Water mystery 4 Google Classroom- Internet Research	the shape and stability of structures of natural and designed objects are related to their function **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. (K-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. (K-2-ETS1-1),(K-2-ETS1-3) W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (K-2-ETS1-1),(K-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. (K-2-ETS1-2) **Mathematics – MP.2** Reason abstractly and quantitatively. (K-2-ETS1-1),(K-2-ETS1-3) MP.4 Model with mathematics. (K-2-ETS1-1),(K-2-ETS1-3) MP.5 Use appropriate tools strategically. (K-2-ETS1-1),(K-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. (K-2-ETS1-1),(K-2-ETS1-3)

Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
Visual aids Sentence Frames Modeling Anchor charts Modify rubric Teacher directed grouping	Pre-teach vocabulary Non-linguistic cues Sentence frames Visual aids Manipulatives Graphic organizers Use of educational websites: www.khanacademy.org www.colorincolorado.org/	http://education.jlab.org/vocabhangman/ Science content vocabulary hangman http://kids.nationalgeographic.com/ National Geographic online http://www.bbc.co.uk/schools/scienceclips/ages/10_11/science_10_11.shtml Interactive science activities http://classroom.jc-schools.net/sci-units/plants-animals.htm#Interactive

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