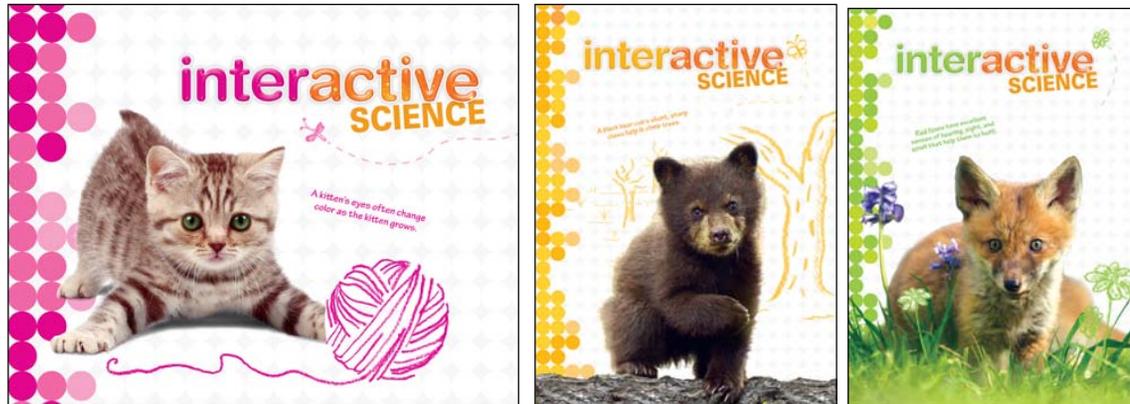


A Correlation of
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Interactive Science
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To the
Oregon Instructional Materials Evaluation Tool (OR-IMET)
for Alignment in Science
Grades Kindergarten-2

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SECTION I: Alignment to the 2014 Oregon Science Standards

Criterion 1: FOCUS

Materials focus on in-depth learning of the NGSS disciplinary core ideas while engaging students in the scientific and engineering practices and connecting to crosscutting concepts in the context of authentic and content-appropriate science, and facilitate students developing a deeper understanding and application of scientific knowledge and the ability to think and reason scientifically while investigating complex ideas and solving problems.

The *Interactive Science* program is broken into four strands: physical science, life science, earth science, and Science, Engineering, and Technology, which correspond to the four domains of the NGSS disciplinary core ideas (DCI): physical science (PS), life science (LS), earth and space science (ESS), and engineering technology and applications of science (ETS1). Each grade level in the Grade K-2 band follows the same sequence of strands, with one chapter per strand in physical science, life science, and earth and space science. The Science, Engineering, and Technology strand is covered in a two-part Skills Handbook at the end of each book for each grade level. Each chapter has several lessons that further break down the disciplinary core ideas. As students progress through the program by grade level, they will build on previous knowledge to master the disciplinary core ideas.

The NGSS science and engineering practices (SEP) for grade levels K-2 expect students to engage in planning and carrying out investigations, constructing explanations and designing solutions, and analyzing and interpreting data. SEP boxes in each of *Interactive Science* chapter opener identify opportunities within the chapter for students to develop a specific science and engineering practice. In addition, each chapter contains a STEM Activity in which students identify a problem; plan, design, and test the solution; record the data; and share and reflect on the results.

Similarly, opportunities to reinforce NGSS Crosscutting Concepts are identified in the boxes labeled CCC. These boxes provide suggestions for the teacher to use chapter activities and discussions to help students recognize specific crosscutting concepts as they learn about the chapter topic.

Students demonstrate competence in the three NGSS dimensions by completing Performance Expectation Activities found within each strand. Students are given an objective that requires them to perform tasks that reinforce the disciplinary core ideas while incorporating science and engineering practices and crosscutting concepts. Between two and six Performance Expectation Activities per strand exist to ensure that each of the disciplinary core ideas is addressed.

Criterion 1 Quality Indicators	Specific Evidence from Materials
<p>1a. In each K-5 grade level, both student and educator materials, when used as designed, provide opportunities to develop and use specific elements of the science and engineering practice(s) to make sense of phenomena and to design solutions to problems.</p> <p><i>The Framework for K12 Science Education (NRC 2012): pp. 41 – 48 and the science and engineering practices progressions identified in Appendix F.</i></p>	<p>See STEM Activities: Grade K TE pages 12–15 Grade 1 SE/TE pages 6–15, 144-153 Grade 2 SE/TE pages 6–15, 66–75</p>
<p>1b. In each K-5 grade level, both student and educator materials, when used as designed, provide opportunities to develop and use specific elements of the crosscutting concept(s) to make sense of phenomena and to design solutions to problems.</p> <p><i>The Framework for K12 Science Education (NRC 2012): pp. 84 – 101 and the Crosscutting Concepts progressions identified in Appendix G.</i></p> <p>Choose different performance expectations from criterion 1a. Please note: Kindergarten life science is the only exception as there is only one performance expectation in this domain at this grade level.</p>	<p>Grade K TE page 154 (Part 2 CCC: Structure and Function) Grade 1 TE page 127a (Chapter 3 CCC: Patterns) Grade 2 SE/TE pages 104–105 (Chapter 2 CCC: Cause and Effect), 138 (Chapter 3 CCC: Stability and Change)</p>
<p>1c. In each K-5 grade level, both student and educator materials, when used as designed, provide opportunities to develop and use specific elements of the disciplinary core idea(s) to make sense of phenomena and to design solutions to problems.</p> <p><i>The Framework for K12 Science Education (NRC 2012): pp. 103 – 214 and the Disciplinary Core Ideas progressions identified in Appendix E.</i></p> <p>Choose different performance expectations from criterion 1a and 1b. Please note: Kindergarten life science is the only exception as there is only one performance expectation in this domain at this grade level.</p>	<p>See instruction of Disciplinary Core Ideas: Grade K SE page 15, 17 (PS2.A) Grade 1 SE/TE pages 28-31, 33 -34 (PS4.A) Grade 2 SE/TE pages 16–23 (PS1.A)</p>
<p>1d. In each K-5 grade level, in student and educator materials, when used as designed the three dimensions work together to support students to make sense of phenomena and to design solutions to problems.</p> <p><i>The Framework for K12 Science Education (NRC 2012): pp. 217 – 240.</i></p>	<p>See Performance Expectation Activities: Grade K TE pages 33a–33b, 71a–71c Grade 1 TE pages 43a–43d, 99a–99c Grade 2 TE pages 159a–159d</p>

Criterion 2: RIGOR

Materials support and guide in-depth instruction in the three intertwined NGSS dimensions, support the integration of conceptual understanding linked to explanations and empirical investigations that allow students to evaluate knowledge claims and develop procedural skills while engaging in authentic and content-appropriate scientific inquiry and engineering design learning experiences, and provide opportunities for students to engage in practice, discourse, and reflection in multiple interconnected and social contexts.*

*The three intertwined NGSS dimensions refer to the disciplinary core Ideas, crosscutting concepts, and science and engineering practices.

Interactive Science includes a balance of natural and technological sciences presented in formats incorporating the three intertwined NGSS dimensions. In each chapter, students explore questions about living things, natural resources, and physics by engaging in scientific inquiry activities that increase in depth and complexity as the chapter progresses. The chapter opens with a Try It! activity in which students make, describe and compare observations.

In Grades 1 and 2, many lessons open with an Explore It! activity where students explore phenomena related to the disciplinary core ideas that are specific to the lesson. In these activities, students are asked to explain their results by making inferences or summarizing patterns in their observations. Each lesson and its associated exploratory activity relate back to a Big Question given at the beginning of the chapter and the Teacher's Edition follows an "Engage, Explore, Explain, Elaborate, and Evaluate" format to uncover that question.

An Investigate It! experiment at the end of each chapter is supported in the Teacher's Edition by an Activity Card Support section that includes options for directed inquiry in all three grades and for guided inquiry and open inquiry in Grades 1–2. These investigations occur at the end of the chapters so students can draw from what they learned in the related lessons to better analyze their results. The directed activities that appear in the student edition represent the first level of inquiry, where students follow a structured procedure with predictable results. The guided inquiry instructs students to modify the directed investigation in order to answer a related scientific question, and the open inquiry allows students to formulate their own questions and design their own investigations to answer these question, thus engaging the science and engineering practices of Planning and Carrying Out Investigations and Analyzing and Interpreting Data. This allows for greater variability in the results of student investigations and requires both students and teachers to prepare for unexpected outcomes or new questions on scientific phenomena.

In Grades 1 and 2, end-of-chapter Apply It! or Design It! activities require students to use the concepts from the chapter in an application or design context.

Criterion 2 Quality Indicators	Specific Evidence from Materials
<p>2a. Materials support the development of students' conceptual understanding of the natural world through experiential investigations by providing three-dimensional opportunities to fully engage and interpret scientific explanations.</p> <p><i>The Framework for K12 Science Education (NRC 2012): pp. 41 – 53 and Appendix F</i></p>	<p>See Try It!, Explore It! and Investigate It! activities: Grade K SE page 21, TE page 42 Grade 1 SE/TE pages 4, 118 Grade 2 SE/TE pages 88, 148-149</p>
<p>2b. Materials support the development of students' conceptual understanding of the designed world through authentic engineering practices to define and solve problems by providing three-dimensional opportunities to fully engage and apply scientific knowledge.</p> <p><i>The Framework for K12 Science Education (NRC 2012): pp. 41 – 53, Appendix F and Appendix I</i></p>	<p>See pages from Part 2 of Science, Engineering, and Technology Skills Handbook: Grade K SE 82-83; TE pages 152–154 Grade 1 SE/TE pages 186–188, 200–203 Grade 2 SE/TE pages 206, 218–221</p>
<p>2c. Materials include authentic and content-appropriate practices for student-generated claims with scientific evidence to make sense of phenomena and engineering design through evaluating and developing procedural skills.</p> <p><i>The Framework for K12 Science Education (NRC 2012): Appendix F and Appendix H</i></p>	<p>See Activity Card Support: Grade 1 TE pages 33a–33d, 129a–129d Grade 2 TE pages 49a–49d, 105a–105d</p>
<p>2d. Materials are designed so that educators and students spend sufficient time engaging in the science and engineering practices to better understand the nature and development of scientific knowledge in multiple interconnected and social contexts through student-generated discourse.</p> <p><i>The Framework for K12 Science Education (NRC 2012): What it means to learn science pp. 251-255</i></p> <p><i>Next Generation Science Standards: For States, By States (NGSS Lead States 2013): 9-12 Performance Expectations.</i></p>	<p>See pages from Part 1 of Science, Engineering, and Technology Skills Handbook: Grade K TE pages 116–118 Grade 1 SE/TE pages 140–142, 144–153 Grade 2 SE/TE pages 160–162, 164–173</p>

Criterion 3 & 4: COHERENCE

Learning experiences form a coherent learning progression in which each K-5 student builds competencies in the performance expectations through actively engaging in science and engineering practices and applying crosscutting concepts to continually build on and revise their knowledge and skills in disciplinary core ideas. Student opportunities are directly connected to the grade-level performance expectations to develop and use specific grade-appropriate elements of three-dimensional learning that are integrated to develop and support students' sense-making of phenomena and design solutions to problems.

The *Interactive Science* program addresses the same three science strands at all grade levels: physical, life, and earth and space science. In addition, each grade level includes a Science, Engineering, and Technology Handbook to enrich students' knowledge of science and engineering practices. The disciplinary core ideas within each strand progress with each grade level, developing the concepts of motion, energy, matter, living things (plants and animals), Earth's weather, Earth's resources, and Earth's position in space. Comprehension of these concepts is assessed at the lesson, chapter, and strand level through recall questions and performance activities.

This progression gives students the advantage of building upon information they learned in previous grades. For example, Grade K, Chapter 2, Lesson 3 is titled "What do plants need?" Students learn that plants need air, water, light, and space. Grade 1, Chapter 2, Lesson 3, titled "How do plants grow?", expands upon this information by introducing students to the life cycle of a plant. In the Grade 2, Chapter 2 Investigate It! activity, students learn through experimentation about what happens if a plant does not receive water. Students are now applying science and engineering practices to investigate the core idea concerning the needs of plants. Students see the cause-and-effect relationship of water and plant growth. This three-dimensional approach supports students' sense-making of what living things need to grow.

At each grade level, knowledge and skills are evaluated in Performance-Based Assessments. In the Grade K, Chapter 2 Performance-Based Assessment, students are asked to draw a picture of a plant and then describe the things plants need to live by filling in sentence frames. In the Grade 1, Chapter 2, Performance-Based Assessment, students draw a picture of a plant, label its parts, and tell how the plant changes over its life cycle. In addition to describing plants through labels and drawings, students compare how a plant grows in soil and in sand; this investigation follows the scientific method. A Grade 2, Chapter 2 Performance-Based Assessment then engages students in the same topic at a deeper level as they conduct scientific investigation to determine how light affects a plant's growth.

These Performance-Based Assessments are directly related to the disciplinary core idea of the Growth and Development of Organisms and incorporate the crosscutting concept of Structure and Function and the science and engineering practice of Planning and Carrying Out Investigations. Each grade level draws from the schema students developed in the previous grade level, so that by the time students reach third grade, they will have learned first-hand from the previous grades what plants look like, what they need to live, and how they grow.

Criterion 3 & 4 Quality Indicators	Specific Evidence from Materials
<p>3a&d. Materials provide strong integration of science and engineering practices, disciplinary core ideas, and crosscutting concepts that build coherent learning progressions within and between grades K-5 and include application of knowledge and skills learned in prior grades.</p> <p><i>The Framework for K12 Science Education (NRC 2012): Appendix E, Appendix F and Appendix G</i></p>	<p>See the progression of what living things need to survive: Grade K TE pages 52–53 Grade 1 SE/TE pages 68–71, 86–87 Grade 2 SE/TE pages 100–103, 104–105</p>
<p>3b&c. Materials provide coherent learning experiences that help students develop proficiency on a targeted set of three-dimensional performance expectations in a relevant and engaging manner, building upon ideas, practices, and concepts developed in previous learning experiences.</p> <p><i>The Framework for K12 Science Education (NRC 2012): Appendix E, Appendix F and Appendix G</i></p>	<p>See Engage and Explore section about activating prior knowledge: Grade K TE page 22 Grade 1 TE pages 65, 78 Grade 2 TE pages 25, 37</p>
<p>4. Materials are directly connected to the appropriate grade-level performance expectations to develop and use specific science and engineering practices, disciplinary core ideas, and crosscutting concepts that are integrated to develop and support students' sense-making of phenomena and design solutions to problems.</p> <p><i>Next Generation Science Standards: Evidence Statements</i></p>	<p>See Performance-Based Assessments and Performance Expectation Activities: Grade K TE page 69 Grade 1 SE/TE pages 99, TE page 139a Grade 2 SE/TE pages 116–117, TE page 117a</p>

Criterion 6 & 7: COHERENCE

The interdependence and the influence of science, engineering and technology on society and the natural world along with the understanding of the nature of science are interconnected and integrated as significant elements in learning experiences.

Real-world connections provide the starting point for each lesson and chapter in *Interactive Science*. Each chapter begins with a Big Question, and most of the lessons are titled in the form of a question. The chapter and lesson questions are broken into additional queries that students discuss, elaborate, and explore while providing background and real-world examples. Students go on to answer the Big Question using scientific observations and evidence.

The Science, Engineering, and Technology Handbook includes lessons about how science and technology are related to each other and to society. The Part 1 opener for grade levels K–2 addresses the Big Question “What is science?” by engaging students in an activity with partners to use, observe, and report on a scientific practice. The nature of science is discussed in terms of the questions scientists ask, what skills scientists use, how scientists use tools, how scientists find answers, and how scientists share data, with increasing levels of detail as students progress through grade levels. In Part 2, both Grade 1 and Grade 2 have a lesson entitled “What is technology?” Each lesson includes a timeline of significant technological achievements and explanations about how technology helps people by using science to solve problems.

Investigation activities included in the *Interactive Science* program follow a simplified version of the scientific method where the students act as young scientists and identify a problem, form a hypothesis, test by experimentation, record data, draw conclusions and share the results. The subjects of these investigations draw from multiple science strands.

Other features that demonstrate the influence of science on society are included within lessons throughout the program. Go Green! pages give examples of technological innovations that benefit the environment. The My Planet Diary feature in some lessons includes Discovery pages highlighting famous discoveries made by scientists. Big World, My World pages show how scientific discoveries have been applied in different ways; Students learn how science was used to make a discovery and then asked a question about that discovery. Connections between science and technology are also made on STEM pages. The Careers and Biography features of the *Interactive Science* program highlight several science disciplines such as robotics, meteorology, botany, or medicine as they relate to the physical, life, and earth and space science strands.

Criterion 6 & 7 Quality Indicators	Specific Evidence from Materials
<p>6a. Materials integrate the interdependence of science, engineering, and technology as significant elements in learning experiences.</p> <p><i>The Framework for K12 Science Education (NRC 2012): p. 203, 210-212 and Appendix J</i></p>	<p>See lessons about science, engineering, and technology. Grade K TE pages 152–155 Grade 1 SE/TE pages 200–203, 208–213 Grade 2 SE/TE pages 218–221, 222–227</p>
<p>6b. Materials demonstrate the influence of engineering, technology, and science on society and the natural world as significant elements in learning experiences.</p> <p><i>The Framework for K12 Science Education (NRC 2012): p. 203, 212-214 and Appendix J</i></p>	<p>See STEM, Go Green!, My Planet Diary: Discovery, and Big World, My World pages: Grade K SE page 19 Grade 1 SE/TE pages 34, 154 Grade 2 SE/TE pages 50, 236</p>
<p>7. Materials integrate understandings about the nature of science as significant elements in learning experiences.</p> <p><i>The Framework for K12 Science Education (NRC 2012): Appendix H</i></p> <p><i>Next Generation Science Standards: For States, By States (NGSS Lead States 2013): 9-12 Performance Expectations.</i></p>	<p><i>Interactive Science</i> chapter and lesson titles and openers pose questions for key concept understanding answered through instructional content and inquiries: Grade K TE pages 8 Grade 1 SE/TE pages 2–3, 64 Grade 2 SE/TE pages 30, 62-63</p>

Criterion 5, 8 & 9: COHERENCE

Instructional sequence provides multiple approaches to achieve proficiency of the performance expectations and a logical progression of diverse instructional strategies for student learning.

The Teacher’s Edition breaks each lesson into five components to facilitate three-dimensional learning in a logical progression. These components are Engage, Explore, Explain, Elaborate, and Evaluate (the 5E’s) that students demonstrate while engaged in the lesson’s associated activities. Each component has the potential to introduce science and engineering practices, apply crosscutting concepts, or expand on disciplinary core ideas. The 5E’s are clearly indicated in the Lesson Plans that is provided before each lesson.

The *Interactive Science* curriculum guide includes a Pacing Guide recommending an approximate number of instructional days for each chapter at every grade level. Each strand takes between 30 and 40 days to teach depending on the number of lessons per chapter. These breakdowns allow the teacher to plan science lessons each day and accommodate for other subjects. In Grades 1–2, the Lesson Plan highlights the important elements of the lesson and the recommended time for instruction. In Grade K, a Resource Guide is provided before each chapter giving the recommended time to teach each lesson and activity down to the minute.

Interactive Science addresses multiple learning styles, accommodating for different types of learners. Leveled Content Readers about topics in each chapter for below-level, on-level, and advanced readers. Within each lesson, the ELL Support feature provides suggestions for helping English language learners to master content, and the Differentiated Instruction feature includes adaptations for on-Level and advanced learners as well as for hearing- and visually-impaired students. Response to Intervention features are formatted as “If.../Then...” statements and offer guidance in addressing common areas of difficulty in student understanding or correcting student misconceptions.

The Teacher’s Edition of *Interactive Science* provides ample support for the teacher to present a logical progression of content in a meaningful way. Teacher Background boxes on the Integrate Your Day pages and Content Refresher boxes within lessons give teachers further detail to supplement their content knowledge and enhance lesson discussions. Background text boxes give additional context to the design problems posed in the STEM activities for each chapter and explain procedures and phenomena that students encounter in exploratory activities.

Criterion 5, 8 & 9 Quality Indicators	Specific Evidence from Materials
<p>5. Materials provide learning opportunities that include instructional strategies to facilitate three-dimensional learning.</p> <p><i>The Framework for K12 Science Education (NRC 2012): Appendix D and Case Studies 1-7</i></p>	<p>See learning opportunities that enable three dimensional learning; the K-12 Science Framework’s Scientific Practices, Crosscutting Concepts, and Disciplinary Core Ideas.</p> <p>Grade K SE pages 23-32 Grade 1 TE pages 44-45, 186-187 Grade 2 TE pages 62-63, 118-119</p>
<p>8. Instructional sequence consistently provides multiple opportunities and adequate time for student learning.</p> <p><i>The Framework for K12 Science Education (NRC 2012): Appendix E</i></p>	<p>See the Pacing Guides and Lesson Plans:</p> <p>Grade K TE pages xxxviii–xxxix Grade 1 TE pages xlvi–xlvii, 16A Grade 2 TE pages xlvi–xlvii, 24A</p>
<p>9a. Materials use diverse instructional strategies that provide clear purposes for learning experiences (e.g., elicit preconceptions, teach new knowledge, build skills and abilities, and connect to prior knowledge).</p> <p><i>The Framework for K12 Science Education (NRC 2012): Appendix D</i></p>	<p>See Leveled Content Reader Support, Resource Guide, Differentiated Instruction, and Response to Intervention:</p> <p>Grade K TE pages 7A–7B Grade 1 TE pages 44G–44H, 66-67 Grade 2 SE/TE page 143</p>
<p>9b. Instructional strategies are used in a logical progression that provides clear purposes for learning experiences (e.g., elicit preconceptions, teach new knowledge, build skills and abilities, and connect to prior knowledge).</p> <p><i>The Framework for K12 Science Education (NRC 2012): Appendix E</i></p>	<p>See the 5E’s: Engage, Explore, Explain, Elaborate, and Evaluate:</p> <p>Grade K TE pages 20-21-- Grade 1 TE pages 24–27, 78-81 Grade 2 TE pages 16–23, 132-137</p>

Criterion 3 & 10: COHERENCE

Materials support and guide in-depth instruction in the three intertwined NGSS dimensions, with relevant and clear connections to multiple science disciplines, the Common Core State Standards (CCSS) in Mathematics, English Language Arts & Literacy, and the Oregon English Language Proficiency Standards.

In Grades K-2, *Interactive Science* includes a section called Integrate Your Day before each chapter. These pages includes activities in other subject areas such as reading, math, writing, language arts, health, social studies, and art. The teacher is provided with a list of materials and a detailed procedure for instruction. These activities correlate to the Common Core State Standards and the Oregon English Language Proficiency Standards.

Mathematics is embedded into *Interactive Science* throughout the text. Math activities are included in the Integrate Your Day sections before many of the chapters, Do the Math!, and within some of the STEM Activities. The Do the Math! activities reinforce grade level mathematics that pertain to the disciplinary core ideas studied in the associated lesson.

ELA/literacy and mathematics activities designed to address specific Common Core State Standards are associated with many of the end-of-chapter Performance Expectation Activities. These activities are related to scientific investigations and require a variety of reading, writing, or mathematics skills.

The *Interactive Science* write-in Student Editions require students to demonstrate reading comprehension by completing writing activities within the lessons and to give written responses to questions posed in exploratory activities. In Grade K, students are expected to draw, color, and circle as well as write. *Interactive Science* is accompanied by leveled readers (below-level, on-level, and advanced) that reinforce scientific concepts and include Before, During, and After-Reading activities to check for comprehension using written responses or discussions.

The Teacher's Edition includes Science to Language Arts connections that help students learn new vocabulary terms. Students also take notes and write in a Science Notebook according to guidance given in each lesson; they may be given a specific assignment or prompt to write in their notebooks, or expected to take notes on the material being presented.

Students are also expected to practice English language arts and literacy in completing the Lesson Check. This end-of-lesson activity includes answering questions and using vocabulary terms appropriately.

Criterion 3 & 10 Quality Indicators	Specific Evidence from Materials
<p>3e. Where appropriate, materials include disciplinary core ideas from different science disciplines that are used together to explain phenomena.</p> <p><i>K-5 NGSS grade-level standards: Connections to other DCI at the grade band and Articulation of DCI across the grade-band, Connection Boxes</i></p>	<p>See pages related to science disciplines: Grade K SE page 61 Grade 1 SE/TE pages 16, 114 Grade 2 SE/TE pages 174–175, 198</p>
<p>3f. Where appropriate, materials use crosscutting concepts in the explanation of phenomena from a variety of science disciplines in addition to other content areas.</p> <p><i>The Framework for K12 Science Education (NRC 2012): Chapter 4 and Appendix G</i></p>	<p>See cross-disciplinary content that utilizes crosscutting concepts to explain science phenomena: Grade K TE page 152 Grade 1 SE/TE pages 26, 126 Grade 2 SE/TE pages 64, 88</p>
<p>3g. Where appropriate, materials include science and engineering practices that are integrated with other content area practices.</p> <p><i>The Framework for K12 Science Education (NRC 2012): Appendix F</i></p> <p><i>K-5 NGSS grade-level standards: Connection Boxes and the Commonalities Among Practices in Science, Mathematics, English Language Arts and English Language Proficiency (NSTA Venn and Understanding Language Venn Diagram)</i></p>	<p>See Science connections to other content areas: Grade K TE page 167 Grade 1 SE/TE page 80 Grade 2 SE/TE pages 45, 80</p>
<p>10a. Materials provide relevant grade-appropriate connection(s) to the Common Core State Standards (CCSS) in Mathematics.</p> <p><i>K-5 NGSS grade-level standards: Connection Boxes, Common Core State Standards-Mathematics and The Framework for K12 Science Education (NRC 2012): Appendix L (pp.4-21)</i></p>	<p>See mathematics boxes and Do the Math!: Grade K TE pages 4, 36 Grade 1 SE/TE pages 88, TE: 99b Grade 2 TE page 62C</p>

Criterion 3 & 10 Quality Indicators	Specific Evidence from Materials
<p>10b. Materials provide relevant grade-appropriate connection(s) to the Common Core State Standards (CCSS) in English Language Arts & Literacy.</p> <p><i>K-5 NGSS grade-level standards: Connection Boxes, Common Core State Standards-English Language Arts and Appendix M</i></p>	<p>See Leveled Content Reader Support, Integrate Your Day, Lesson Checks, Science to Language Arts connections, and Science Notebook: Grade K TE pages 7A–7B Grade 1 TE pages 2C–2D, 19b Grade 2 SE/TE pages 19, 99</p>
<p>10c. Materials provide relevant grade-appropriate connection(s) to the Oregon English Language Proficiency Standards.</p> <p><i>K-5 NGSS grade-level standards, Framework for English Language Proficiency Development Standards (pp. 26-30) and English Language Proficiency Standards (pp. 31- 34)</i></p>	<p>See Leveled Content Reader Support, Integrate Your Day, Lesson Checks, Science to Language Arts connections, and Science Notebook: Grade K TE pages 39A-39B Grade 1 TE pages 2G–2H, 186G Grade 2 TE page 47b</p>

SECTION II: Instructional Supports
Supporting Criteria

II - INDICATORS OF QUALITY: Student Engagement	Evidence
<p><i>11. Engages students in authentic and meaningful learning experiences that reflect real-world science and engineering practices in the NGSS performance expectations and are grounded in students' experiences to provide a context for making sense of phenomena <u>and</u> designing solutions to problems through the following indicators:</i></p>	
<p>a. The context of learning experiences, including relevant phenomena, questions, or problems, engages students in three-dimensional learning.</p>	<p>See the following student experiences: Grade K TE pages 16–17 Grade 1 SE/TE pages 24–25 Grade 2 SE/TE pages 30–31</p>
<p>b. Provides relevant firsthand experiences or models that allow students to make sense of the physical and natural world.</p>	<p>See STEM and Investigate It! Activities: Grade K TE pages 12–15 Grade 1 SE/TE pages 6–15, 128-129 Grade 2 SE/TE pages 66–75, 148-149</p>
<p>c. Engages students in multiple practices that are integrated into relevant disciplinary core ideas and crosscutting concepts to support making sense of phenomena <u>and</u> designing solutions to problems through inquiry and engineering design experiences.</p>	<p>See STEM, Quest, and Lesson Activities: Grade K TE pages 12–15 Grade 1 SE/TE pages xlv–xlv, 144–153 Grade 2 SE/TE pages 6–15, 164–173</p>
<p>d. Provides opportunities for students to connect their explanation of a phenomenon and/or their design solution to a problem to their own experience.</p>	<p>See Activate Prior Knowledge, Explain, and STEM: Grade K TE pages 25, 50 Grade 1 SE/TE pages 24, 68 Grade 2 SE/TE page 22</p>
<p>e. Provides relevant applications for students to relate science to life, home, school, and various careers, and to apply their knowledge and skills as scientifically literate citizens.</p>	<p>See Careers, Biography, and STEM: Grade K TE pages 61, 167 Grade 1 SE/TE pages 130, 216 Grade 2 SE/TE page 236</p>

II - INDICATORS OF QUALITY: Student Engagement	Evidence
12a. Facilitates deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts by building upon prior knowledge.	See Big Question, Unlock the Big Question, Review and Apply the Big Question: Grade K TE pages 8–9 Grade 1 SE/TE pages 2–3, 17 Grade 2 TE page 111
12b. Facilitates deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts by identifying and correcting misconceptions.	See Common Misconception: Grade K TE page 19 Grade 1 TE pages 22, 59–60 Grade 2 TE page 39
13. Through scientific discourse in oral, visual, and/or written form, materials provide frequent opportunities for students to express, clarify, justify, interpret, represent their ideas, and respond to peer and teacher feedback.	See Activity Card Support and Performance Based Activities: Grade K TE pages 28–29 Grade 1 TE pages 33a–33d, 138–139 Grade 2 TE pages 60–61, 105a–105d

SECTION II: Instructional Supports

Key Criteria

II - INDICATORS OF QUALITY: Differentiated Instruction	Evidence
<p>14. Provides guidance for teachers to support differentiated and culturally responsive (i.e., purposefully represents diverse cultures, linguistic backgrounds, learning styles, and interests) instruction in the classroom so that every student's needs addressed by including:</p>	
<p>a. Suggestions for how to promote equitable instruction by making connections to culture, home, neighborhood, and community, as appropriate.</p>	<p>See School-to-Home Letter and At-Home Labs: Grade K TE pages 6–7 Grade 1 TE pages 2E–2F, 122</p>
<p>b. Appropriate scaffolding, Interventions, and supports, including integrated and appropriate reading, writing, listening, and speaking alternatives (e.g., translations, picture support, graphic organizers) that neither sacrifice science content nor avoid language development for English language learners, special needs, or below grade level readers.</p>	<p>See ELL Support: Grade K TE page 17 Grade 1 TE pages 29, 119 Grade 2 TE pages 17, 133</p>
<p>c. Digital and print resources that provide various levels of readability (e.g., based on the CCSS three part model for measuring text complexity).</p>	<p>See Activity Card Support and Leveled Content Reader Support: Grade K TE pages 28-29, 39A-39B Grade 1 TE pages 100G-11H, 177a-177d Grade 2 TE pages 149a-149d</p>
<p>d. Modifications and extensions for all students, including those performing above their grade level, to develop deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts.</p>	<p>See Differentiated Instruction: Grade K TE page 22 Grade 1 TE pages 80, 212 Grade 2 TE pages 22, 140</p>
<p>e. Technology and digital media to support, extend, and enhance learning experiences.</p>	<p>See Interactive Whiteboard and 21st Century Learning activities: Grade K TE pages 8, 11, 16 Grade 1 TE page 27, 84 Grade 2 TE page 220</p>

II - INDICATORS OF QUALITY: Differentiated Instruction	Evidence
f. Materials in multiple language formats.	See School-to-Home Letter and Vocabulary Smart Cards: Grade K TE pages 6–7 Grade 1 TE pages 2E–2F, 35 Grade 2 TE pages 2E–2F, 51
15. Includes grade-level appropriate academic and content-specific vocabulary in the context of the learning experience that is accessible, introduced, reinforced, reviewed and augmented with visual representations when appropriate.	See Vocabulary Smart Cards and Lesson Check - Words to Know: Grade K TE page 16 Grade 1 SE/TE pages 81b, 131-132 Grade 2 SE/TE pages 17, 51-52
16. Includes grade-level appropriate informational text (e.g., digital and print resources) that supports conceptual understanding of the disciplinary core ideas.	See Reading box in Integrate Your Day and Leveled Content Readers: Grade K TE pages 4, 7A–7B Grade 1 TE pages 100C Grade 2 TE pages 62C, 62G–62H

SECTION II: Instructional Supports
Supporting Criteria

II - INDICATORS OF QUALITY: Extensions & Educator Supports	Evidence
17. Provides guidance for teachers throughout the unit for how learning experiences build on each other to support students in developing deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts.	See CCC and SEP boxes in chapter openers: Grade K TE pages 116-117 Grade 1 TE pages 2-3, 100-101 Grade 2 TE pages 62-63, 204-205
18. Provides scaffolded supports for teachers to facilitate learning of the practices so that students are increasingly responsible for making sense of phenomena <u>and</u> designing solutions to problems.	Grade K TE pages 28–31 Grade 1-TE pages 33a–33d, 129a-129d Grade 2 TE pages 49a–49d, 105a–105d
19. Provide digital and print materials that are consistently formatted, visually focused, and uncluttered for efficient use.	The structure of each volume and page layout in Interactive Science is consistent. As grades progress, more content appears on each page of the Student Edition. See the following changes in pages from Grades K and 1: Grade K TE pages 12–15, 44–47 Grade 1 SE/TE pages 6–15, 48–57, 104–113
20. Provide virtual labs, simulations, and video-based learning experiences.	Virtual labs provide opportunities to complete activities that might be too expensive or take too much time, and are available through www.PearsonRealize.com . Students also have access to Untamed Science Videos, produced for every chapter.

II - INDICATORS OF QUALITY: Extensions & Educator Supports	Evidence
21. Allow teachers to access, revise, and print from digital sources (e.g., readings, labs, assessments, and rubrics).	www.PearsonRealize.com includes native materials, materials from print matter, and functionality for teachers to upload content themselves for use in their classes. In addition to physical material, the digital source provides songs, videos, and interactive lessons.
22. Supplies and equipment, when provided, are high quality (e.g., durable, dependable) and organized for efficient use.	Material kits are available that include grade level material, LabWare materials, refills, and safety equipment. See the following pages: Grade K TE pages xv, xix Grade 1 SE/TE pages 4, 20 Grade 2 SE/TE page 30
23. Provide thorough lists that identify by learning experience all consumable and non-consumable materials aligned for both instruction and assessment.	See Resource Guide and Table of Contents: Grade K TE pages 2-3, 34-35 Grade 1 TE pages 2A-2B, 44A-44B Grade 2 TE pages 62A-62B
24. Use scientifically accurate and grade-appropriate scientific information, vocabulary, phenomena, models, and representations to support students' three-dimensional learning.	Grade K TE pages 5, 37 Grade 1 SE/TE pages 89-92, 96-97 Grade 2 SE/TE pages 4, 144

II - INDICATORS OF QUALITY: Extensions & Educator Supports	Evidence
<p>25. Adhere to safety laws, rules, and regulations and emphasize the importance of safety in science.</p>	<p>Grades K–2 include lessons or pages dedicated to safety procedures and materials. Students learn how scientists stay safe by protecting themselves and what rules to follow in a science classroom.</p> <p>See the following pages as examples for each grade: Grade K TE pages 134–135 (SE: 80-81) Grade 1 SE/TE pages 166–167, 167b Grade 2 SE/TE pages 184, 187</p>
<p>26. Make available ongoing and embedded professional development for implementation and continued use of the instructional materials.</p>	<p>See Teacher Background, Background for STEM Activities, and Professional Development Notes: Grade K TE pages 90, 94, 97 Grade 1 TE page 140D, 144-145 Grade 2 TE page 42</p>

SECTION III: Monitoring Student Progress
Supporting Criteria

III - INDICATORS OF QUALITY: Monitoring Student Progress	Evidence
The instructional materials support monitoring student progress:	
27. Elicits direct, observable evidence of three-dimensional learning using practices with core ideas and crosscutting concepts to make sense of phenomena and to design solutions that have been covered adequately in the instructional materials.	See Performance Expectation Activities: Grade K TE pages 33a–33b Grade 1 TE pages 43a–43d, 99a–99c Grade 2 TE pages 61a–61d, 159a–159d
28. Includes editable and aligned rubrics, scoring guidelines, and exemplars that provide guidance for assessing student performance along all three NGSS dimensions to support teachers in (a) planning instruction and (b) providing ongoing feedback to students.	See Performance-Based Assessments (Rubrics are available on www.PearsonRealize.com): Grade K TE pages 32–33 Grade 1 SE/TE pages 42–43, 98–99 Grade 2 SE/TE pages 60–61, 116–117
29. Uses varied modes (selected, constructed, project-based, extended response, and performance tasks) of instruction-embedded pre-, formative, summative, peer, and self-assessment measures of three-dimensional learning.	See Chapter Opener, Investigation, Lab, Performance Task, and Formative Assessment: Grade K TE pages 8–9, 10, 24, 28–29, 30–32
30. Provides multiple opportunities for students to demonstrate and receive feedback on performance of practices connected with their understanding of disciplinary core ideas and crosscutting concepts.	See Performance-Based Assessment and Performance Expectation Activities: Grade K TE pages 33–33b Grade 1 SE/TE pages 138–139, 139a–139b Grade 2 SE/TE pages 60–61, 117a–117c
31. Assesses student proficiency using methods, vocabulary, representations, models, and examples that are accessible and unbiased for all students.	See Lesson Check and Chapter Test: Grade K TE pages 30–31 Grade 1 TE pages 39a–39b, 213b Grade 2 TE pages 143b, 155a–155b

III - INDICATORS OF QUALITY: Monitoring Student Progress	Evidence
32. Provide digital assessments that are easy to manipulate and customize, are linked to Common Core State Standards, and have large problem banks.	Teachers are able to upload their own assessments in www.PearsonRealize.com . Lessons and activities are provided with accompanying NGSS standards. The standards are available on many activities and can be viewed by clicking on the "Info" button by each lesson.
33. Provides a digital assessment platform that allows teachers to easily access student work and provide feedback.	Assessments and assignments may be assigned online. Teachers can easily access student work. Students can complete the assignments online and submit them digitally for review or print them for classroom submission.
34. Provides teachers with a range of data to inform instruction that can interface with multiple electronic grade book platforms.	Data is made available to teachers on the digital interface. Teachers can view test scores, assignments, and track the number of students that have signed in.
35. Provides print and digital assessments that are platform- and device-independent.	Most assessments available online can be printed out from www.PearsonRealize.com . The website is also available on mobile devices.