Green Ninja Middle School Science Grade 7

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Executive Summary

Section 1. Science-Related Texas Essential Knowledge and Skills (TEKS) and English Language Proficiency Standards (ELPS) Alignment

Grade	TEKS Student %	TEKS Teacher %	ELPS Student %	ELPS Teacher %
Grade 6	100%	100%	100%	100%
Grade 7	100%	100%	100%	100%
Grade 8	100%	100%	100%	100%

Section 2. Instructional Anchor

- The materials are designed to strategically and systematically integrate scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS.
- The materials anchor the learning in phenomena and problems as the key lever for driving learning and student mastery of disciplinary knowledge and skills.

Section 3. Knowledge Coherence

- The materials are designed to build knowledge systematically, coherently, and accurately.
- The materials provide educative components to support teachers' content and coherence knowledge.

Section 4. Productive Struggle

- The materials provide opportunities for students to engage in productive struggle through sensemaking that involves reading, writing, thinking, and acting as scientists and engineers.

Section 5. Evidence-Based Reasoning and Communicating

- The materials promote students' use of evidence to develop, communicate, and evaluate explanations and solutions.
- The materials provide teacher guidance to support student reasoning and communication skills.

Section 6. Progress Monitoring

- The materials include a variety of TEKS-aligned and developmentally appropriate assessment tools.

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- The materials include guidance that explains how to analyze and respond to data from assessment tools.
- The assessments are clear and easy to understand.

Section 7. Supports for All Learners

- The materials provide guidance on fostering connections between home and school.
- The materials include listening, reading, writing, and speaking supports to help Emergent Bilinguals meet grade-level science content expectations.
- The materials include a variety of research-based instructional methods that appeal to a variety of learning interests and needs.
- The materials include guidance, scaffolds, supports, and extensions that maximize student learning potential.

Section 8. Implementation Supports

- The materials include year-long plans with practice and review opportunities that support instruction.
- The materials include classroom implementation support for teachers and administrators.
- The materials provide implementation guidance to meet variability in program design and scheduling.

Section 9. Design Features

- The visual design of materials is clear and easy to understand.
- The materials are intentionally designed to engage and support student learning with the integration of digital technology.
- The digital technology or online components are developmentally and grade-level appropriate and provide support for learning.

Section 10. Additional Information

- The publisher submitted the technology, price, professional learning, and additional language supports.

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Indicator 2.1

Materials are designed to strategically and systematically integrate scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS.

1	Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade-level appropriate scientific and engineering practices as outlined in the TEKS.	M
2	Materials provide multiple opportunities to make connections between and within overarching concepts using the recurring themes.	M
3	Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and grade level as outlined in the TEKS.	M
4	Materials include sufficient opportunities, as outlined in the TEKS, for students to ask questions and plan and conduct classroom, laboratory, and field investigations and to engage in problem-solving to make connections across disciplines and develop an understanding of science concepts.	M

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials are designed to strategically and systematically integrate scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS.

Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade-level appropriate scientific and engineering practices as outlined in the TEKS. Materials provide multiple opportunities to make connections between and within overarching concepts using the recurring themes. Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and grade level as outlined in the TEKS. Materials include sufficient opportunities, as outlined in the TEKS, for students to ask questions and plan and conduct classroom, laboratory, and field investigations and to engage in problem-solving to make connections across disciplines and develop an understanding of science concepts.

Evidence includes but is not limited to:

Materials provide multiple opportunities for students to develop, practice, and demonstrate mastery of grade-level appropriate scientific and engineering practices as outlined in the TEKS.

- Materials provide multiple opportunities to develop, practice, and demonstrate mastery of grade-level appropriate scientific practices as outlined in the TEKS. Each Unit contains a culminating project where students must show mastery of the content learned.
- For example, Unit 2, Water, is structured to build on knowledge gained during each lesson to allow development and practice of the topic. The Unit 2 Water Science Method Objectives state, "Model the behavior of water. Apply heat transfer concepts to forecast atmospheric changes. Use technologies to mitigate impacts of natural hazards."
- For example, in lesson 4.23, students learn about scientist Alfred Wegner while being exposed to the phenomenon of Pangea and continental drift.

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Materials provide multiple opportunities to make connections between and within overarching concepts using the recurring themes.

- The materials provide multiple opportunities to use recurring themes in making connections between and within overarching concepts. Recurring themes are reintroduced throughout the curriculum. Teachers can identify these opportunities marked in green throughout the multiple lessons.
- For example, in Lesson 3.17, Body Systems Research Part I, the green call-out box showcases RTC connections of systems and models. The call-out box states: "Emphasize that the body is a system made up of multiple smaller subsystems. These subsystems interact and work together so that the organism functions properly."
- The materials are systematically organized around a theme, explained by a storyline. Each Unit within the grade level begins with a challenge, emphasizes scientific methods, and ends with a culminating experience; all represented on a unique roadmap for the unit referenced throughout the lesson plans.
- The grade 7 material allows students to analyze and explain how energy flows and matter cycles through systems. They answer the question, "What happens to the energy as food goes through this life cycle?"

Materials strategically and systematically develop students' content knowledge and skills as appropriate for the concept and grade level as outlined in the TEKS.

- The materials are systematically (methodical fixed plan) designed to develop and build student skills and content knowledge using phenomena appropriate to the grade level as outlined in the TEKS. Each Unit is designed in a way that each lesson builds upon the knowledge from the previous lesson, not only in content but also in science and engineering skills and the understanding of the recurring themes and concepts.
- Materials contain a Culminating Experience Teacher Guide that explains, describes, and makes connections between the science and engineering principles and conceptual understanding. This guide contains a Unit Introduction, Roadmap, and Thought Starters designed to help teachers develop students' content knowledge and skills.
- For example, in each lesson, there is a Google Slide deck that is complete with teacher notes and information for when to emphasize the importance of the grade-level content.

Materials include sufficient opportunities, as outlined in the TEKS, for students to ask questions and plan and conduct classroom, laboratory, and field investigations and to engage in problem-solving to make connections across disciplines and develop an understanding of science concepts.

- The materials give students multiple opportunities to plan and conduct classroom and field investigations. Students are engaged in problem-solving and make connections across disciplines to develop an understanding of science concepts. Materials contain several differentiated options for student exploration of science concepts.
- For example, in Grade 7 Lesson 1.22, Investigating Solutions Part I, Students participate in an investigation to understand and describe a solution in terms of concentration and dilution.
- For example, in Lesson 2.2, Deadly Storms, students gather information about the characteristics of Earth that support life, then the students teach each other what they have learned from a reading handout using the Jigsaw Method.

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Indicator 2.2

Materials anchor the learning in phenomena and problems as the key lever for driving learning and student mastery of disciplinary knowledge and skills.

1	Materials embed phenomena and problems across lessons to support students to in constructing, building, and developing knowledge through authentic application and performance of scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS.	M
2	Materials intentionally leverage students' prior knowledge and experiences related to phenomena and engineering problems.	M
3	Materials clearly outline for the teacher the scientific concepts and goals behind each phenomenon and engineering problem.	M

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials anchor the learning in phenomena and problems as the key lever for driving learning and student mastery of disciplinary knowledge and skills.

Materials embed phenomena and problems across lessons to support students to in constructing, building, and developing knowledge through authentic application and performance of scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS. Materials intentionally leverage students' prior knowledge and experiences related to phenomena and engineering problems. Materials clearly outline for the teacher the scientific concepts and goals behind each phenomenon and engineering problem.

Evidence includes but is not limited to:

Materials embed phenomena and problems across lessons to support students to in constructing, building, and developing knowledge through authentic application and performance of scientific and engineering practices, recurring themes and concepts, and grade-level content as outlined in the TEKS.

- The materials use phenomena as a central anchor that drives student learning across grade-level content in each discipline (earth/space, life, physical science). Materials drive knowledge-building for students. For example, each Unit is set up with a Unit Storyline that presents the content to students in an engaging phenomena-driven manner.
- The materials embed phenomena and engineering problems with opportunities for students to develop, evaluate and revise their thinking to uncover phenomena and define/solve problems. For example, in Unit 2, two phenomena are presented over the length of the chapter for students to determine a solution to the problem of mitigating the impacts of flooding and dangerous weather events such as hurricanes.
- Material is centered around observing and analyzing various phenomena while incorporating TEKS-specified standards for content, science and engineering, and recurring themes. In Grade 7, Lesson 4.23, students are prompted to evaluate Wegener's continental drift theory by recognizing the phenomenon that tropical plant fossils were found in Antarctica.

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Materials intentionally leverage students' prior knowledge and experiences related to phenomena and engineering problems.

- The materials allow different entry points to the learning phenomena and/or solving problems. Students experience the phenomena through various means, such as teacher demonstrations, hands-on experiences, videos, text, data, and images.
- The materials provide guidance for teachers and students to adequately address potential areas of misunderstanding. In each lesson, there is a Background for Teachers and Teacher Tips section that has common student misconceptions noted, which allows the teacher to be proactive in avoiding the misconceptions altogether.
- The materials provide opportunities to leverage students' prior knowledge and experiences related to phenomena and engineering problems, connecting to previous content knowledge and outside-of-school experiences. For example, in Unit 1, Chapter 1, Lesson 1.3, students are introduced to the phenomenon of a big tree and asked to consider how it got so large. Students create mind maps of information they already know about what materials trees need to grow.
- Materials are designed around the central idea of having students propose real-world solutions. Each unit is structured so that a specific phenomenon is introduced, and students use prior knowledge to complete the culminating project. Grade 7, Unit 1 introduces the challenge of reducing the carbon footprint of food. Students evaluate all of the components that go into producing our food. These include but are not limited to, photosynthesis, chemical reactions, and ecosystems. At the end of the unit, students are tasked with a project to reduce the carbon footprint of producing food.

Materials clearly outline for the teacher the scientific concepts and goals behind each phenomenon and engineering problem.

- The materials clearly outline the scientific concepts and learning goals behind each phenomenon and engineering problem. In each lesson, there is a snapshot of the lesson goals and objectives as they relate to the phenomenon. For example, the materials provide guidance for teachers and students to adequately address potential areas of misunderstanding. In each lesson, there is a Background for Teachers section that has common student misconceptions noted, which allows the teacher to be proactive in avoiding the misconception altogether.
- Student learning goals are indicated in the lesson plan, where the phenomenon is introduced with a teacher guide for activities or discussion for further exploration of the content associated with it. For example, this can be found in the provided Culminating Experience Teacher Guide, which outlines the learning goals and scientific concepts covered in each unit's Culminating Experience, which often contains an engineering problem.
- Material is designed around the central idea of having students propose real-world solutions. Each unit is structured so that a specific phenomenon is introduced, and students use prior knowledge to complete the culminating project. For example, for teacher support, materials provide guidance on how to use the phenomenon by including a lesson plan and/or in the Background for Teachers sections found in certain lessons.

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Indicator 3.1

Materials are designed to build knowledge systematically, coherently, and accurately.

1	Materials are vertically aligned and designed for students to build and connect their knowledge and skills within and across units and grade levels.	M
2	Materials are intentionally sequenced to scaffold learning in a way that allows for increasingly deeper conceptual understanding.	M
3	Materials clearly and accurately present grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices.	M
4	Mastery requirements of the materials are within the boundaries of the main concepts of the grade level.	M

Meets | Score 6/6

The materials meet the criteria for this indicator. Materials are designed to build knowledge systematically, coherently, and accurately.

Materials are vertically aligned and designed for students to build and connect their knowledge and skills within and across units and grade levels. Materials are intentionally sequenced to scaffold learning in a way that allows for increasingly deeper conceptual understanding. Materials clearly and accurately present grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices. Mastery requirements of the materials are within the boundaries of the main concepts of the grade level.

Evidence includes but is not limited to:

Materials are vertically aligned and designed for students to build and connect their knowledge and skills within and across units and grade levels.

- Materials consistently connect new learning goals to previous and future learning within and across grade levels. In the grade 7 unit, Exploring Early Earth, the materials include a Roadmap that explains the link between what they learned in grade 6 and the progression of learning throughout grade 7.
- Materials present content in a way that builds in complexity within and across units and grade levels. For example, materials provide a Unit Overview that shows how each unit connects to other units within the series. Additionally, the Unit Overview provides a Storyline that shows how lessons build and connect across the unit with specific information for each lesson, including a lesson question, phenomenon, or design challenge, what students do and figure out, and how they end up representing what they figure out in the Culminating Experience.
- Materials support teachers in understanding the vertical alignment of TEKS and SEP. For example, in Lesson 1.3, Where Do Plants Get the Material and Energy to Grow? the Teacher's Section includes a student prior-learning section highlighting vertically aligned learning connections. It states, “In 4th grade, students learned that most producers make their own food using sunlight, water, and carbon dioxide through the cycling of matter.” In Lesson 3.3, Finding Order in Diversity, the section called Students Prior Experience states, “Students are expected to know the basic characteristics of organisms, including prokaryotic, eukaryotic, unicellular,

multicellular, autotrophic, and heterotrophic (TEKS 6.13B). These terms are reviewed in the lesson prior to learning about taxonomy."

Materials are intentionally sequenced to scaffold learning in a way that allows for increasingly deeper conceptual understanding.

- Materials are intentionally sequenced to scaffold learning with opportunities for student exploration of topics before explanations are given by the teacher. For example, students begin their exploration of the variety of life and consider how all of the different types of organisms can be classified. They participate in a classification activity with cards in preparation to learn the taxonomic system scientists use to organize living things.
- Pre-assessments and associated activities in the materials provide opportunities for students to activate prior knowledge before exploring new concepts. For example, students discuss their responses and evaluate their water cycle diagrams with a partner before participating in a class discussion and asking questions about their diagrams.
- Materials provide a Grade Storyline that thoroughly details the theme and a brief outline of the sequence of units and experiences that students will investigate during the course of study.
- Materials are organized in chapters based on different topics. Each chapter introduces a specific concept/phenomenon and then proceeds to support that topic with lessons of increasing depth, eventually culminating in a chapter review.

Materials clearly and accurately present grade-level-specific core concepts, recurring themes and concepts, and science and engineering practices.

- Materials clearly present grade-specific core concepts, recurring themes and concepts, and science and engineering practices. For example, the 7th Grade Course Overview includes a yearlong storyline as well as a Unit Roadmap concisely outlining topics covered for all four units.
- Each Unit Overview includes a Standards Tab. For example, the Unit 2, Water, Standards tab lists grade-level TEKS and ELPS applied during the unit. Lesson 1.5, Modeling Photosynthesis, includes a blue call-out box emphasizing developing and using models.
- Each unit begins with a "Getting Started" section that clearly outlines an overview of the chapter, connections to the Unit Roadmap, and associated phenomena for the concepts in the chapter.
- The development and use of models and cause and effect RTCs are emphasized in colored callouts in the teacher guide as students develop their own models of reproductive strategies and link parent and offspring relationships.

Mastery requirements of the materials are within the boundaries of the main concepts of the grade level.

- Materials include specific learning targets for each grade level concept. Each chapter includes a Getting Started page where the learning goals for the chapter are stated. For example, Unit 4, Exploring Earth, Chapter 1 Overview states, "Students explore recent changes in the polar ice caps and think about how Earth has changed over millions of years. Looking at our solar system provides insights into Earth's place in it, why the moon has craters, and how asteroids have impacted the Earth. How can we protect Earth in the future?"

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- Each Unit has multiple assessment points, including Chapter Assessments and Culminating Projects. For example, Unit 2, Water, Chapter 3, Water and Flooding, includes a Chapter Assessment (suggesting two different options, including a one-pager and reading questions).
- Materials provide a pre-assessment at the beginning of each unit. This allows the instructor to gauge the student's knowledge prior to starting the unit. As the unit progresses, there are multiple points (i.e., exit tickets, checkpoints, and performance assessments), to gauge progress in the unit.
- Materials feature a Unit Assessment at the end of each unit. This task provides data on student progress and mastery of the key concepts. Additionally, it provides information that can be used for scaffolding, remediation, and/or reinforcement of certain topics during future lessons.

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Indicator 3.2

Materials provide educative components to support teachers' content and knowledge coherence.

1	Materials support teachers in understanding the horizontal and vertical alignment guiding the development of grade-level content, recurring themes and concepts, and scientific and engineering practices.	M
2	Materials contain explanations and examples of science concepts, including grade-level misconceptions to support the teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS.	M
3	Materials explain the intent and purpose of the instructional design of the program.	M

Meets | Score 6/6

The materials meet the criteria for this indicator. Materials provide educative components to support teachers' content and knowledge coherence.

Materials support teachers in understanding the horizontal and vertical alignment guiding the development of grade-level content, recurring themes and concepts, and scientific and engineering practices. Materials contain explanations and examples of science concepts, including grade-level misconceptions to support the teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS. Materials explain the intent and purpose of the instructional design of the program.

Evidence includes but is not limited to:

Materials support teachers in understanding the horizontal and vertical alignment guiding the development of grade-level content, recurring themes and concepts, and scientific and engineering practices.

- Materials display vertical and horizontal alignment of the grade-level content, recurring themes and concepts, and scientific and engineering practices. When teachers click on the Standards tab from the Grade Overview page, they will see how different concepts and skills recur within a grade and build across all of the grade bands (6,7,8).
- Materials provide a section for each Grade Overview page called "Curriculum Alignment" that describes the horizontal and vertical alignment.
- Materials provide a feature within the Lessons tab on each Unit Overview page. When the Lessons tab is opened, a list of all lessons within the unit is listed along with the TEKS addressed in each lesson. This feature allows teachers to see how one standard develops over multiple lessons within the unit (part of horizontal alignment).
- Materials provide a feature within the standards tab on each Grade and Unit Overview page that highlights the Emphasizing boxes that provide teachers guidance about the Science & Engineering Practices and Recurring Themes and Concepts. Teachers can swipe sequentially through the Emphasizing boxes for a specific Practice or Recurring Theme across all three middle school grades and see how they align and progress.

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Materials contain explanations and examples of science concepts, including grade-level misconceptions to support the teacher's subject knowledge and recognition of barriers to student conceptual development as outlined in the TEKS.

- Across the curriculum, the materials only sometimes identify common grade-level misconceptions students may have about science concepts. Identifying barriers to student conceptual development must be consistently addressed to ensure mastery of the grade-level TEKS. For example, in grade 7, Unit 1, Food, Chapter 2, Chemical Reactions, under the section titled, “Revisit Phenomenon and Concept Check: Next,” students will participate in a concept checkpoint to gauge their understanding of the TEKS covered in this series of lessons, primarily 6.6A, 6.6B, and 6.6C. Use the Food Unit Chemistry concept checkpoint, Lesson 1.14, a-food-unit-chemistry-concept-checkpoint.pptx . Display each slide and instruct students to answer the questions individually. They can write the answer or vote anonymously. Then, students discuss the question and their answers with a peer and re-vote if they changed their thinking. Finally, discuss the question and correct answer as a class. When discussing, it helps to call on students to ask them to explain why a particular choice is incorrect. This allows for addressing misconceptions.
- Materials include a background information section for each lesson that includes explanations and examples of science concepts. For example, in the Teacher Background section of the lesson, the activity is unpacked with images included to indicate what teachers should expect students to find.
- Materials also mention opportunities for teachers to check for misconceptions. For example, the Food Concept Checkpoint is a formative assessment with multiple choice questions meant to address misconceptions, but those misconceptions are not clearly identified for the teacher in the answer key or lesson explanation.
- Materials provide a Background for Teachers section within units. These areas provide content background knowledge to support teacher understanding. The section also includes information to support teacher facilitation for students with language, academic, or special needs.
- Materials provide a Tips for Teachers section that provides key information to assist teachers with content implementation. This information includes but is not limited to, lesson starters, analogies, and charts/diagrams.

Materials explain the intent and purpose of the instructional design of the program.

- Materials provide a purpose or rationale for the instructional design of the program on the home page for each grade level course. For example, the grade 7 course homepage introduces the rationale for the Green Ninja material by stating, “The Grade 7 integrated science curriculum is designed around the TEKS and ELPS and has the goal of helping make science and engineering relevant and engaging for students. We take to heart the notion that giving students opportunities to work on real-world problems can promote science learning and student engagement and a full description of the research behind the curriculum and the instruction design is provided at https://www.greenninja.org/texas/. The core of the curriculum is helping to make science fun and interesting for students. Student motivation is a critical component of learning, so our goal is to help teachers make their classes as engaging for students as possible.”
- Materials provide a rationale for the structure and organization of the materials. The Green Ninja website states, “Our unique approach to science education, which incorporates leadership development, has been shown to not only improve students' academic performance but also

their critical thinking and communication skills, as well as their self-confidence and sense of agency."

- Materials provide a framework explaining the main intent and goals of the program. For example, the Green Ninja Website states, "Grade 7 focuses on Sustaining Life, covering food, water, genetics, and Earth's history. Students learn about photosynthesis, flood mitigation, genetic diversity, and asteroids."
- Materials provide a YouTube video embedded on the Overview page that describes the structure and intent of the curriculum.

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Indicator 4.1

Materials provide opportunities for students to engage in productive struggle through sensemaking that involves reading, writing, thinking, and acting as scientists and engineers.

1	Materials consistently support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers.	M
2	Materials provide multiple opportunities for students to engage with grade-level appropriate scientific texts to gather evidence and develop an understanding of concepts.	M
3	Materials provide multiple opportunities for students to engage in various written and graphic modes of communication to support students in developing and displaying an understanding of scientific concepts.	M
4	Materials support students to act as scientists and engineers who can learn from engaging in phenomena and engineering design processes, make sense of concepts, and productively struggle.	M

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials provide opportunities for students to engage in productive struggle through sensemaking that involves reading, writing, thinking, and acting as scientists and engineers.

Materials consistently support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers. Materials provide multiple opportunities for students to engage with grade-level appropriate scientific texts to gather evidence and develop understanding of concepts. Materials provide multiple opportunities for students to engage in various written and graphic modes of communication to support students in developing and displaying understanding of scientific concepts. Materials support students to act as scientists and engineers who can learn from engaging in phenomena and engineering design processes, make sense of concepts, and productively struggle.

Evidence includes but is not limited to:

Materials consistently support students' meaningful sensemaking through reading, writing, thinking, and acting as scientists and engineers.

- Materials consistently provide learning activities through reading and writing that support students' meaningful sensemaking.
    - For example, in each of the grade bands, there is a Reading Companion that is accompanied by comprehension questions that require different modalities of learning to answer the questions. There are multiple choice questions, short answer questions, and reading, analyzing, and interpreting graphs questions. According to the publisher, the Reading Companion is "...informational text, along with key vocabulary, that accompanies each Green Ninja unit." The reading contains summaries of the key science concepts covered in a particular lesson series.
    - The materials state, "Here are some suggestions for different ways to use the Reading Companion in your classroom:

        - For students who don't have much background in science or prior knowledge to leverage, use the Reading Companion as an introduction to provide context and some understanding.
        - Assign the relevant section of the Reading Companion as homework immediately after a classroom activity. This helps students connect the key science concepts with the classroom activity.
        - Provide the relevant section of the Reading Companion to students in class as they work on evaluation activities, such as developing models, creating storyboards, etc. The content in the Reading Companion serves as a reference for students as they work on their assignments.
        - Assign the Reading Companion as homework at the end of a lesson sequence. This summarizes and reinforces the key science concepts covered in the lessons.
        - At the end of the unit, a) provide all the unit Reading Companions to help students prepare for the unit assessment."
- Materials consistently provide opportunities for students to act as scientists and/or engineers. Each unit is broken into chapters where students use science and engineering practices to investigate a unique phenomenon. A culminating experience is featured at the end of each unit with the intention of giving students an opportunity to apply the knowledge gained.

Materials provide multiple opportunities for students to engage with grade-level appropriate scientific texts to gather evidence and develop an understanding of concepts.

- Materials provide multiple opportunities for students to engage with grade-level appropriate scientific texts to gather evidence and develop an understanding of concepts.
    - For example, each chapter includes a Reading Companion that is highlighted on the Getting Started page of the chapter introduction. The companion includes a passage with illustrations, diagrams, charts, or graphs, as well as bolded unit vocabulary. Questions are included with both multiple-choice and open-ended responses.
- Materials contain a Literacy Section that includes all the student documents and teacher-supporting resources for reading options presented throughout the unit. Vocabulary for the unit is also listed with additional reading resources through Newsela.

Materials provide multiple opportunities for students to engage in various written and graphic modes of communication to support students in developing and displaying an understanding of scientific concepts.

- Materials provide multiple opportunities for students to engage in written and graphic modes of communication.
    - For example, students create data tables and graphs in Unit 2, Lesson 2.12, on their thermal expansion model. In the next part, they design a diagram that allows them to explain to a friend or family member the concept of sea level rise due to thermal expansion by writing sentences that explain the concept.
    - In grade 7, Unit 3, Chapter 4, students work in small groups to research body systems and produce a poster to instruct others.
    - In Unit 1, Chapter 2, Lesson 1.11, students collect data on the CO_2 production of yeast and represent it in a chart and graph. They then interpret their findings by writing responses to several analysis questions based on their group's data.

- Materials consistently support opportunities for students to use and enhance writing skills to explore specific phenomena.
    - For example, unit pre-assessments are structured as free-response questions to allow the teacher to gauge student understanding at the beginning of the unit.

Materials support students to act as scientists and engineers who can learn from engaging in phenomena and engineering design processes, make sense of concepts, and productively struggle.

- Materials support students acting as scientists and engineers as they learn from engaging phenomena and the engineering design process.
    - For example, in Unit 1, Chapter 1, students are presented with the phenomenon of a really big tree. Students investigate the role that carbon dioxide plays in plant growth and development. This investigation is designed to model how scientists experiment to find the answers to questions, in this case, “How do we know plants use carbon dioxide from the air?”
    - In Unit 3, Chapter 5, Lesson 3.22, students transfer their understanding of what occurred during the Potato Famine with a lack of genetic variation that might apply to animals that are endangered in their culminating activity. Students take on the role of scientists and engineers to design a solution that supports the animal's survival.
- Materials support students to act as scientists and engineers who can learn from engaging in phenomena to make sense of concepts and persevere through productive struggle.
    - For example, throughout the grade bands, the units of learning all start out with anchoring phenomena that are depicted in a drawing (Unit Roadmap) and introduced in a "letter" from Green Ninja (Unit Storyline).
    - Throughout the grade bands, the students are working towards completing a culminating project in which the science and engineering practice are applied. Each unit of learning has a problem (anchoring phenomenon). Students create a solution (culminating event) to this problem using their understanding of the concepts taught to them throughout the specific unit of learning.

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Indicator 5.1

Materials promote students' use of evidence to develop, communicate, and evaluate explanations and solutions.

1	Materials prompt students to use evidence to support their hypotheses and claims.	M
2	Materials include embedded opportunities to develop and utilize scientific vocabulary in context.	M
3	Materials integrate argumentation and discourse throughout to support students' development of content knowledge and skills as appropriate for the concept and grade level.	M
4	Materials provide opportunities for students to construct and present developmentally appropriate written and verbal arguments that justify explanations to phenomena and/or solutions to problems using evidence acquired from learning experiences.	M

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials promote students' use of evidence to develop, communicate, and evaluate explanations and solutions.

Materials prompt students to use evidence to support their hypotheses and claims. Materials include embedded opportunities to develop and utilize scientific vocabulary in context. Materials integrate argumentation and discourse throughout to support students' development of content knowledge and skills as appropriate for the concept and grade level. Materials provide opportunities for students to construct and present developmentally appropriate written and verbal arguments that justify explanations to phenomena and/or solutions to problems using evidence acquired from learning experiences.

Evidence includes but is not limited to:

Materials prompt students to use evidence to support their hypotheses and claims.

- Materials provide opportunities for students to develop how to use evidence to support their hypotheses and claims. Throughout the 6-8 grade band, the materials offer many opportunities for students to participate in CER.
    - For example, in grade 7, Lesson 1.26, Analyzing Food Choices, Part III, "The CER format can be used for constructing explanations or constructing arguments. In this case, students are making the argument that their food choice does or does not align with MyPlate. The key for middle school students is that they should be able to articulate their reasoning more than they did in elementary school—how does the evidence support their claim?"
- Throughout the 6-8 grade band in the Google Slide decks that accompany the lessons, there are prompts that remind students to use the evidence from their investigations when writing their CER. The slides and worksheets remind students that they need to "point out the parts of your data that support your claim. Rather than just repeating the data, summarize it and compare it to help the reader see how it shows that your claim is reasonable."

- For example, in Lesson 4.22, students are exploring Wegener's hypothesis of continental drift as they assemble the Pangea puzzle. The analysis questions prompt the students to write a CER statement using all the evidence they previously collected from the puzzle.

Materials include embedded opportunities to develop and utilize scientific vocabulary in context.

- Materials include opportunities to develop and use vocabulary after having a concrete or firsthand experience to which they can contextualize new terms.
  - For example, the Google Slide decks that accompany each chapter include vocabulary development opportunities to provide students with a spiral review of new vocabulary after students have a concrete experience.
    - For example, in grade 7, Lesson 2.17, students are introduced to the terms *mitigation* and *adaptation*. They are asked to apply the definition of these terms to real word examples.
- Materials provide opportunities for students to apply scientific vocabulary within context.
  - For example, Lesson 3.5 states, "Students learn about the reproductive methods of different organisms, then they come together as a class to generate a list of general characteristics for organisms that reproduce sexually and/or asexually," creating whole class definitions in the process.
  - In grade 7, Lesson 1.5, students are directed to complete a modeling photosynthesis worksheet, which requires defining multiple vocabulary terms.

Materials integrate argumentation and discourse throughout to support students' development of content knowledge and skills as appropriate for the concept and grade level.

- Materials integrate argumentation and discourse within stages of the learning cycle. Throughout the grade bands, there are Google Slide decks that accompany the lesson plans. In the Google Slide decks, multiple opportunities for the students to discuss in varying levels of groupings are available. These are easily identified by the Discussion icon in the corner of the slide. These opportunities allow for a risk-free opportunity to get students involved in practicing scientific discourse before they are asked to perform a formative or summative assessment.
  - For example, in grade 7, Lesson 2.24, The Dead Zone Debate, "Students will complete a mini-debate around the topic of fertilizer usage as well as the beneficial and harmful human activities that occur on groundwater and surface water. Then, students will participate in a debate debrief."
- Materials provide opportunities for students to develop how to engage in the practice of argumentation and discourse.
  - For example, Lesson 3.17 includes a blue call-out box emphasizing engaging in arguments from the evidence that states, "Point out to students that the research and poster session assignment offers an opportunity to provide evidence that the human body is a system of many interacting subsystems. Emphasize the requirement to identify these system interactions."
  - Lesson 1.26 states, "Students are making the argument that their food choice does or does not align with MyPlate."

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Materials provide opportunities for students to construct and present developmentally appropriate written and verbal arguments that justify explanations to phenomena and/or solutions to problems using evidence acquired from learning experiences.

- Materials provide instruction for how to construct and present a verbal or written argument to problems using evidence acquired from learning experiences. Assignment rubrics are frequently used throughout the grade band to provide criteria for developmentally appropriate arguments.
    - For example, the Body Systems Research Project Assignment includes a rubric.
- Each unit has a culminating project that uses various learning formats for students to present their learning, utilizing opportunities for students to express their knowledge verbally or through writing.
    - For example, in Unit 1, Food, the Culminating Project is to create nutritionally-balanced, low-carbon-footprint menus for a day and write out recipes for two of the items on the menu, followed by a gallery walk.
    - In Lesson 1.14, students construct storyboards over cellular respiration.
    - In Lesson 1.21, students perform a gallery walk to view posters created by their classmates. They are instructed to write down notes related to the impacts shown on the posters.

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Indicator 5.2

Materials provide teacher guidance to support student reasoning and communication skills.

1	Materials provide teacher guidance on anticipating student responses and the use of questioning to deepen student thinking.	M
2	Materials include teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context.	M
3	Materials provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims.	M
4	Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions.	M

Meets | Score 4/4

The materials meet the criteria for this indicator. Materials provide teacher guidance to support student reasoning and communication skills.

Materials provide teacher guidance on anticipating student responses and the use of questioning to deepen student thinking. Materials include teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context. Materials provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims. Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions.

Evidence includes but is not limited to:

Materials provide teacher guidance on anticipating student responses and the use of questioning to deepen student thinking.

- Materials provide guidance on how to build on students' thinking. Throughout the grade bands (6,7,8), the Google Slide decks provide guidance for teachers in the slides and the notes portion on many ways to deepen student understanding, including, but not limited to, sentence stems, tie back to prior knowledge/lessons, common student responses, common student misconceptions, and using vocabulary in context emphasis.
- Materials provide support for teachers to anticipate student responses and deepen student thinking through questioning.
    - For example, in grade 7, Lesson 2.20, Water VS Human Effect, Lesson Plan Part 1a states, "Host a discussion with the class to bridge from how water affects us, to how we affect water by asking the following questions: What are some of the ways water affects humans and animals? (be sure students list the positive and negative effects they have learned about throughout the unit). What are some of the solutions to the negative effects? (students should discuss the mitigation and adaptation strategies learned in previous lessons). How do we (humans) impact water, specifically oceans? (allow students to use their prior knowledge, but guide students to thinking about our dependence, our influence, and our activities on the ocean.)"

- In Unit 1, Lesson 1.14, teachers complete a phenomenon checkpoint on the students' understanding of cellular respiration and photosynthesis. The teacher is guided to ask the following questions and prompted to listen for information: "What happens to food after we swallow it? How does the body turn nutrients into energy? What is energy? Does all food produce energy? Ask students which questions they can answer. Students should be able to state that: Food is broken down into small materials called nutrients by the digestive system. Nutrients undergo a chemical reaction with oxygen that we breathe to produce energy. Energy is movement and the ability to do things such as carry out body processes. Inform students that we will return to the fourth question on the list later in the unit."

Materials include teacher guidance on how to scaffold and support students' development and use of scientific vocabulary in context.

- Materials include teacher guidance on how to scaffold and support students' development and use of scientific vocabulary.
  - For example, in the slide decks for each unit, vocabulary words are often introduced after students have experienced core concepts. In the Unit 3, Chapter 3 slide deck, the students explore the idea of fitness as it relates to Darwin's finches. The teacher guides students to modify their definition of *natural selection* as their understanding of the fitness of an organism in its environment changes.
  - When introducing words that have common roots, prefixes, or suffixes, the teacher is prompted to probe for prior knowledge. In the Unit 1, Chapter 4 slide deck, students are revisiting their road map toward the end of the unit, and the notes guide the teacher to "ask students what they think 'low carbon meals' means. Accept all ideas. Inform students they will be doing research on different stages of the food life cycle and will learn what the term means. Students will then work in groups to research various stages of the food life cycle."
  - Slide 61 of the grade 7, Lesson 1.54, Google Slide deck asks teachers to prompt students to evaluate the words *photo* and *synthesis*, which they then use to construct their own definition of photosynthesis.
  - Slides 64-66 of the grade 7, Lesson 1.54, Google Slide deck ask teachers to prompt students to define the terms *atom*, *element*, and *molecule*. These terms are subsequently used throughout the following lessons in the process of modeling photosynthesis.

Materials provide teacher guidance on preparing for student discourse and supporting students in using evidence to construct written and verbal claims.

- Materials provide teacher supports to prepare for student discourse.
  - In the Google Slide decks that accompany each grade 6-8 unit, the orange slides marked with the "Discussion" icon provide guidance for the teacher in the notes section to help prepare students for academic discourse. For example, in grade 7, Lesson 2.20, Water VS Human Effects, the notes section, Slide 64, states, "Ask student pairs to share out the patterns they noticed in this data set. They should note that, over time, it has increased in size. Then ask students what connections they can make between this data and the data about nitrogen. If necessary, guide students to see the pattern of the size of the dead zone, nitrogen, and water flow (they tend to increase together and decrease

together). Then ask students, so, do you think nitrogen might just be the cause of the dead zone? They should say yes at this point."

- In the Student Prior Experience section of Unit 2, Lesson 2.18, it states, "It is helpful (but not necessary) for students to have experience with science talk, or discourse, or at least some familiarity with small group and class discussion norms. The Inquiry Project has some examples of how to encourage productive discussions in science that can be found at the following link."
- Students participate in a peer review in Unit 2, Chapter 2, and the slide deck provides teacher guidance on how to handle students that are not experienced with discourse by providing the following: "If students are not familiar with discourse (talking) in science, you may write some prompts on the board for students to use during the peer review (e.g., 'What do you mean by that?', 'I agree/disagree because…', 'Why do you think that?')."

Materials support and guide teachers in facilitating the sharing of students' thinking and finding solutions.

- Materials provide teacher support and guidance to engage students' thinking in various modes of communication throughout the year.
  - For example, each unit ends with an assessment; however, the materials provide multiple options covering different learning modalities and give teacher guidance on executing each. Lesson 3.30 Chapter Review Lesson states, "Listed below are two assessment options that can be used to accommodate different learners. Option 1, One-Pager: Students create a one-page summary of everything they learned in the chapter using words and/or pictures. This is an excellent differentiated assessment—some students will be able to provide a wide range of detailed information, while others may be able to give basic words and drawings. See the "Content Knowledge" section for more guidance on using one-pagers. Option 2, Reading Questions: Students complete a series of multiple choice questions with one open-ended question from the Body Systems reading question. This option is good for students who need extra practice with literacy skills. Students can work in pairs or small groups to discuss the open-ended question."
  - Each unit ends in a culminating project where students use the knowledge gained during the unit and share their findings with peers. In Chapter 5, Saving Endangered Species, the Project Overview states, "Students review how a lack of genetic variation in potato crops contributed to the Irish famine and are then ready to commence the culminating activity, researching an endangered plant or animal and designing a solution to help the organism survive. A documentary will be developed to highlight their organism and their solutions to save it. Students need to show cause-and-effect relationships and begin storyboarding scripts for their documentaries. They will come up with ways to promote their solutions. A documentary film festival gives students a chance to display their documentaries while learning about the importance of genetic variation in the survival of a species."
  - In grade 7, Lesson 4.30, Anthropocene: A New Epoch? the following teacher guidance is provided: "Once in their groups, have students share the passages that support their thinking about the Anthropocene. Each group should fill in the chart on the worksheet with evidence that supports and refutes the proposed epoch. This should include evidence gained from previous lessons, such as significant events that contributed to

observable differences in eons, eras, and periods, as well as information from the reading. During the discussion time, remind students of their science discourse practices. They should be familiar with the responsibilities of a good listener, agreeing with ideas, not people, and critically thinking about each person's contributions. You can be circulating through the groups to encourage these practices along with the use of discipline-specific scientific vocabulary."

Green Ninja Middle School Science Grade 7

Indicator 6.1

Materials include a variety of TEKS-aligned and developmentally appropriate assessment tools.

1	Materials include a range of diagnostic, formative, and summative assessments to assess student learning in a variety of formats.	M
2	Materials assess all student expectations over the breadth of the course and indicate which student expectations are being assessed in each assessment.	M
3	Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts.	M
4	Materials include assessments that require students to apply knowledge and skills to novel contexts.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include a variety of TEKS-aligned and developmentally appropriate assessment tools.

Materials include a range of diagnostic, formative, and summative assessments that include formal and informal opportunities to assess student learning in a variety of formats.Materials assess all student expectations over the breadth of the course and indicate which student expectations are being assessed in each assessment. Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts. Materials include assessments that require students to apply knowledge and skills to novel contexts.

Evidence includes but is not limited to:

Materials include a range of diagnostic, formative, and summative assessments to assess student learning in a variety of formats.

- Materials consistently include a range of diagnostic, formative, and summative assessments that include formal and informal opportunities to assess student learning in a variety of formats.
    - For example, the 7th Grade Course Overview highlights various assessment strategies embedded throughout the curriculum. It states, "The Green Ninja curriculum provides a diverse range of assessment types to ensure comprehensive monitoring of student progress. Each assessment type is designed to serve a specific purpose and offers unique insights into student understanding and performance. Here's more information about each assessment type:
        - Pre-assessments: These assessments help gauge students' prior knowledge and understanding of a topic before starting a unit. By identifying existing preconceptions and levels of content knowledge, teachers can tailor their instruction to address misconceptions and meet individual student needs.
        - Exit Tickets: Short, open-ended questions that serve as checkpoints to inform teachers of students' understanding during a lesson or unit. Exit tickets allow for quick feedback and help educators adjust their instruction accordingly to address gaps in knowledge or comprehension.

- Worksheets/Handouts: These resources often include questions or activities that require students to apply their learning to various tasks. A teacher key is typically provided to offer guidance on evaluating student responses, ensuring consistent and accurate assessment of student work.
- Concept Checkpoints: These thought-provoking, multiple-choice questions are specifically designed to assess students' understanding of particular science concepts. Many items are crafted to prepare students for state or national assessments, reinforcing essential knowledge and skills.
- Rubrics: As most summative assessments are performance-based, rubrics are used to evaluate student work in terms of science core ideas, practices, and cross-cutting concepts. Rubrics provide clear criteria for assessment, ensuring consistency and fairness in the evaluation process.
- Performance Assessments: Culminating projects serve as performance assessments, requiring students to extend their science learning and apply their understanding to real-world scenarios. These assessments demonstrate students' ability to synthesize information, solve problems, and effectively communicate their ideas.
- Unit Assessments: At the end of each unit, students complete assessments designed to evaluate their understanding of the primary science content. These assessments provide valuable data on student progress and mastery of key concepts, informing future instruction and identifying areas for improvement or reinforcement.

  By incorporating these diverse assessment types into the Green Ninja curriculum, educators can effectively monitor student progress and adapt their teaching strategies to better meet the needs of their students."

- Materials include formative assessments in a variety of formats to measure student learning and determine next steps for instruction.
  - For example, the Google Slide Presentations include checkpoint slides (color-coded teal) to provide formative assessments.
- Materials consistently utilize a combination of formative and summative assessments.
  - Each chapter culminates with a summative assessment. Teachers are provided with multiple options, including student-created summaries of the material or multiple-choice questions. Additionally, throughout the chapters, the materials provide a multitude of opportunities for the instructor to assess ongoing student learning and provide intervention/facilitation when needed.

Materials assess all student expectations over the breadth of the course and indicate which student expectations are being assessed in each assessment.

- Materials provide TEKS-based lesson plans that provide student expectations and guidance on how to assess student learning. Each unit consists of chapter assessments and a single unit assessment. The assessments directly address the materials covered within each chapter/unit. Chapter assessments are provided in multiple options, either short answer-based or multiple choice.
  - For example, the TEKS are assessed through a variety of assessments, including pre-assessments, checkpoints, activities, discussions, culminating projects, and unit tests. The TEKS are not identified for each assessment item or as a whole though they do appear to align well with the instruction in the lessons.

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- Materials provide a general overview that lists all the assessments provided in conjunction with the student expectations. Materials provide answer keys for assessments offered in the lesson in which it is presented. In that answer key, a box below each item shows the correlation to the TEKS core science content standard being assessed and the scientific practice and recurring theme/concept that the student draws most heavily upon to answer the question. This table specifies all three dimensions of the TEKS (i.e., core science content, scientific & engineering practices, and/or recurring themes & concepts). Each assessment item can assess a single dimension or can require the integrated application of two or all three of the dimensions.

Materials include assessments that integrate scientific concepts and science and engineering practices with recurring themes and concepts.

- Materials include assessments that require students to integrate scientific knowledge and science and engineering practices appropriate to the student expectation being assessed.
    - For example, in Grade 7, Lesson 2.31, Water, Assessment and Reflection, question number one states, "In a recent forest fire in a national park, rangers wanted to protect a famous tree from the heat of the fire. Before the fire arrived, they wrapped huge sheets of shiny foil material all around the base of the tree. Using your knowledge of heat transfer, explain how this material protects the tree from the heat of the fire." This requires students to construct an explanation using their understanding.
- Materials include assessments that require students to integrate recurrent themes appropriate to the student expectation being assessed.
    - For example, in grade 7, Lesson 2.31, Water, Assessment and Reflection, questions 2 and 3 require students to understand systems and system models to explain how heat transfer works.
    - Lesson 2.9, Concept Model: Substance Changes and Thermal Energy, states, "Students create concept maps or models that describe changes in the particle motion, temperature, and state of water when thermal energy is added or removed. Students revise their models using different scenarios as prompts to questions that can be answered using their concept models as tools and take a quiz covering concepts from this lesson series."
    - Each unit includes a culminating project. The Green Ninja Website states that this "Performance Based Assessment occurs once per unit, using a rubric. Green Ninja's specially designed assessment to assess students' culminating projects," where they merge science concepts and science and engineering practices with recurring themes.

Materials include assessments that require students to apply knowledge and skills to novel contexts.

- Materials consistently include assessments that require students to apply knowledge and skills to novel contexts. The culminating experience for each unit is a real-world, scenario-based assessment where students apply their learning from the unit to propose a solution.
    - For example, in the Unit Assessment for Unit 2, students are asked to answer questions about wildfires in a national park using their understanding of conduction, convection, and radiation. Students will need to apply their learning from the heat transfer lab activities to answer these questions.
    - In the grade 7 Unit 1 Assessment, students are required to complete a chart pertaining to photosynthesis and cellular respiration. Additionally, they are asked to evaluate a chemical formula and provide a short answer discussion.

    - In the Unit Assessment for grade 7, Unit 2, students are asked to respond to a descriptive prompt while providing content-based evidence.
- Materials include assessments that require students to apply knowledge and skills to a new phenomenon or problem.
    - For example, in Unit 4, Exploring Early Earth, the Chapter 1 Google Slide Deck provides a checkpoint where students are comparing and contrasting, defining, and drawing their answers in relation to the chapter's content.
    - The Unit 2, Water, Culminating Project states, "The culminating activity is a multi-day simulation in which students design cities resilient to extreme flooding, then respond once disaster strikes. Assuming the roles of different members in the community, they interpret data and design cities that can respond effectively to flooding. What resources can mitigate the effects? How can a city adapt? The situation changes when news of an impending storm arrives, and students are faced with emergency scenarios to which they must now respond. A final reflection helps to synthesize the experience, and students share in a gallery walk. Students consider how the simulation compares to an extreme natural hazard and then take a final assessment of the unit."

Green Ninja Middle School Science Grade 7

Indicator 6.2

Materials include guidance that explains how to analyze and respond to data from assessment tools.

1	Materials include information and/or resources that provide guidance for evaluating student responses.	M
2	Materials support teachers' analysis of assessment data with guidance and direction to respond to individual students' needs, in all areas of science, based on measures of student progress appropriate for the developmental level.	M
3	Assessment tools yield relevant information for teachers to use when planning instruction, intervention, and extension.	M
4	Materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include guidance that explains how to analyze and respond to data from assessment tools.

Materials include information and/or resources that provide guidance for evaluating student responses. Materials support teachers' analysis of assessment data with guidance and direction to respond to individual students' needs, in all areas of science, based on measures of student progress appropriate for the developmental level. Assessment tools yield relevant information for teachers to use when planning instruction, intervention, and extension. Materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.

Evidence includes but is not limited to:

Materials include information and/or resources that provide guidance for evaluating student responses.

- Materials consistently include information and/or resources that provide guidance for evaluating student responses.
    - For example, in the unit pre-assessments, teachers are provided with guidance in the form of an answer key and additional information in the next lesson plan. In Unit 2, Lesson 2.2, the teacher is guided to have students work with partners to compare and discuss their responses. Then, "After students' work and questions are discussed, you may choose to summarize the complete diagram, especially if preconceptions are evident. Use the Water Unit pre-assessment key as a guide. Do not simply describe the image and expect students to copy it. The pre-assessment is not intended to be used for instruction; it is to get a feel for student progression on the disciplinary core ideas of the unit. Be sure to give students time to ask any questions they wrote down."
    - In the Unit 2, Chapter 2 slide deck, the exit ticket brings students back to the initial concept addressed in the phenomenon. The teacher is guided to consider the following when evaluating student responses: "Challenge students to begin to compare the models they developed to what is going on in the ocean. How are their models similar or different? This will also give you insight into students' understanding before diving into the analogy model in Lesson 2.13 Rising Seas: Thermal Expansion Part III."

- For each unit, a pre-assessment is given to students with teacher guidance on how to use the results. For example, in Lesson 3.1, Humans and Life, the Teacher Tips section states, “The pre-assessment in this lesson will help you evaluate students’ prior knowledge of inheritance and variation of traits. In previous years, students have learned that organisms have structures that help them survive. Students can differentiate between inherited and acquired physical traits of organisms (TEKS 4.13B). The pre-assessment helps gauge student understanding of prior knowledge and also challenges them with more complex vocabulary.”
- Materials include information that guides teachers in evaluating student responses. In the Unit 4, Exploring Early Earth, Chapter 1 Google Slide Deck, slide 81 states, "Lesson Plan Part 2: Now, return to the phenomenon for this set of lessons, ‘The moon's near side looks different than its far side.’ Ask students what asteroids have to do with the moon. Based on previous research, they should be able to convey that impacts, including asteroid impacts, are responsible for why the moon has craters. Leave students with the phenomenon as a question, ‘Why are the two sides so different looking?’ If time permits, allow students to share their thoughts. They will likely say that one side of the moon gets hit by more asteroids than the other side. If so, ask them why they think one side might get hit more than the other. See ‘Content Knowledge’ for why the near and far side of the moon look different.”

Materials support teachers' analysis of assessment data with guidance and direction to respond to individual students’ needs, in all areas of science, based on measures of student progress appropriate for the developmental level.

- Throughout each of the grade levels (6,7,8), materials provide guidance resources to support teachers' analysis of assessment data.
  - In each grade level, under the tab titled “GN Classroom,” there is a subsection of information called “Responding to Assessment Results.” There is a table provided that explains the following: “When a student or many students fall below our goals, we must first diagnose the problem and figure out where things went wrong. A student's performance depends on three crucial interactions: the student and the assessment itself, the student and the learning activities that went before the assessment, and the alignment between the assessment and those learning activities. If a student does poorly, it is because of a failure in one of those connections.”
- Materials provide guidance or tools to support teachers in responding to data to inform instruction.
  - Each unit contains two or more concept checkpoints designed to be formative assessments of student understanding of particular core concepts. A small box in the lesson where the checkpoint occurs shows the correlation to the content TEKS being assessed along with guidance for teachers to support students who do not meet expectations.
  - For example, when a teacher clicks the Lessons tab on each Unit Overview page, they will see a list of all lessons within the unit along with the TEKS addressed in each lesson. TEKS in bold indicate formative or summative assessments. This feature allows teachers to see how a lesson and its associated assessments are aligned to the standards.

Green Ninja Middle School Science Grade 7

Assessment tools yield relevant information for teachers to use when planning instruction, intervention, and extension.

- Materials provide guidance to support teachers' analysis of assessment data. Each unit begins with a pre-assessment, a pre-assessment answer key, and discussion questions to guide teachers on how to interpret the data and engage students in understanding the initial concepts needed.
    - For example, Lesson 3.2, What a Variety! states, “Instruct students to select partners and discuss their pictures on the pre-assessment. Give students about 10 minutes to discuss and make revisions and/or compile a list of questions to ask.
      Next, have a few of the pairs share one of the terms. After sharing, give the rest of the class the opportunity to ask questions or offer suggestions. Continue through each term.
      As a class, come up with a basic definition for each term. Write the terms and class definitions on the board. Use the Humans and Life pre-assessment key Lesson 3.1 c-humans-and-life-pre-assessment-key-tx.pdf (from Lesson 3.1 Humans and Life) for reference as needed. For example:
      Variation – the difference in appearance of organisms
      Trait - a specific characteristic of an organism
      Inherit - when a trait (characteristic) is passed from a parent to an offspring
      Classification – to group organisms based on their characteristics
      Finally, give students the opportunity to share which terms were easy to draw and which were challenging. Ask students if the discussions —with their partners and the class—made the terms clearer. Explain that these are terms and concepts that students will investigate during the unit.“
- Materials include assessment tools that yield data teachers can easily analyze and interpret. Throughout the 7th grade course, there are a variety of assessment types, including open-ended opportunities and creative ways for students to showcase learning and for teachers to evaluate their learning.
    - For example, the unit slide decks include concept checks and exit tickets that teachers can use to further plan core instruction and differentiate based on student responses.
    - For example, the Unit 4, Exploring Early Earth, Chapter 3 Google Slide Deck, slide 30 includes teacher guidance on helping students evaluate their experiment. It states, “After a more open-ended discussion, focus students' attention on the actual experimental design during the escape room. Remind them that, among other considerations, an effective experiment:
      Answers a scientific question
      Uses the appropriate tools
      Includes repeated trials to ensure consistent results
      How well did their experiment during the escape room accomplish those tasks?“
- Materials provide checkpoints throughout the lessons and culminate with a unit assessment. These tools provide useful data to reference back to the pre-assessment to determine student growth and/or identify areas of concern for re-teaching/scaffolding of instruction.

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Materials provide a variety of resources and teacher guidance on how to leverage different activities to respond to student data.

- Throughout each of the grade levels (6,7,8), materials provide a student resource for teachers to use in responding to performance data. There is a chart called “Responding to Assessment Results “ found in the GN Classroom Tab. It states, “Once you successfully diagnose the problem, then you can chart a plan for solving it.”
    - For example, “maybe the problem is as simple as the fact that the student misunderstood the intent of a question (student/assessment). If the problem lies in the alignment between the learning activity and assessment, it may require teaching skipped material or rewriting the assessment question.”
    - The unit slide decks contain concept checks that include misconceptions as distractors. Teachers are guided to use student responses to misconceptions to guide the discussion.
- Throughout each of the grade levels, materials include intervention activities teachers can use for reteaching concepts. This is intentionally driven by response to student assessment data. These intervention activities are provided for use at any time.
- For example, materials provide resources that teachers could use to respond to student data, including reading passages, reading companions, sentence stems, graphic organizers, and extensions. Materials provide teacher guidance in the Teacher Tips section for every Chapter Review Lesson on how to respond to student data from the end of chapter assessment. The sections are titled “How to Support Students with Reading” and “How to Support Students with One-Pagers.”

Green Ninja Middle School Science Grade 7

Indicator 6.3

Assessments are clear and easy to understand.

1	Assessments contain items that are scientifically accurate, avoid bias, and are free from errors.	M
2	Assessment tools use clear pictures and graphics that are developmentally appropriate.	M
3	Materials provide guidance to ensure consistent and accurate administration of assessment tools.	M
4	Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Assessments are clear and easy to understand.

Assessments contain items that are scientifically accurate, avoid bias, and are free from errors. Assessment tools use clear pictures and graphics that are developmentally appropriate. Materials provide guidance to ensure consistent and accurate administration of assessment tools. Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals.

Evidence includes but is not limited to:

Assessments contain items that are scientifically accurate, avoid bias, and are free from errors.

- Materials contain assessment items for the grade level that are scientifically accurate. Formative and summative assessments include assessment items that align with taught objectives and present grade-level content and concepts, science and engineering practices, and recurring themes and concepts in a scientifically accurate way. Throughout the materials, assessments contain items for the grade level and course that are free from errors.
    - In Unit 3, Humans and Life, "students use their understanding of genetic variation to create a documentary highlighting an endangered animal and the cause of its decreased genetic diversity, as well as promoting the benefits of an increase in genetic diversity, researching various animals all over the world."
    - The grade 7 Unit 2 Assessment contains a series of items related to means of protecting trees from forest fires. These items use factual information and data as means of assessing student knowledge.
- Materials contain assessment items that avoid bias and are free from errors.
    - For example, the Reading Questions Assessment in Lesson 4.42, Chapter Review, accurately depicts Earth's Place in Space and its interactions with other objects without error.
    - Students explore diverse cultures, ecosystems, and natural resources as they investigate historical flooding and mitigation efforts in New Orleans.
    - The calculations for the seafloor data and modeling activity in Unit 4, Lesson 4.24, are free from errors.

Green Ninja Middle School Science Grade 7

Assessment tools use clear pictures and graphics that are developmentally appropriate.

- Assessment tools use clear pictures and graphics. Throughout the grade bands (6,7,8), the images that are used help to provide a visual understanding of the content being taught.
    - For example, in Grade 7, Lesson 2.2, Deadly Storms, images used in the Google Slide deck (Slide 22) help enhance that water is essential for life but can also be hazardous.
    - In the Reading Questions Passage Assessment in Lesson 4.42, Chapter Review Lesson, two images detailing inertia are provided. The first figure uses a real-world example of a horse tied to a rope and its connection to inertia, while the second image takes the first and compares it to the same process in the universe.
- Assessments contain pictures and graphics that are developmentally appropriate. Throughout all grade bands (6,7,8), the graphics and images used are appropriate for the grade level without excessive detail that would alarm or overwhelm middle school students.
    - For example, in the Unit 1 Assessment, images of a data table, chemical formulas, and a balance with different masses are colorful, simple, and developmentally appropriate.
    - In the Unit 1 pre-assessment, images of a sun and a person are clear and provide students with a starting and ending point for their response.
    - The pre-assessment for Lesson 3.1, Humans and Life, contains images of three animals with borders around them to indicate which characteristics belong to which animal, allowing students to visualize the question, which is a developmentally appropriate strategy to utilize images in assessments.

Materials provide guidance to ensure consistent and accurate administration of assessment tools.

- Materials provide clear guidance for teachers to consistently and accurately administer assessment tools. Materials offer alternate-form reliability to maintain consistency of test results between two different but equivalent forms of tests.
    - For example, the Culminating Experience Teacher Guide provides detailed information for teachers to administer the performance-based assessment, including guiding questions, student exemplars, and a rubric.
    - The pre-assessments provide guidance for the teachers on when to give pre-assessments and provide options for administration, including digital access through google classroom.
- In each of the grade bands (6,7,8), there is an opportunity for a formative/summative review at the end of each chapter that allows the students choice in assignment to show what they know. There is guidance for the teacher to explain the difference between a one-pager assignment and a reading comprehension assignment.
    - For example, Lesson 1.38, Chapter Review Lesson, includes a Teacher Background Section, providing guidance on how to administer the one-pager with examples of completed ones and details about what should be included in the overall assessment.
    - Lesson 3.30, Chapter Review Lesson, provides an answer key for the Reading Questions Assessment with explanations for questions where students' answers may vary.
- Materials include detailed information that supports the teacher's understanding of assessment tools and their scoring procedures. An assessment guide or a distinct section in the Teacher's Guide on assessment includes an overview of the assessment, scoring procedures, and an answer key.

Green Ninja Middle School Science Grade 7

Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery of knowledge and skills aligned to learning goals.

- Materials include guidance to offer accommodations for assessment tools that allow students to demonstrate mastery aligned to learning goals. The Unit Overview provides teachers with a list of assessments within the unit and their purpose, and the teacher may determine if and how those assessments are given to students and accommodate particular needs based on the format of the assessment.
    - For example, the Culminating Experience for Unit 1 includes notes for the teacher in the Access and Equity section that indicates accommodations that can be provided for students that are non-dominant science learners or have special needs. The Background for Teachers states, "Students living in poverty may not be able to afford ingredients. A way around this is to have groups share some ingredients that may be difficult for them to find and list them on the board. Have other students—and even teachers—bring in the ingredients."
- Materials offer accommodations for assessment tools so that students of all abilities can demonstrate mastery of learning goals.
    - For example, Lesson 4.42, Chapter Review Lesson, states, "You can allow students to choose their own assessment style so that 'lower' students can challenge themselves with the 'high-level' assessment, and 'higher' students can do the one-pager showing their depth of knowledge. Sometimes, 'higher' students need a break from ALL high-level assessments, and sometimes, 'lower' students need the challenge of completing a higher-level task. You can have students complete the chapter assessment by working in small groups (2-3 students). Using small groups for assessments can improve student learning."
    - Additionally, all video clips (such as the Green Ninja Show Episodes) have closed caption capabilities to help all students see and hear scientific vocabulary in context.

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Indicator 7.1

Materials include guidance, scaffolds, supports, and extensions that maximize student learning potential.

1	Materials provide recommended targeted instruction and activities to scaffold learning for students who have not yet achieved grade-level mastery.	M
2	Materials provide enrichment activities for all levels of learners.	M
3	Materials provide scaffolds and guidance for just-in-time learning acceleration for all students.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include guidance, scaffolds, supports, and extensions that maximize student learning potential.

Materials provide recommended targeted instruction and activities to scaffold learning for students who have not yet achieved mastery. Materials provide enrichment activities for all levels of learners. Materials provide scaffolds and guidance for just-in-time learning acceleration for all students.

Evidence includes but is not limited to:

Materials provide recommended targeted instruction and activities to scaffold learning for students who have not yet achieved grade-level mastery.

- Materials consistently provide teacher guidance for scaffolding instruction for students who have not yet achieved mastery. Throughout the grade bands, there are multiple guidance points for the teacher to scaffold learning to a variety of student learning levels. These opportunities can be found incorporated within the lesson plans in the sections labeled “Teacher Background” under the headings “Access and Equity” and “Student Prior Learning.”
    - For example, in Unit 2, Lesson 2.3, the Teacher Background section gives examples of strategic grouping, and provides a reading protocol to process texts.
    - Lesson 1.24, Analyzing Food Choices Part I, contains an Access and Equity Section that states, “Students Below Grade Level in Science Skills and Students with Special Needs or Disabilities: You can project or make copies of visuals showing the human body with the digestive tract and a simple diagram of cellular respiration to serve as reminders for students below grade level in science skills and students with learning disabilities. Having an instructional assistant/aide to help during these lessons is one strategy, as is withholding the full worksheet and only passing out one part at a time (you can modify font size and spacing so each of the three parts is on a separate page). Going over the instructions and writing key ideas and reminders on the board will help too.”
    - Lesson 1.19, Sustainable Transportation: What Do Users Need? includes a section that addresses Standard EL and EL Learners and Non-dominant Science Learners in General. It states: “Although the lesson plan suggests students may do this project individually, it is recommended that EL learners and non-dominant science learners be paired with stronger students so that they can participate fully in the culminating experience. The text in the handout information is well-organized and fairly easy to understand. There

are also handouts with information in graph and chart form, which may be more challenging. Go over these graphics with students needing additional support. Use the graphics to access prior knowledge and build on students' understanding of transportation in different places to help them visualize differences and come up with ideas for sustainable transport. Set clear goals for each day students work on their projects, and have students check in with daily progress reports to be sure they are on track—a good idea for all learners."

Materials provide enrichment activities for all levels of learners.

- Materials provide enrichment activities that account for learner variability.
    - For example, materials suggest small group or partner discussions, and include guidance to regularly engage in tasks, such as writing prompts for responding to lessons so students can apply their science knowledge in writing. Each unit includes a list of suggested readings to encourage all students to make connections, learn about the unit concept and standards, and integrate mathematical practice where applicable.
    - For example, Unit 1, Food, Access and Equity Section, states "Guidance for strategic learning techniques and vocabulary acquisition to be used throughout Grade 7" listing specific Vocabulary and Learning Technique activities that can be used throughout the year.
    - In Unit 1, Lesson 1.38, an enrichment activity on Researching Careers is included with a link to a STEM careers website and questions for students to answer.
    - Unit 2, Lesson 2.5, provides a math extension activity on climate data that asks students to analyze and interpret data graphically.

Materials provide scaffolds and guidance for just-in-time learning acceleration for all students.

- Materials include a variety of means to provide just-in-time learning opportunities for students.
    - These include, but are not limited to, group discussions, teacher tips, and background for teacher sections embedded into the lessons. Throughout each of the grade bands in the Google Slides that accompany each of the lessons, there is guidance for the teachers in the "Notes" sections of the slide deck that help to provide scaffolds for "just-in-time" learning acceleration.
        - Some "just-in-time" suggestions that are provided include, but are not limited to, sentence stems, tie backs to previous lessons, lesson/concept analogies, reminders of key concepts to emphasize, possible student misconceptions, and additional resources to investigate.
    - Lesson 1.9, Digestion, gives guidance to accelerate the learning of lower performing students. It states: "The reading material on the website is at grade level, but students below grade level may need additional support. Have these students focus on the diagram in the reading. Encourage students to trace the path of food through the digestive system on their worksheets. They can do this with a pencil or with their fingers: mouth – esophagus – stomach – small intestine – large intestine – ileum – anus. The accompanying video on the website has subtitles and plenty of images to help students visualize the movement of food through the digestive system. The flowcharting activity in the second part of the lesson will also reinforce the digestive process"
- Materials often include questions for teachers embedded in lessons to stimulate student engagement and thinking about the upcoming topic.

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- For example, each unit includes a Google Slides Presentation. Slide 1 of the Slide Deck states, “Lesson Content, including teacher tips and teaching resources, is provided in the notes section of each slide.”
- Throughout the grade bands, the materials include a Culminating Experience at the end of each unit of learning that contains challenging activities that extend beyond the regular curriculum and stimulate critical thinking, problem-solving, and creativity.

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Indicator 7.2

Materials include a variety of research-based instructional methods that appeal to a variety of learning interests and needs.

1	Materials include a variety of developmentally appropriate instructional approaches to engage students in the mastery of the content.	M
2	Materials consistently support flexible grouping (e.g., whole group, small group, partners, one-on-one).	M
3	Materials consistently support multiple types of practices (e.g., modeled, guided, collaborative, independent) and provide guidance and structures to achieve effective implementation.	M
4	Materials represent a diversity of communities in the images and information about people and places.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include a variety of research-based instructional methods that appeal to a variety of learning interests and needs.

Materials include a variety of developmentally appropriate instructional approaches to engage students in the mastery of the content. Materials consistently support flexible grouping (e.g., whole group, small group, partners, one-on-one). Materials consistently support multiple types of practices (e.g., modeled, guided, collaborative, independent) and provide guidance and structures to achieve effective implementation. Materials represent a diversity of communities in the images and information about people and places.

Evidence includes but is not limited to:

Materials include a variety of developmentally appropriate instructional approaches to engage students in the mastery of the content.

- Materials engage students in mastery of the content through a variety of developmentally appropriate instructional approaches. Each unit is designed to address multiple learning modalities.
    - For example, the 7th-grade coursework includes multiple reading activities (Reading Companion used frequently), visual activities (Green Ninja Show/Google Slides), and kinesthetic activities (field investigations). The course overview for 7th grade on the GN Classroom tab provides teacher guidance on facilitating instructional strategies, including science notebooks, charts and posters of science concepts, discussion protocols, and collaborative group work used throughout the course.
    - Another example is in Unit 2, where students watch videos, participate in jigsaws, and design heating systems for flood victims to demonstrate their understanding of thermal energy and real-world implications.
- Materials provide many opportunities for students to learn from various means.

- For example, in Grade 7, Unit 3, Chapter 1, students utilize observations, pre-assessments, graphic organizers, and small group discussions to examine the influence of genetic variation in an ecosystem.

Materials consistently support flexible grouping (e.g., whole group, small group, partners, one-on-one).

- Materials consistently provide guidance to teachers on when to use specific grouping structures based on the needs of students.
  - For example, in Lesson 1.9, Digestion, the teacher prep notes state, "Create a simple flowchart as a class, to make sure students understand the structure....When about five minutes remain in class, have students share their flowcharts in small groups. Monitor the discussions; if students seem confused, you may need to take time to create a class flowchart" when addressing the Digestion Flow Chart Activity.
  - In Unit 2, Chapter 1, students work with partners to compare their pre-assessment illustrations, work in teams to research the water phenomenon for the unit, and work independently on the quick lab on investigating temperature.
- In each unit, students are given multiple opportunities to utilize flexible grouping, including whole group, small group, and one-on-one.
  - For example, in Lesson 2.2, Deadly Storms, students work as partners before coming back together for a whole class grouping. The lesson states, "Begin by having students choose partners. Instruct students to compare their diagrams with their partner and discuss what physical components, conditions, and processes might cause rain...After students have had time to confer, have a discussion with the class about parts of their diagram."
  - In Unit 3, Chapter 2, guidance is provided to the teacher on suggested grouping, stating, "One way to organize students is to set up groups of six students. Within each group of six, there are three pairs. (For classes that can't be arranged in multiples of six, there will have to be some sets of three students doing the research together)."

Materials consistently support multiple types of practices (e.g., modeled, guided, collaborative, independent) and provide guidance and structures to achieve effective implementation.

- Materials allow for the implementation of multiple forms of practices. Students often engage in teacher-guided instruction combined with group collaborative work.
  - For example, in Grade 7, Unit 1, the teacher begins with guided lessons and models how materials and energy move through an ecosystem. Afterward, students work in pairs to develop their own models.
  - Each unit provides opportunities for group and independent lab investigations, demonstrations, and scientific discussions. For example, the course overview for 7th grade on the GN Classroom tab provides teacher guidance on facilitating instructional strategies, including science notebooks, charts and posters of science concepts, discussion protocols, and collaborative group work used throughout the course.
- Materials provide a useful tool for teachers to facilitate various modes of instruction. The slide deck incorporated into each unit is constructed so that green backgrounds typically provide instruction activities and grouping sizes. Orange backgrounds are for class discussions, and blue backgrounds are for assessment activities.
  - For example, Lesson 2. 2 Deadly Storms states: "Begin by having students choose partners. Instruct students to compare their diagrams with their partner and discuss

what physical components, conditions, and processes might cause rain. Give partners five minutes to discuss their diagrams, make revisions, and compile any questions they have. After students have had time to confer, have a discussion with the class about parts of their diagram - water source, heat, evaporation/condensation, clouds, where rain will ultimately fall - to get students thinking about water and how it moves around the planet."

Materials represent a diversity of communities in the images and information about people and places.

- Materials represent a diversity of communities in the images and information about people and places.
    - For example, the images in the roadmaps, phenomenon, and slide deck represent diverse communities in real-world rural, urban, and suburban settings.
    - In Unit 3, a family is depicted of both African-American and Caucasian nationalities.
    - Lesson 1.26, Analyzing Food Choices Part III, states, "You should leave an extra ten minutes at the end of this lesson for students to share everything from surprises, 'aha' moments, and how their favorite foods fared nutritionally. Encourage students from different cultures and backgrounds to share, so the class hears a variety of favorite foods and dishes."
    - Lesson 4.4, Craters on the Moon, begins with a lesson on Culture Views of the Moon. The lesson plan states, "Inform students that they will be reading some cultural viewpoints of the moon with a partner. These viewpoints are common folklore of the culture...hold a brief discussion regarding the folktales they just read. What stood out to them the most? Do they know any folklore within their culture?"
- Materials represent diversity in the places of focus, including both Texas-specific locations and also those around the world.
    - For example, Unit 2 investigates the dead zone in the Gulf of Mexico, while Unit 3 begins with a phenomenon of Irish potato farmers.

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Indicator 7.3

Materials include listening, speaking, reading, and writing supports to assist emergent bilingual students in meeting grade-level science content expectations.

1	Materials include guidance for linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as defined by the ELPS.	M
2	Materials encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include listening, speaking, reading, and writing supports to assist emergent bilingual students in meeting grade-level science content expectations.

Materials include guidance for linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as defined by the ELPS. Materials encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English.

Evidence includes but is not limited to:

Materials include guidance for linguistic accommodations (communicated, sequenced, and scaffolded) commensurate with various levels of English language proficiency as defined by the ELPS.

- Materials include linguistic accommodations commensurate with various levels of English language proficiency as defined by the ELPS. Throughout the grade bands, there are multiple links to ELPS supports to guide teachers with modifications and accommodations needed for all levels of ELLs. These materials can be found embedded within the lessons and chapter reviews in all grade bands.
- Throughout the 6-8 grade band on the unit landing page, there is an Access and Equity section that states the following:

  For English Learners, Guidance for strategic learning techniques and vocabulary acquisition to be used throughout. Vocabulary: Repeat basic and grade-level vocabulary words throughout lessons. Have students provide a definition, use the word in a sentence, and draw the sentence using basic and grade-level vocabulary. Give students time to practice sounding out and spelling the vocabulary words independently, and using the vocabulary in a sentence with a partner. Use a word wall in the classroom for each unit where you highlight basic and grade-level vocabulary words. Encourage students to use vocabulary when asking for and when giving information as applicable. Challenge students to use the words correctly in conversations throughout that unit. Learning Techniques: During discussions, have students repeat the last sentence they heard before contributing to the conversation (i.e., "I heard…say…, I think…."). When using reading handouts, have students circle all unfamiliar words. Then, give students time to create definitions, sentences, and illustrations of each word. Use concept maps,

Encourage elaboration during discussion, Recalling information during the Unit Roadmap discussions, Partner/Group Work, One-pagers as an assessment. More ways to support English Learner students can be found on each chapter review lesson.

- For example, the Chapter Review Lesson 2.32 provides an ELPS Modification and Integrations to Support Literacy Document that includes guidance on Learning Strategies, Vocabulary, Discussion (listening and speaking), Writing, Reading, and Sentence Stems.
- The ELPS Modification and Integrations to Support Literacy Document for Lesson 4.41 includes sentence stems as well as suggestions for organizing information into graphic organizers.

Materials encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English.

- Materials encourage strategic use of students' first language as a means to linguistic, affective, cognitive, and academic development in English.
    - For example, in the chapter review section of each unit, the Access and Equity area indicates supports for English language learners, including having teachers "provide students with a bilingual dictionary to use as needed" and indicating that "translating the handout into the student's native language may also be helpful."
    - In Grade 7, Lesson 1.4, the Access and Equity statement suggests having students explain interesting facts in their native language or dialect.
    - The ELPS Modifications & Integrations to Support Literacy section of the chapter reviews suggest the use of Google Translate to create a document in students' native language.

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Indicator 7.4

Materials provide guidance on fostering connections between home and school.

1	Materials provide information to be shared with students and caregivers about the design of the program.	M
2	Materials provide information to be shared with caregivers for how they can help reinforce student learning and development.	M
3	Materials include information to guide teacher communications with caregivers.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials provide guidance on fostering connections between home and school.

Materials provide information to be shared with students and caregivers about the design of the program. Materials provide information to be shared with caregivers for how they can help reinforce student learning and development. Materials include information to guide teacher communications with caregivers.

Evidence includes but is not limited to:

Materials provide information to be shared with students and caregivers about the design of the program.

- Materials provide information to share with students and caregivers about the design of the program. Examples include: at the beginning of each grade level overview, there is a section titled “Family and Caregivers.” The following information is provided:

  Dear Family Members and Caregivers,

  We are excited to introduce the Green Ninja curriculum to our Texas middle school students! This innovative program is based on the latest research and focuses on engaging students in authentic science experiences that enhance engagement and drive academic performance. The Green Ninja curriculum is unique in several ways:

  Real-world connections: By presenting science concepts within the context of solving real-world environmental challenges, students gain a deeper understanding of the material and become more invested in their learning.
  Hands-on learning: Students participate in a variety of hands-on activities, experiments, and projects that encourage critical thinking, problem-solving, and collaboration.
  Interdisciplinary approach: The curriculum integrates multiple subject areas, including science, technology, engineering, and math (STEM), as well as social studies, language arts, and environmental education, to provide a well-rounded learning experience.
  As family members and caregivers, your support and involvement play a crucial role in your student's success. Here are some ways you can support their learning:

Encourage curiosity: Ask your student about what they learned in school, and engage in conversations about science and the environment to foster their curiosity.
Reinforce learning: Help your student with homework and projects, and encourage them to explore additional resources related to the topics they are studying.
Connect with the school: Attend parent-teacher conferences, join school committees, and participate in school events to stay informed about your student's progress and the Green Ninja curriculum.
Throughout the course of the Green Ninja program, students will develop essential skills, such as critical thinking, problem-solving, communication, and collaboration. By participating in this engaging and interdisciplinary curriculum, they will be better prepared to understand and address the complex challenges of the 21st century.

We look forward to partnering with you on this exciting learning journey and welcome any questions or feedback you may have. Together, we can support our students in becoming informed and responsible citizens who can make a positive impact on the world around them.

Thank you,
The Team at Green Ninja

- Along with the letter home, there is a QR code that can be scanned that links to a YouTube video that teaches parents about the design of the program.

Materials provide information to be shared with caregivers for how they can help reinforce student learning and development.

- Materials provide resources and strategies for caregivers to help reinforce student learning and development. Throughout the grade bands (6,7,8), each unit of learning has a Home to School Connection outlined that suggests activities in the chapter that family members or caregivers can get involved with and also indicates checkpoints that they can look at student progress.
    - For example, the 7th Grade Course Overview includes information to be shared with families and caretakers that states, “As family members and caretakers, your support and involvement play a crucial role in your students' success. Here are some ways you can support their learning. 1. Encourage Curiosity: Ask your student about what they learned in school, and engage in conversations about science and the environment to foster their curiosity. 2. Reinforce Their Learning: help your student with homework and projects, and encourage them to explore additional resources related to the topics they are studying. 3. Connect with the School: Attend parent-teacher conferences, join school committees, and participate in school events to stay informed about your student's progress and the Green Ninja Curriculum.”
    - For the grade 7 unit on Food, the following information is shared: “Green Ninja curriculum connects classroom learning to everyday experiences in the home. It also provides many ways for parents to stay connected to the classroom. In this unit, students make a clear home-school connection by learning how their eating habits affect their carbon footprints.”
    - FIn Grade 7, Lesson 3.28, Designing Solutions: Saving Endangered Organisms Part VII, states, “Parents can be invited to watch students present their documentaries at the Promoting Genetic Diversity Culminating Film Fest.”

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Materials include information to guide teacher communications with caregivers.

- Materials include teacher guidance for communicating with caregivers.
    - For example, the home page for each grade level includes a letter to family members and caregivers that can be printed or digitally sent home. This letter indicates the unique features of the curriculum and offers suggestions for how the family member or caregiver can support their child's success in learning the curriculum's content and skills.
    - Every unit includes a Home to School Connections section providing teacher guidance on how to involve students' families to deepen student learning.
    - Each Unit Overview gives suggestions the teacher can provide to caretakers for monitoring students' progress. Unit 3, Humans and Life, states, “Specific opportunities for parents to monitor student progress: Parents can be invited to watch students present their documentaries at the Promoting Genetic Diversity Culminating Film Fest: Lesson 3.28 Designing Solutions: Saving Endangered Organisms Part VII.”

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Indicator 8.1

Materials include year-long plans with practice and review opportunities that support instruction.

1	Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built in the course materials.	M
2	Materials provide clear teacher guidance for facilitating student-made connections across core concepts, scientific and engineering practices, and recurring themes and concepts.	M
3	Materials provide review and practice of knowledge and skills spiraled throughout the year to support mastery and retention.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include year-long plans with practice and review opportunities that support instruction.

Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built into the course materials. Materials provide clear teacher guidance for facilitating student-made connections across core concepts, scientific and engineering practices, and recurring themes and concepts. Materials provide review and practice of knowledge and skills spiraled throughout the year to support mastery and retention.

Evidence includes but is not limited to:

Materials are accompanied by a TEKS-aligned scope and sequence outlining the order in which knowledge and skills are taught and built in the course materials.

- The material shows clear alignment to the TEKS and English Language Proficiency Standards (ELPS) that includes unit and lesson progression. A scope and sequence document for the TEKS and ELPS is provided and integrated into the Standards section of each Grade and Unit Overview in an accessible format that is easy to use and modify. For example, teachers would be able to sort the standards either by grade, unit, or lesson.
- Located in the Getting Started section of each lesson, the sequencing of the instruction per unit is found under the Lesson Plan section stating, "This is the suggested sequence of learning activities for this lesson. Note that session times are estimates. Depending on students' progress, the sessions may be shorter or longer."
- The materials include all 7th Grade TEKS, ELPS, and SEPs standards in multiple areas of the course numerically.

Materials provide clear teacher guidance for facilitating student-made connections across core concepts, scientific and engineering practices, and recurring themes and concepts.

- There is evidence of teacher guidance throughout the learning units , for example Teacher Resources provide a lesson plan and a Google Slide presentation to show students for each lesson. Materials include a Unit-to-Unit connection presented in the Grade Overview section. This provides teacher guidance on how student connections to core concepts, SEPs, and RTCs occur across the grade.

- Each lesson includes a Tying it Together concept at the end of each Unit's lesson. This emphasizes how the lesson connects to what students are learning within the unit. For example,in the grade 7 materials' Introduction to Minerals, students build awareness of material resources required to manufacture smartphones and other technological devices. They are introduced to the unit challenge: Design a "smarter" smartphone—one that is designed or used differently, to be more sustainable.

Materials provide review and practice of knowledge and skills spiraled throughout the year to support mastery and retention.

- The materials provide extensions for students to review and enhance student knowledge with connections between other concepts.
- The Teacher Resources section of the materials within each lesson includes a Reading Companion that "can be used in various ways to enhance student learning, "including practice of current content in the form of homework.This summarizes and reinforces the key science concepts covered in the lessons." The materials show how the skills (SEPs and RTCs) are spiraled throughout the grade by highlighting where the Emphasizing boxes are located within the curriculum. These Emphasizing Skills and Concept boxes provide explicit directions for teachers to embed particular practices or recurring concepts directly into the instruction. Materials include teacher guidance in the standards tab with an easy-to-use format so that teachers could easily see how different practices and concepts are spiraled through the year.

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Indicator 8.2

Materials include classroom implementation support for teachers and administrators.

1	Materials provide teacher guidance and recommendations for use of all materials, including text, embedded technology, enrichment activities, research-based instructional strategies, and scaffolds to support and enhance student learning.	M
2	Materials include standards correlations, including cross-content standards, that explain the standards within the context of the grade level.	M
3	Materials include a comprehensive list of all equipment and supplies needed to support instructional activities.	M
4	Materials include guidance for safety practices, including the grade-appropriate use of safety equipment during investigations.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials include classroom implementation support for teachers and administrators.

Materials provide teacher guidance and recommendations for use of all materials, including text, embedded technology, enrichment activities, research-based instructional strategies, and scaffolds to support and enhance student learning. Materials include standards correlations, including cross-content standards, that explain the standards within the context of the grade level. Materials include a comprehensive list of all equipment and supplies needed to support instructional activities. Materials include guidance for safety practices, including the grade-appropriate use of safety equipment during investigations.

Evidence includes but is not limited to:

Materials provide teacher guidance and recommendations for use of all materials, including text, embedded technology, enrichment activities, research-based instructional strategies, and scaffolds to support and enhance student learning.

- The materials provide teacher guidance through a Getting Started section at the beginning of each chapter within a unit that provides an overview, roadmap connections, chapter vocabulary, reading companion, and chapter phenomena. The slide deck provides technology presentations of key pieces of the lesson and activities ready to present to students, as well as tips to prepare for instruction. These materials include overview documents to support teachers in understanding how to use all materials and resources as intended.
- Materials contain links to embedded technology in the teacher guide as options for teachers to use to support and enhance student learning of science concepts.
- Materials include teacher guidance on strategic learning techniques and vocabulary acquisition to be used throughout grade 7. For example, in Unit 4, The Universe Roadmap, there is a section on access and equitability.

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Materials include standards correlations, including cross-content standards, that explain the standards within the context of the grade level.

- The materials include the accompanying TEKS, ELPS, and RTCs, as well as cross-content standards. These materials include science standards correlations for units, lessons, and activities within the context of the grade level or course in teacher guidance documents and online resources.
- Cross-curricular connections are made within some lessons in each unit of study in ELA and Math though the standards are not identified. Math extensions are included in some lessons.
- Each unit has a Literacy section that provides links to reading companions, vocabulary, and additional reading resources from Newsela. For example, in Unit 4, The Universe, Chapter 4 Scientific Storytelling Project, the students are introduced to the story spine as a way to structure a great story.

Materials include a comprehensive list of all equipment and supplies needed to support instructional activities.

- Materials include a comprehensive list of all equipment and supplies needed to support instructional activities. Items are differentiated between materials provided by the school/teacher, those that are optional, and those that are part of the Green Ninja Kit, as well as alternative materials where applicable.
- Materials include the materials list broken down by access: district/teacher provided or included in the Green Ninja Kit. For example, in the grade 7 Course Overview, both lists can be found with embedded links, as well as an option to export the list as a CSV.
- For example, in Unit 4 Exploring Early Earth Overview the Materials Tab lists every material required, with each accompanying lesson, as well as alternative materials where applicable.
- Materials include some suggestions for teacher implementation of supplies and equipment. For example, in the grade 7 Course Overview, there is a Green Ninja Classroom Tab. This tab includes suggestions for teacher implementation of physical supplies and discarding of supplies.

Materials include guidance for safety practices, including the grade-appropriate use of safety equipment during investigations.

- The materials provide teacher guidance for safety practices and grade-appropriate use of safety equipment during investigations, in accordance with Texas Education Agency Science Safety Standards. This list can be found in the Safety Guidelines section located in the lessons. Chemicals referenced in the Safety Guidelines sections of the lessons are accompanied by MSDS documents.
- The grade 7 Course Overview Materials Tab lists suggested practices for Field Investigations listing possible misconceptions/things to avoid.
- In Lab Activities, Safety Guidelines state: Danger: Know which allergies and sensitivities your students have, and be prepared for emergencies. Be aware of student allergies to food items such as raw eggs, milk products, food coloring, nuts, and flour. Be aware of student allergies to latex gloves, balloons, chalk, rubber tubing, bees, and other stinging insects, pollen, feathers, chemicals, plants, or animals. Before any activity involving possible allergens, review the guidance in the CDE Science Safety Handbook. Require students to complete the appropriate form listed in the CDE Science Safety Handbook. Maintain a list of emergency medications and

procedures to use if a student is exposed. Warning: Keep food outside the laboratory.

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Indicator 8.3

Materials provide implementation guidance to meet variability in program design and scheduling.

1	Materials support scheduling considerations and include guidance and recommendations on required time for lessons and activities.	M
2	Materials guide strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression.	M
3	Materials designated for the course are flexible and can be completed in one school year.	M

Meets | Score 2/2

The materials meet the criteria for this indicator. Materials provide implementation guidance to meet variability in program design and scheduling.

Materials support scheduling considerations and include guidance and recommendations on required time for lessons and activities. Materials guide strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression. Materials designated for the course are flexible and can be completed in one school year.

Evidence includes but is not limited to:

Materials support scheduling considerations and include guidance and recommendations on required time for lessons and activities.

- Materials support scheduling considerations and include guidance and recommendations on required time for lessons and activities. Suggested sequences of learning activities are noted as a clock in each of the lessons. Depending on student's progress, the sessions may be shorter or longer. Extension activities allow teachers to extend time for local needs in scheduling.
    - For example, in Lesson 2.2, Deadly Storms, there is a time estimate next to the clock icon for activating prior knowledge of 15 minutes, suggesting the amount of time needed to complete the activity.
    - For example, in Lesson 3.14, Organisms Are Systems, there is a total time of about 45 minutes next to the clock icon at the end of the lesson plan indicating the time required for all activities in the lesson to be complete.

Materials guide strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression.

- Materials guide strategic implementation without disrupting the sequence of content that must be taught in a specific order following a developmental progression. Each Unit has a Getting Started tab that provides a Unit Roadmap, a conceptual drawing that includes all the elements that will be covered within the unit. Lessons are organized into units by topic, which are broken into chapters that guide students to solve a challenge using scientific methods and end in a culminating experience. The lessons within the unit sequence the content in a developmentally appropriate way to accomplish the unit tasks.

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- In the 7th Grade Unit Food, the Roadmap uses baking and eating tortillas as a way of connecting the different themes of this unit. The first scene depicts the process of photosynthesis, as it takes place in the wheat plants, producing glucose and oxygen. The wheat flour (full of glucose) is then used to make tortilla dough (box 2). When the tortilla dough is baked, it undergoes a chemical reaction (box 3). In the last two boxes, students are reminded of the enduring phenomenon which describes how people and animals receive their energy from food. This roadmap will be a visual guide and reference for students throughout the unit.

Materials designated for the course are flexible and can be completed in one school year.

- The grade 7 materials include 138 lessons approximately 45 minutes in length, which are designed to be completed in a school year. Materials provide strategic Guidance for modification to the lesson sequence. For example, the material states: "The first chapter in each unit establishes the unit challenge and the last chapter assesses it, but each interior chapter of the unit stands alone as a cohesive piece that teachers can easily move around to meet their needs."
- The materials include additional extensions and resources, which can supplement the year's long content if the pace of a class has moved faster than outlined in the standard materials. For example, in all chapters of each lesson in the 6-8 grade band, the Chapter Review Lesson has an extension activity that has students explore a career website and answer the following questions: "What are some examples of green careers that are highlighted on the site? How do these careers contribute to a sustainable future? What education and training are typically required for green careers? How do the salaries and job prospects compare to traditional careers in similar fields? Are there any success stories or case studies of individuals who have transitioned to green careers from other fields? What steps can students take to prepare themselves for a career in the green industry?"

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Indicator 9.1

The visual design of materials is clear and easy to understand.

1	Materials include an appropriate amount of white space and a design that supports and does not distract from student learning.	Yes
2	Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting.	Yes
3	Materials include digital components that are free of technical errors.	Yes

Not Scored

The visual design of materials is clear and easy to understand.

Materials include an appropriate amount of white space and a design that supports and does not distract from student learning. Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. Materials include digital components that are free of technical errors.

Evidence includes but is not limited to:

Materials include an appropriate amount of white space and a design that supports and does not distract from student learning.

- Materials include an appropriate amount of white space and a design that supports and does not distract from student learning. Student documents have clear titles and headings with consistent formatting and sufficient white space to support student attention. Some documents include the strategic use of color, such as the Reading Companions.
    - For example, the Google Slide deck that accompanies each unit uses appropriate-sized font and white space. The slides employ color coding and symbols to indicate activities, discussions, and important vocabulary words consistently across units.
- Materials include a clear heading/title for each page, while subheadings have a clear hierarchy.
    - For example, the Unit 1 Overview page begins with a heading of Introduction followed by bulleted (with specific icons) relevant subheadings of Challenge, Science Methods, and Culminating Experience, following a logical progression.

Materials embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting.

- Materials consistently embed age-appropriate pictures and graphics that support student learning and engagement without being visually distracting. The activities within each unit include student handouts and presentation slides that have clear, visually engaging images that support student learning. These images can be found in the slide deck, reading companions, and unit roadmaps.
    - For example, slide 8 of the Unit 1, Food, Google Slide Deck shows two images of Texas Road Signs and an arrow to indicate what “Farm to Market” means in terms of

agriculture production. Students are able to make connections to the community and apply it to how agriculture is produced in the state.
    - In Unit 1, Lesson 1.15, the phenomenon shown is an image of a marine ecosystem with organism relationships identified and participating in an activity to demonstrate the roles of organisms in the Gulf of Mexico.
- Each slide deck has color-coded slides to represent “Discussion Slides.” These are orange in order to showcase the skill for both the teacher and student without distraction.

Materials include digital components that are free of technical errors.

- Materials are free of technical errors, including spelling, grammar, punctuation, and incorrect content and information. Errors are not found in the teacher lesson resources or the slide deck presentation.
    - For example, Lesson 3.2, What a Variety, has zero technical errors as it is free of spelling, grammar, and punctuation errors.
- Materials are free of inaccurate content materials or information. Each worksheet (embedded or linked) does not contain inaccurate content information.
    - For example, the Pre-Assessment for Unit 2, Water, has clear and accurate information included in the Answer Key, as well as additional background information explaining the content in the Teacher Background Section.

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Indicator 9.2

Materials are intentionally designed to engage and support student learning with the integration of digital technology.

1	Materials integrate digital technology and tools that support student learning and engagement.	Yes
2	Materials integrate digital technology in ways that support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content.	Yes
3	Materials integrate digital technology that provides opportunities for teachers and/or students to collaborate.	Yes
4	Materials integrate digital technology that is compatible with a variety of learning management systems.	Yes

Not Scored

Materials are intentionally designed to engage and support student learning with the integration of digital technology.

Materials integrate digital technology and tools that support student learning and engagement. Materials integrate digital technology in ways that support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content. Materials integrate digital technology that provides opportunities for teachers and/or students to collaborate. Materials integrate digital technology that is compatible with a variety of learning management systems.

Evidence includes but is not limited to:

Materials integrate digital technology and tools that support student learning and engagement.

- Materials integrate digital technology and tools that support student learning and engagement. The PocketLab activities are strategically integrated to provide students with real-time data for lab activities.
    - For example, in Unit 2, students use PocketLab devices to collect data and create concept maps or models that describe changes in the particle motion, temperature, and state of water when thermal energy is added or removed.
    - Digital simulations are strategically integrated to provide students with engaging interactive experiences. In Unit 4, students utilize Scratch to work on some basic examples to help them develop programming skills needed for upcoming lessons on Earth through time.
- Materials provide digital technology and tools enhance student learning through such features as simulations.
    - For example, in Lesson 4.2, Early Earth, students are able to complete a PhET Simulation of Gravity and Orbits.
    - In Lesson 2.15, Damages to Infrastructure, students complete a PocketLab simulation where they “compare the infrastructure of two cities to assess which one would be more prone to damages in the event of a flood.”

- Materials provide teacher guidance for using simulations, interactives, and related activities to support student learning. Teacher guidance includes suggestions for time and pacing, as well as ways to assist students with making observations, asking questions, collecting data, and participating in discussions. The digital technology provided can be found in the Teacher's Guide and/or digital presentation (Google Slides) materials.

Materials integrate digital technology in ways that support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content.

- Materials integrate digital technology in ways that support student engagement with the science and engineering practices, recurring themes and concepts, and grade-level content.
    - For example, materials provide opportunities for students to obtain, evaluate, and communicate information using digital tools. These opportunities can be found in the student digital materials (PhET simulations and PocketLab activities) and Teacher's Guide and/or digital presentation (Google Slides) materials.
    - For example, in Lesson 2.15, Damages to Infrastructure, students complete a PocketLab simulation where they “compare the infrastructure of two cities to assess which one would be more prone to damages in the event of a flood.” Students compare the infrastructure of two cities to assess which one would be more prone to damages in the event of a flood emphasizing the recurring theme of Compare and Contrast.
    - Materials integrate digital technology to support science and engineering concepts. For example, in Lesson 1.4, students utilize a PocketLab device to identify and investigate the cause and effect relationship of sunlight on carbon dioxide absorption in plants (7.5B).
- PhET Simulation activities are designed for students to experience real world applications of the content.
    - For example, in Lesson 4.2, Early Earth, students are able to complete a PhET Simulation of Gravity and Orbits and see in real time how these objects interact.
    - In Lesson 4.23, students utilize online PhET lab simulations to evaluate the cause-and-effect relationship between the Sun's mass and the Earth's orbit around the Sun (7.5B).
- PocketLab activities are strategically integrated to provide students with real-time data for lab activities.
    - For example, in Unit 2, students use Pocketlab devices to collect data and create concept maps or models that describe changes in the particle motion, temperature, and state of water when thermal energy is added or removed.

Materials integrate digital technology that provides opportunities for teachers and/or students to collaborate.

- Materials integrate digital technology that supports student-to-student collaboration.
    - For example, in Lesson 4.2, Early Earth, students are able to work together to complete a PhET Simulation of Gravity and Orbits and discuss how these objects interact.
    - In Lesson 2.15, Damages to Infrastructure, students work together to complete a PocketLab simulation where they “compare the infrastructure of two cities to assess which one would be more prone to damages in the event of a flood” including discussion of their findings.
    - Digital simulations are strategically integrated to provide students with engaging interactive experiences. In Unit 4, students utilize Scratch to work on some basic

examples to help them develop programming skills needed for upcoming lessons on Earth through time.

Materials integrate digital technology that is compatible with a variety of learning management systems.

- Materials utilize digital resources often in Google-based formats, i.e., Google Docs and Google Slides. These formats are commonly implemented in a variety of learning management systems that are found in the classrooms.
- Materials often include files and instructions in PDF format which enables the teacher to provide student access through a variety of learning management systems. In addition, it allows simplistic viewing on mobile devices when computers are not available.
- Materials are accessible and compatible with multiple operating systems and devices. The Unit Google Slide Decks are accessible and compatible with Chromebooks, iPads, PCs, and Apple computers, and or/smartphones, as well as editable on each of these platforms. For example, Unit 1, Food, Slide Deck can be edited and downloaded from the Unit Overview page.

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Indicator 9.3

Digital technology and online components are developmentally and grade-level appropriate and provide support for learning.

1	Digital technology and online components are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression.	Yes
2	Materials provide teacher guidance for the use of embedded technology to support and enhance student learning.	Yes
3	Materials are available to parents and caregivers to support student engagement with digital technology and online components.	Yes

Not Scored

Digital technology and online components are developmentally and grade-level appropriate and provide support for learning.

Digital technology and online components are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression. Materials provide teacher guidance for the use of embedded technology to support and enhance student learning. Materials are available to parents and caregivers to support student engagement with digital technology and online components.

Evidence includes but is not limited to:

Digital technology and online components are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression.

- Digital technology and online components are developmentally appropriate for the grade level and align with the scope and approach to science knowledge and skills progression.
    - For example, the PocketLab and PhET Simulations are used to enhance the teaching of the TEKS aligned content. Each is used when a specific TEKS is being taught. Throughout the grade levels, these digital materials can be found In each lesson/unit in the Teacher's Guide.
    - The materials provide a rationale in the course overview for their approach to technology and how it enhances student learning.
    - The materials provide related TEKS and ELPS for online and digital components within the lessons. Hyperlinks are available where appropriate to facilitate planning and ease of use.
- Materials provide a rationale for the use of the digital and online components in the Grade 7 Course Overview, Technology and Teaching Section. It states, "Exposing students to emerging and innovative technologies can encourage student engagement in science subjects and help to build student confidence in the use of technology. Grade 7 provides a variety of opportunities where students can use technology tools to enhance their learning. PocketLab is used in Unit 1 to measure carbon dioxide during cellular respiration. Students research the four stages of the food life cycle, and, for the culminating project, students research recipes to produce nutritionally balanced menus. In Unit 2, students learn about the use of satellites in collecting

precipitation data. A PhET simulation model can be used to explore the states of matter. Students design a simple piece of technology when they create a water filter. In Unit 3, posters are used to display the research on body systems. The culminating project concludes with the creation of a documentary about an endangered organism. Students learn about asteroid impacts in Unit 4, and think of ways in which technology can be used to prevent a future impact. After an introduction to computer coding, students create an animation to explain how to protect our planet in the future."

Materials provide teacher guidance for the use of embedded technology to support and enhance student learning.

- Materials provide clear instructions and tutorials on how to use the embedded technology.
    - For example, the 7th Grade Course Overview, Technology and Teaching Section, gives teacher guidance on how to implement PocketLab Activities, including a video tutorial as well as a PDF of both student instructions and teacher instructions.
- Materials include professional development videos and training for teachers to continue to develop their skills and knowledge in using the embedded technology to support and enhance student learning. Short "Crash Courses" are available, as well as (Zoom) Green Ninja Office Hours where teachers can ask questions and get guidance on embedding technology. All Day Professional Development Opportunities are also available in addition to the Course PockeLab Page that includes video tutorials.

Materials are available to parents and caregivers to support student engagement with digital technology and online components.

- Materials are available to parents and caregivers to support student engagement with digital technology and online components.
    - For example, all of the online simulations are accessible at home or any other location with internet access.
    - The majority of the worksheets and activities are included in PDF format to easily facilitate learning outside of the classroom.
- In the 7th Grade Course Overview, materials provide a PDF letter that teachers can share with families outlining the program and how caregivers can support their students' learning. It encourages families and caregivers to encourage curiosity in their students, get involved with the school and reinforce learning. This can be easily shared through any school's Learning Management System.
- Simulations, Green Ninja Show Videos, and Green Ninja Games like Carbon Command and Carbon Runner, are available on Green Ninja's Website without a required log-in, so they are easily accessible to families and caregivers to help support student engagement.