Criteria for Instructional Materials Review

Alignment to the 2014 Science Standards (NGSS)

The instructional materials align with the conceptual shifts of the NGSS:

**Criterion 1: Focus**

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

1a. In each 9-12 grade level, both student and educator materials, when used as designed, provide opportunities to develop and use specific elements of the practice(s) to make sense of phenomena and to design solutions to problems.

- Biology TE, p. 14 Data Analysis Lab
- Biology TE, p. 35 Analyze an Argument
- Biology TE, p. 41-49
- Physical Science TE, P. 356 (PBL – Catching Waves is online)
- Physical Science TE, p. 42 (Launch Lab is online)

1b. In each 9-12 grade level, both student and educator materials, when used as designed, provide opportunities to develop and use specific elements of the crosscutting concept(s) to make sense of phenomena and to design solutions to problems.

- Biology TE, p. 41 Flow of Energy in an Ecosystem
- Biology TE, p. 42 MiniLab
- Biology TE, p. 891 (Virtual Lab is online)
- Physical Science TE, p.3 (STEM Project is online)
- Physical Science TE, p. 43 (Theme Focus)

1c. In each 9-12 grade level, both student and educator materials, when used as designed, provide opportunities to develop and use specific elements of the disciplinary core idea(s) to make sense of phenomena and to design solutions to problems.

- Biology TE, p. 51 (BioLab)
- Biology TE, p. 533 (BioLab)
- Biology TE, p. 50 (Biology and Society)
- Physical Science TE, p. 94&95
- Physical Science TE, p. 117 (Mini-lab)

The McGraw-Hill School Education High School science programs were correlated to meet each Next Generation Science Standard (NGSS) performance expectation. The Alignment Guide is available in the online resources for the program. Within all high school products there are opportunities to experience the 3 dimensions in an integrated fashion. As the DCIs are introduced, students have the opportunity to explore the content through various means including performance tasks, applying practices (S&E Practices), inquiry opportunities, Webquests, Case Studies, etc., and the crosscutting concepts are embedded will be experienced throughout. These activities are incorporated into the teacher planning resources through the online portal [www.connected.mcgraw-hill.com](http://www.connected.mcgraw-hill.com)

**Life Science:**

*Glencoe Biology* provides an inquiry strand with a wealth of laboratory options throughout the program. The inquiry-based options offer scientific practice, encouraging problem-solving strategies and developmental critical thinking and process skills. The program’s strong inquiry strand gets students actively involved in the learning process by allowing them to manipulate variables and develop and test appropriate procedures. The Student Edition offers coherent lab options within each chapter, which allows students to develop strong inquiry skills. Students will develop a progression of knowledge and skills that allow them to think like a scientist to become successful with the chapter-end BioLab. The unique “Investigation and Experimentation” section provides students basics instruction and review of safe laboratory guidelines and procedures that they will use throughout the course.

Grade-appropriate evidence of the crosscutting concepts is found in the program materials. An Alignment Guide can be found in the following link: [https://www.dropbox.com/s/3vrijvqmmqg3xwg4/Biology%20Alignment%20Guide.pdf?dl=0](https://www.dropbox.com/s/3vrijvqmmqg3xwg4/Biology%20Alignment%20Guide.pdf?dl=0)

**Earth Science:**

*Earth Science: Geology, the Environment and the Universe* use inquiry-based learning opportunities where students...
participate in science discourse in and outside the classroom environment. Multiple lab opportunities such as Demo Labs, Launch Lab, Mini Labs, Data Analysis Labs, GeoLabs and virtual labs provides students with opportunities to collaborate and communicate findings. Specials features in the Earth Science: Geology, the Environment and the Universe such as Earth Science & Technology/Society & Expeditions provide students the opportunity to discuss and write in science. Other supporting resources found in the Earth Science textbook to support classroom discourse includes: Visualizing Activities, Projects, Academic Vocabulary, Word Origin, Science Usage v. Common Usage and Environmental Connections.

Found throughout MHE Earth Science: Geology: The Environment and the Universe textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the Earth Science: Geology, the Environment and the Universe textbook are aligned to NGSS see attached link.
https://www.dropbox.com/s/geh4axrywv5n29y/ES%20Alignment%20Guide.pdf?dl=0

Physical Science
The ConnectED Plan and Present software includes interactive presentations that promote class discussions. Students participate in grade-level appropriate science discourse and scientific writing using academic vocabulary in several settings.

Glencoe Physical Science was developed to incorporate inquiry-based learning. Teachers have numerous options for inquiry-based instructional strategies. There are numerous lab options for each chapter including Launch Labs, MiniLabs, Labs, Design Your Own Labs, Model and Invent Labs, and Use the Internet Labs. There are also additional labs throughout the Teacher Wraparound Edition such as Inquiry Labs, Alternate Inquiry Labs, and multiple discussion strategies designed to spark student questions.

Found throughout Glencoe Physical Science textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the Glencoe Physical Science textbook are aligned to NGSS see attached link
https://www.dropbox.com/s/fse9a28msduq219/PS%20Alignment%20Guide.pdf?dl=0

Glencoe Physical Science is a research-based program that was developed in collaboration with educators to provide students with the skills and understandings of physical science concepts. The provided correlation provides the documentation that demonstrates how Glencoe Physical Science meets the goals and objectives of the Core and Content Standards. The chapters are built around the ‘Big Ideas’ of physical science and every lesson supports the conceptual development of that broad science understanding. The focus of Physical Science is to afford all students the opportunity to experience the richness and excitement of the natural world around them, to help them acquire the skills needed for their future and to prepare them to address new and complex problems they will face as adults.
The instructional materials align with the conceptual shifts of the NGSS:

**Criterion 2: RIGOR**

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

2a. Materials support the development of students’ conceptual understanding of the natural world through experiential investigations by providing three-dimensional opportunities to fully engage and interpret scientific explanations.

- Biology TE, p. 514 (Launch Lab – Detail are online)
- Biology TE, p. 728 (MiniLab)
- Biology TE, p. 593 (BioLab)
- Physical Science TE, P. 381 (Applying Practices – Modeling Changes in Energy)

2b. Materials support the development of students’ conceptual understanding of the designed world through authentic engineering practices to define and solve problems by providing three-dimensional opportunities to fully engage and apply scientific knowledge.

- Biology TE, p. 1010
- Biology TE, p. 381
- Biology TE, p. 81 (Applying Practices)
- Physical Science TE, P. xii (Engineering Practices Handbook is online)

2c. Materials include authentic and content-appropriate practices for student-generated claims with scientific evidence to make sense of phenomena and engineering design through evaluating and developing procedural skills.

- Biology TE, p. 98 (Data Analysis Lab)
- Biology TE, p. 106 (WebQuest is Online)
- Biology TE, p. 916 (Applying Practices is online)
- Physical Science TE, P. 103 (STEM Project is online)

2d. Materials are designed so that educators and students spend sufficient time engaging in the science and engineering practices to better understand the nature and development of scientific knowledge in multiple interconnected and social contexts through student-generated discourse.

- Biology TE, p. 472 Discussion Group
- Biology TE, p. 173 (Share Your Data – BioLab)
- Biology TE, p. 182 (Activity – Make a Comparison)
- Physical Science TE, p. 89 (PBL Egghead is online)

Life Science:

Students participate in grade-level appropriate science discourse and scientific writing using academic vocabulary in several settings. Vocabulary margin features—Academic Vocabulary, Word Origin, and Science Usage v. Common Usage—also support scientific writing and discourse. The combination of Applying Practices activities (Evaluating Impacts of Environmental Change on Populations), PBL projects (Microbeads, Mega-problem), WebQuests (Careers in Biology: Wildlife Biologist), and inquiry activities (A Pond in a Jar), provides students with multiple opportunities to experience relevant phenomena in both representation format and in firsthand experience. Within the lessons Data Analysis Labs and DBQs present results from research presented in scientific literature to bring scientists doing science to the classroom. These activities engage students in phenomenon from various disciplines and involve them in three dimension learning. Students utilize science and engineering practices to make choices, design investigations, make models, analyze data and draw conclusion as they move toward a solution in real-life relevant scenarios. These opportunities allow students to make connections to the world they live in as they develop crucial problem-solving and critical thinking skills.

Earth Science:

Throughout the program students apply the Claim-Evidence-Reason Model to the Applying Practices opportunities. The
Applying Practices worksheets allows students to collaborate discussing the reasons behind the scenarios or problems presented while providing evidence to support their finding and explanation of why the claim was supported from the data obtained.

*Earth Science: Geology, the Environment and the Universe* provides an inquiry strand with a wealth of laboratory options throughout the program. The inquiry-based options offer scientific practice, encouraging problem-solving strategies and developmental critical thinking and process skills. The program’s strong inquiry strand gets students actively involved in the learning process by allowing them to manipulate variables and develop and test appropriate procedures. The Student Edition offers coherent lab options within each chapter, which allows students to develop strong inquiry skills. Students will develop a progression of knowledge and skills that allow them to think like a scientist to become successful with the chapter-end GeoLab.

The Teacher Wraparound Edition offers demonstration strategies that assist with clarifying topics within the lesson. The program provides two lab manuals online. Inquiry instruction can be diversified with a suite of inquiry options that can reach students where they are, while challenging others to excel.

**Physical Science**
The ConnectED Plan and Present software includes interactive presentations that promote class discussions. Students participate in grade-level appropriate science discourse and scientific writing using academic vocabulary in several settings.

*Glencoe Physical Science* was developed to incorporate inquiry-based learning. Teachers have numerous options for inquiry-based instructional strategies. There are numerous lab options for each chapter including Launch Labs, MiniLabs, Labs, Design Your Own Labs, Model and Invent Labs, and Use the Internet Labs. There are also additional labs throughout the Teacher Wraparound Edition such as Inquiry Labs, Alternate Inquiry Labs, and multiple discussion strategies designed to spark student questions.

*Glencoe Physical Science* has a unique scope and sequence based on extensive research. This program has implemented the thoroughly researched pedagogy of sequencing a curriculum in order from more concrete concepts and progressing towards more abstract concepts. Physical Science begins with the concrete concepts of motion, forces and energy and builds complexity to the Big Idea of energy through electricity, magnetism, waves, sound, and light. Once a sound foundation of energy is built, students explore the more abstract world of chemistry, starting with matter and progressing into bonding, chemical reactions and materials chemistry.

*Glencoe Physical Science* encourages students to think critically and builds analysis and problem solving skills.

- Every Lab in the Student Edition gives students the opportunity to analyze, conclude and apply. There is also a strategy for Communicating Your Data.
- Design Your Own Labs and Model and Invent Labs allow students creativity in solving the problem.
- In the Leveled Resources book, there are leveled versions of the labs. The B version of each lab has a Challenge and Extension section that is an opportunity to go further.
- The Teacher Wraparound Edition often includes alternative Inquiry labs that provide teachers with strategies for Inquiry and extension.
The instructional materials align with the conceptual shifts of the NGSS:

**Criterion 3 & 4: COHERENCE**

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

3a. Materials provide strong integration of science and engineering practices, disciplinary core ideas, and crosscutting concepts **within each and across grade levels.**

Biology TE, p. 144-145  
Biology TE, p. 146A&B  
Biology TE, p. xviii-xix (Real World STEM)  
Earth Science TE, p. xvi-xxvii  
Physical Science TE, P. 104 A&B

3b&c. Materials **within each unit and course** provide coherent learning experiences that help students develop proficiency on a targeted set of three-dimensional performance expectations by intentionally linking prior knowledge and skills as a basis of engagement.

Biology TE, p. 266-267 (5 minute launch and video is online)  
Biology TE, p. (268A Materials and Planning)  
Biology TE, p. 268 (Launch Lab)  
Biology TE, p. 273 (Visual Literacy and Animation is online)  
Biology TE, p. 281 (MiniLab and Virtual Lab is online)

3d. Materials **within each unit and course** focus on the application of authentic and content-appropriate knowledge, skills, and reasoning.

Biology TE, p. 286  
Biology TE, p. 287  
Biology TE, p. 300 (MiniLab)  
Biology TE, P. 309 (Applying Practices, Investigating Genetic Variation is Online)  
Biology TE, p. 303 Data Analysis Lab

**Life Science:**

Crosscutting Concepts are themes that appear throughout all branches of science and engineering. These are not directly correlated but are found implicitly in the other correlations listed on the page. The cross-cutting concepts are found within the applying practices, the performance tasks, the WebQuests and many of the inquiry exercises. Patterns, models, energy flow and the other crosscutting concepts are experienced throughout.

The engineering performance expectations are always presented in the context of the DCI they relate to. The engineering designed loop is used in many of the activities but are not isolated from context. A number of the labs also contain engineering practices as students design their labs.

Grade-appropriate evidence of the crosscutting concepts is found in the program materials. An Alignment Guide can be found in the following link: [https://www.dropbox.com/s/3vriyvmmqoxmg4i/Biology%20Alignment%20Guide.pdf?dl=0](https://www.dropbox.com/s/3vriyvmmqoxmg4i/Biology%20Alignment%20Guide.pdf?dl=0)

Vertical alignment of science concepts is inherent in the NGSS, allowing students a progression in understanding of key concepts. Student activities and questions throughout *Glencoe Biology* provide opportunities for identifying gaps in prior knowledge and building on it in all three areas. The 5-Minute Unit Launch (TE p. 144) is a short pre-teaching activity, such as K-W-L, teachers can use as a warm-up and gauge of prior knowledge. The Chapter Diagnostic Test also probes prior learning and plan lessons. The Launch Lab at the beginning of each chapter provides structured inquiry into the content of the chapter and allows students to apply what they have already learned.

LearnSmart with SmartBook is an online, interactive version of the textbook with adaptive, continual assessment and metacognitive tools to help teachers and students know what the student has mastered and what the student needs to focus on.
**Earth Science:**
The engineering performance expectations are always presented in the context of the DCI they relate to. The engineering designed loop is used in many of the activities but are not isolated from context. A number of the geo-labs also contain engineering practices.

*Earth Science: Geology, the Environment and the Universe* use inquiry-based learning opportunities where students participate in science discourse in and outside the classroom environment. Multiple lab opportunities such as Demo Labs, Launch Lab, Mini Labs, Data Analysis Labs, GeoLabs and virtual labs provides students with opportunities to collaborate and communicate findings. Specials features in the *Earth Science: Geology, the Environment and the Universe* such as Earth Science & Technology/Society & Expeditions provide students the opportunity to discuss and write in science. Other supporting resources found in the Earth Science textbook to support classroom discourse includes: Visualizing Activities, Projects, Academic Vocabulary, Word Origin, Science Usage v. Common Usage and Environmental Connections.

Found throughout *MHE Earth Science: Geology: The Environment and the Universe* textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the *Earth Science: Geology, the Environment and the Universe* textbook are aligned to NGSS see attached link.

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**Physical Science**
*Glencoe Physical Science* encourages students to think critically and builds analysis and problem solving skills.
- Every Lab in the Student Edition gives students the opportunity to analyze, conclude and apply. There is also a strategy for Communicating Your Data.
- Design Your Own Labs and Model and Invent Labs allow students creativity in solving the problem.
- In the Leveled Resources book, there are leveled versions of the labs. The B version of each lab has a Challenge and Extension section that is an opportunity to go further.
- The Teacher Wraparound Edition often includes alternative Inquiry labs that provide teachers with strategies for Inquiry and extension.

*Glencoe Physical Science* provides connections to life science & Earth science as well as to other curricular areas such as Math, Language Arts, & Social Studies. Throughout the student edition, there is liberal use of graphs, tables & charts for students to interpret, math problems to work out, and cross-curricular connections. In the Teacher Wraparound Edition, teachers are supplied with strategies for supporting math, and opportunities to make cross-curricular connections.

Found throughout MHE *Glencoe Physical Science* textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the Glencoe Physical Science textbook are aligned to NGSS see attached link


*Glencoe Physical Science* has a unique scope and sequence based on extensive research. This program has implemented the thoroughly researched pedagogy of sequencing a curriculum in order from more concrete concepts and progressing towards more abstract concepts. Physical Science begins with the concrete concepts of motion, forces and energy and builds complexity to the Big Idea of energy through electricity, magnetism, waves, sound, and light. Once a sound foundation of energy is built, students explore the more abstract world of chemistry, starting with matter and progressing into bonding, chemical reactions and materials chemistry.
4. Materials are directly connected to the appropriate grade-level performance expectations to develop and use specific science and engineering practices, disciplinary core ideas, and crosscutting concepts that are integrated to develop and support students’ sense-making of phenomena and design solutions to problems.

**Biology TE, p. 308 (Virtual Lab is Online)**
**Biology TE, p. 316 (In the Field)**
**Biology TE, p. 317 (Bio Lab)**
**Physical Science TE, p. 343 (Applying Practices – Is Light a Wave or a Particle is online)**
**Physical Science TE, p. 548-549 (STEM Project is online)**

**Life Science:**
The Scientific and Engineering Practices Handbook provides the basis for understanding the practices and contains examples of how the S&E practices can be integrated into the classroom. The applying practices activities and the PBL’s were meant to involve students in using the S&E practices to solve problems. They help students integrate those problems as well. All of these activities are open where students make choices and design solutions. The geo-labs within the text also contain a number of design your own labs. The Applying Practices and Project-Based Learning activities are found at point of use within the Plan and Present Tab of the online teacher resources.

Students participate in grade-level appropriate science discourse and scientific writing using academic vocabulary in several settings. These include class discussions initiated from activities and teacher demonstrations, during lab reports, Applying Practices activities (online in ConnectED), WebQuests, and PBLs (online in ConnectED), in chapter review critical thinking responses, Document-Based Questions, Short Answer, Extended Response, and Essay Questions, Debate in Biology, and in Writing in Biology. Vocabulary margin features—Academic Vocabulary, Word Origin, and Science Usage—also support scientific writing and discourse.

Grade-appropriate evidence of the crosscutting concepts is found in the program materials. An Alignment Guide can be found in the following link: [https://www.dropbox.com/s/3vriyqmmqwxwg4i/Biology%20Alignment%20Guide.pdf?dl=0](https://www.dropbox.com/s/3vriyqmmqwxwg4i/Biology%20Alignment%20Guide.pdf?dl=0)

The ConnectED digital platform for *Glencoe Biology* brings a new level of engagement, communication, and effectiveness to the classroom. A one-stop shop where students and teachers can access the student eBook, digital resources, videos, worksheets, presentations, assessment tools, and planning and messaging tools.

Through the inquiry activities found in *Glencoe Biology*, students are asked to define the problem, form a hypothesis, and design investigations to test their ideas. Many involve peer review and allow students to extend the investigation with further refinements.

The textbook has special features in each chapter (Cutting-Edge Biology, Biology & Society, In the Field) that describe how science and technologies impact people’s life. Students are provided with opportunities to research, evaluate, and write about the topics. Some encourage class debates.

The Applying Practices activities, PBL projects, Webquests, and other phenomenon-based activities have students present their explanations and arguments in a larger setting and in a variety of media to expand the three-dimensional learning.

*Glencoe Biology* offers a Teacher Edition print and online full of research-based strategies to support and differentiate instruction (TE pp. 222-233,) including Develop Concepts, Reading Strategy, Skill Practice, Writing Support, Differentiated Instruction, Critical Thinking, Demonstration, Content Background, Clarify Misconceptions, and Formative Assessments. The Teacher Edition teaching strategies and activities have been coded for ability-level appropriateness. A competency level is given for each activity using the following code: AL activities for students working above grade level; OL on grade level; BL below grade level; EL activities for English learners.

The Teacher Edition Chapter Organizer planning pages appear at the beginning of each chapter (TE pp. 216A-216B.) These pages detail all Essential Questions, lab materials, suggested pacing, ancillaries, and online resources for the chapter. The planning pages also show the leveling key which describes the differentiated instruction used in the chapter.

Reading Essentials, for struggling readers in both English and Spanish, provides the content at an accommodated level. Science Notebook guides students in making meaningful connections with the text through Cornell note-taking. Graphic organizers called Foldables are also available, as well as interactive dissections, Vocabulary eFlashcards and eGames in English and Spanish, minigames, and videos and animations. All of these resources can be used with EL students who need alternative strategies for reading and comprehending the text.

**Earth Science:**
The Scientific and Engineering Practices Handbook provides the basis for understanding the practices and contains examples of how the S&E practices can be integrated into the classroom. The applying practices activities and the PBL’s
were meant to involve students in using the S&E practices to solve problems. They help students integrate those problems as well. All of these activities are open where students make choices and design solutions. The geo-labs within the text also contain a number of design your own labs. The Applying Practices and Project-Based Learning activities are found at point of use within the Plan and Present Tab of the online teacher resources.

In the Teacher Wraparound Edition, strategies have been laid out to help with organization. The following teaching strategies are in found in each chapter section: Focus, Teach, and Assess. An activity to reteach and an assessment skill are provided to help with understanding. A competency level is given for each activity using the following codes: AL= activities for students working above grade level, OL= on grade level, BL= below grade level, and EL= activities for English Learners. Assessments are found at the end of each section along with the chapter assessment.

The lab manual online gives detailed labs with the answers given in the back. The Unit/ Chapter (Fast File) Resources online provide review and mastery for key earth science concepts. The ConnectED Plan and Present software allows teachers to plan lessons with a customizable calendar and the ability to edit student worksheets to meet learners’ needs. The eAssessment Suite in ConnectED allows teachers to prepare lesson assessments by selecting questions based on difficulty level. The ConnectED platform includes teacher materials such as Plan and Present software that allows the teacher to build customized lesson plans and edit student worksheets to address learner needs as well as use the prepared interactive presentations or edit them to fit the students’ needs.

Found throughout Earth Science: Geology, the Environment and the Universe textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the Earth Science: Geology, the Environment and the Universe textbook are aligned to NGSS see attached link:
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Physical Science
Glencoe Physical Science provides connections to Life Science and Earth Science as well as to other curricular areas such as Math, Language Arts, & Social Studies. Throughout the student edition, there is liberal use of graphs, tables and charts for students to interpret, math problems to work out, and cross-curricular connections. In the Teacher Wraparound Edition, teachers are supplied with strategies for supporting math, and opportunities to make cross-curricular connections.

Glencoe Physical Science provides Project-Based Learning Activities (PBLs) which challenges the way students solve and analyze complex real-world problems. Project-Based Learning Activities integrate traditional science content with engineering practices using the engineering design loop.

Found throughout MHE Glencoe Physical Science textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the Glencoe Physical Science textbook are aligned to NGSS see attached link:
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**Criterion 6 & 7: COHERENCE**

The interdependence and the influence of science, engineering and technology on society and the natural world along with the understanding of the nature of science are interconnected to the content being addressed.

6a. Materials integrate the interdependence of science, engineering, and technology as significant elements in learning experiences.

   - Biology TE, p. 528 (Data Analysis Lab)
   - Biology TE, p. 953 (BioLab – Forensics)
   - Biology TE, p. 1067 (Internet Lab)
   - Physical Science TE, P. 298 (How it Works)

6b. Materials demonstrate the influence of engineering, technology, and science on society and the natural world as significant elements in learning experiences.

   - Biology TE, p. 1011 (Internet Lab)
   - Biology TE, p. 81 (Applying Practices – Microbeads is online)
   - Biology TE, p. 350
   - Physical Science TE, P. 574

**Life Science:**

*Glencoe Biology* incorporates features to help students develop the skills essential for success in a first year-biology course. The biology program places a strong emphasis on student comprehension through visual literacy. The conceptual presentation is organized around Themes, Big Ideas, and the Main Ideas in biology. Real-World Reading Links in each section draw the student’s attention into the narrative with relevant analogies that help clarify topics, making them more understandable. Relevant applications throughout the textbook are highlighted with instructional photos, illustrations, tables, and high interest, student-centered special features. Inquiry-based learning is a strong strand throughout the textbook. The program offers multiple lab manuals online that have a strong diverse inquiry approach.

The Real-world sections in *Glencoe Biology* include a wealth of reading that allows teachers to infuse into their class ethical discussions on issues that science and technology bring to society. All of the special features that connect students’ lives and the world around provide writing extensions. These Student Edition elements create opportunities for students to discuss science and ethical issues. The Section and Chapter Assessment includes specific writing questions to create scenarios for students to express their understanding in relationship to the lessons’ key idea.

The Teacher Edition also has more Real-World Connections in the margins along with Writing Support activities that bring out ethical issues. Writing rubrics are provided on ConnectED. The web site provides WebQuests with safe, reliable websites for students to research current ethical issues in science.

The book is organized around Themes, Big Ideas, and Main Ideas of biology. Themes are overarching concepts based on the NGSS crosscutting concepts used throughout the entire book that help students tie what they learn together. They help students see the connections among major ideas and concepts. The Big Idea summarizes the chapter content in an overarching statement and helps students focus on topics within the Themes. The Big Idea is broken down into Main Ideas, which describe the focus of each lesson. This instructional strategy is further supported by the many instructional materials that make up this complete biology curriculum.

All of the activities and projects—Applying Practices, PBLs, Webquests, and lab—contain detailed teacher plans, giving the teachers the freedom to give a high level of support or a minimal level of support. The teacher then can differentiate and move students along the inquiry spectrum from structured and guided to fully independent.

**Earth Science:**

The engineering performance expectations are always presented in the context of the DCI they relate to. The engineering designed loop is used in many of the activities but are not isolated from context. A number of the geo-labs also contain engineering practices.

*Earth Science: Geology, the Environment, and the Universe* provides a strong assessment strand. The program provides leveled questions that give students opportunities to respond at various levels of problem-solving and understanding. “Think Critically” questions are found at the end of each chapter section and in the Chapter Assessment. Document-Based Questions (DBQ) provides questions based on real-world data. GeoLabs include opportunities for students to extend and apply the knowledge and skills to a related Earth science topic.
Earth Science: Geology, the Environment, and the Universe provides Project-Based Learning Activities (PBLs) which challenges the way students solve and analyze complex real-world problems. Project-Based Learning Activities integrate traditional science content with engineering practices using the engineering design loop.

Physical Science
Glencoe Physical Science provides Project-Based Learning Activities (PBLs) which challenges the way students solve and analyze complex real-world problems. Project-Based Learning Activities integrate traditional science content with engineering practices using the engineering design loop.

The focus of Glencoe Physical Science is to afford all students the opportunity to experience the richness and excitement of the natural world around them, to help them acquire the skills needed for their future and to prepare them to address new and complex problems they will face as adults. The Teacher Wraparound Edition provides a variety of instructional strategies to help teachers build these skills in all of their students. In each chapter, Differentiated Instruction notes give teachers specific lesson strategies for leveling the activities, questions and instruction of the lesson to meet the varying needs of students in their classroom. Explicit directions are provided to support teachers as they develop their lesson plans. The Teacher Wraparound Edition also provides explicit directions on when and where to use the supplemental materials that support each lesson or to address special classroom needs. Each chapter has a planning chart that indicates the lesson objectives, the associated resources and the technology components that support instruction.
7. Materials integrate understandings about the nature of science as significant elements in learning experiences.
Biology TE, p. 2-23
Biology TE, p. 1002 (MiniLab)
Biology TE, p. 137 (Field Investigation)
Physical Science TE, p. 4-36
Physical Science TE, p. 298

Life Science:
Glencoe Biology provides an inquiry strand with a wealth of laboratory options throughout the program. The inquiry-based options offer scientific practice, encouraging problem-solving strategies and developmental critical thinking and process skills. The program’s strong inquiry strand gets students actively involved in the learning process by allowing them to manipulate variables and develop and test appropriate procedures. The Student Edition offers coherent lab options within each chapter, which allows students to develop strong inquiry skills. Students will develop a progression of knowledge and skills that allow them to think like a scientist to become successful with the chapter-end BioLab. The unique “Investigation and Experimentation” section provides students basics instruction and review of safe laboratory guidelines and procedures that they will use throughout the course.

The Teacher Wraparound Edition offers demonstration strategies that assist with clarifying topics within the lesson. The Glencoe Biology program offers six different lab manuals online. Inquiry instruction can be diversified with a suite of inquiry options that can reach students where they are, while challenging others to excel.

Virtual Labs are available on ConnectED. These labs allow students to manipulate variables, collect and analyze data, and draw conclusions in a unique interactive inquiry format that is ideal for exploration, reinforcement, and extension of key concepts. Video Labs are used to help students gain confidence with laboratory process skills by first seeing them being done by students before they attempt the procedure in the laboratory.

Students are provided numerous supports for their engagement in labs, activities, and projects. The Science and Engineering Practices Handbook available online in ConnectED introduces the practices and well as scientific methods and the engineering design process. Additional background on the nature of science, hypotheses, scientific theories, and scientific laws can be found in chapter 1 of the Student Edition. In the back of the Student Edition, the Investigation and Experimentation appendix and the Skillbuilder Handbook, which includes Problem-Solving Skills and Math Skills, serve as further reinforcement and help build independence. The labs, activities, and projects in Glencoe Biology lie along a spectrum from traditional hands-on teacher-controlled to fully student-controlled, making students increasingly responsible for their investigations and solutions.

Earth Science:
Earth Science: Geology, the Environment, and the Universe offers Earth Science 4 You at the beginning of each section, providing students with an everyday relevant analogy that helps to clarify the key idea of the lesson. The program provides hands-on activities that relate Earth science to students’ everyday lives. The unit openers and career features encourage students to go beyond the classroom to investigate the Earth science behind the products and processes that are a part of their world. With these aspects of the program, students gain a greater appreciation for the applications of Earth science that make their world a better place. The “Expedition” features let students investigate a day in the life of people working in the field of Earth science. They also learn what is required of them if they are to prepare to join the scientists they read about. “What’s Earth Science Got to Do With it?” video series offers fast paced videos that connect concepts to contemporary examples found in the students’ world.

Physical Science
The focus of Glencoe Physical Science is to afford all students the opportunity to experience the richness and excitement of the natural world around them, to help them acquire the skills needed for their future and to prepare them to address new and complex problems they will face as adults. The Teacher Wraparound Edition provides a variety of instructional strategies to help teachers build these skills in all of their students. In each chapter, Differentiated Instruction notes give teachers specific lesson strategies for leveling the activities, questions and instruction of the lesson to meet the varying needs of students in their classroom. Explicit directions are provided to support teachers as they develop their lesson plans. The Teacher Wraparound Edition also provides explicit directions on when and where to use the supplemental materials that support each lesson or to address special classroom needs. Each chapter has a planning chart that indicates the lesson objectives, the associated resources and the technology components that support instruction.
The Reading Essentials resource provides on-level content at a lower-reading level for students who need extra assistance. The *Glencoe Physical Science* web site aids learners with online content, review, practice, assessment, and remediation.

The LearnSmart with SmartBook program allows students and teachers to constantly assess understanding of a given topic and automatically modify the content of the books to match the student’s learning needs. LearnSmart generates data for the student and teacher so that lessons and if necessary intervention can be precisely crafted for each student.
The instructional materials align with the conceptual shifts of the NGSS:

**Criterion 5, 8 & 9: COHERENCE**

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

5. Materials provide learning opportunities that include instructional strategies to facilitate three-dimensional learning.
   - Biology TE, p. 131 (PBL – Cleaning Up an Oil Spill is online)
   - Biology TE, p. 47 (Applying Practices – Modeling the Carbon Cycle is Online)
   - Biology TE, p. 146 (Foldable)
   - Biology TE, p. 623 (Field Investigation)
   - Biology TE, p. 50

Digital high school science solutions, solving real problems for the real world:
- Project-Based Learning Activities (PBLs)
- Science and Engineering Practices Handbook
- Applying Practices Worksheets

New Applying Practices activities and Project-Based Learning activities, each written to a specific NGSS performance expectation, appear at point of use. These editable worksheets can be filled in online or downloaded. Your students will be engaged and successful, integrating the three dimensions—disciplinary core ideas, science and engineering practices, and cross-cutting concepts!

LearnSmart dynamically adjusts the learning content to match the student’s progress, based on the student’s demonstrated skill and level of confidence in his or her knowledge. Because no two students experience the application in the same way, the sequence of practice questions is presented to each student uniquely.
8. Instructional sequence consistently provides multiple opportunities and adequate time for student learning.

Biology TE, p. 146A&B
Biology TE, p. 146 (Launch Lab)
Biology TE, p. 150&151 (Skill Practice, BrainPop, Writing Support)
Physical Science TE, p. 104A&B
Physical Science TE, 110 (Example and Practice Problems)

**Life Science:**
Through the inquiry activities found in *Glencoe Biology*, students are asked to define the problem, form a hypothesis, and design an experiment to test their idea. Once they have their data, they are asked to modify the experiment’s design to remove uncertainties so they achieve clearer results. The textbook has special features (Cutting-Edge Biology, Biology & Society, In the Field) that describe how new technologies impact people’s life. Students are provided with opportunities to evaluate and write about the impact of human endeavors on their world.

The *Glencoe Biology* program provides a variety of laboratory manuals that further students’ opportunities to engage in inquiry experiments that supports understanding of major biology concepts. The Virtual Labs provide interactive manipulations of variables that support engineering design principles. The Video Lab online helps students with reviewing selected lab procedures. The web site offers students access to the virtual labs and WebQuest activities.

The Real-world sections in *Glencoe Biology* include a wealth of reading that allows teachers to infuse into their class ethical discussions on issues that science and technology bring to society. All of the special features that connect students’ lives and the world around provide writing extensions. These Student Edition elements create opportunities for students to discuss science and ethical issues. The Section and Chapter Assessment includes specific writing questions to create scenarios for students to express their understanding in relationship to the lessons’ key idea.

The structure of the unit and/or lessons within *Glencoe Biology* targets a gradual release model of the conceptual framework of the science. Students’ knowledge and understanding build while moving from lesson to lesson. They are then able to apply practices and concepts to rigorous situations. The ability to meet the performance expectations lies in the deep exposure to the DCIs, while using the practices and the Crosscutting Concepts. The crosscutting concepts, such as patterns, cause and effect, structure and function, and matter and energy, are found throughout the Applying Practices, the PBLs, the WebQuests, and the inquiry activities.

The science and engineering practices are detailed in the Science and Engineering Practices Handbook. But the practices are integral to the performance expectations that are always presented in the context of the DCIs they relate to. They are not done in isolation from context. A number of the labs also involve engineering practices as students design their investigations and perform analyses.

**Earth Science:**
*Earth Science: Geology, the Environment, and the Universe* provides a strong assessment strand. The program provides leveled questions that give students opportunities to respond at various levels of problem-solving and understanding. “Think Critically” questions are found at the end of each chapter section and in the Chapter Assessment. Document-Based Questions (DBQ) provide questions based on real-world data. GeoLabs include opportunities for students to extend and apply the knowledge and skills to a related earth science topic.

Student activities and questions throughout *Earth Science: Geology, the Environment, and the Universe* provide opportunities for ongoing assessment and remediation. The Launch Lab is an entry-level assessment (diagnostic) that assesses students’ prior knowledge at the beginning of a chapter. In the Teacher Wraparound Edition, the “Identity Misconception” feature provides diagnostic assessment. Formative assessment strategies are provided in the margins of the Teacher Wraparound Edition. This Teacher Wraparound Edition provides an “Assess” checkpoint, which provides an evaluation of key section concepts and an activity to re-teach students who are struggling to meet the learning objective.

**Physical Science**
*Glencoe Physical Science* encourages students to think critically and builds analysis and problem solving skills.

- Every Lab in the Student Edition gives students the opportunity to analyze, conclude and apply. There is also a strategy for Communicating Your Data.
- Design Your Own Labs and Model and Invent Labs allow students creativity in solving the problem.
- In the Leveled Resources book, there are leveled versions of the labs. The B version of each lab has a Challenge and Extension section that is an opportunity to go further.
• The Lab Videos online are video versions of labs. If students have problems with the lab, they can use the video to observe where they may have erred and can see the expected results.
• The Teacher Wraparound Edition often includes alternative Inquiry labs that provide teachers with strategies for Inquiry and extension.

*Glencoe Physical Science* is a research-based program that was developed in collaboration with educators to provide students with the skills and understandings of physical science concepts. The correlation provides the documentation that demonstrates how *Glencoe Physical Science* meets the goals and objectives of the Core and Content Standards. The chapters are built around the Big Ideas of physical science and every lesson supports the conceptual development of that broad science understanding. The focus of Physical Science is to afford all students the opportunity to experience the richness and excitement of the natural world around them, to help them acquire the skills needed for their future and to prepare them to address new and complex problems they will face as adults.
9a. Materials use diverse instructional strategies that provide clear purposes for learning experiences (e.g., elicit preconceptions, teach new knowledge, build skills and abilities, and connects to prior knowledge).
Biology TE, p. 417 (Foldable and Directed Reading)
Biology TE, p. 418 (KWL)
Biology TE, p. 420 (Data Analysis Lab and Demonstration)
Biology TE, p. 421 (Visualization)
Biology TE, p. 420 (Applying Practices – Can You Beat Natural Selection with Camouflage is online)

9b. Materials use instructional strategies in a logical progression that provides clear purposes for learning experiences (e.g., elicit preconceptions, teach new knowledge, build skills and abilities, and connect to prior knowledge).
Physical Science TE, p. 102&103 (Themes, Unit Projects, Use the Photo)
Physical Science TE, p. 104&105 (Launch Lab, Foldables, Themes)
Physical Science TE, p. 106 (Reading Preview, Main Idea)
Physical Science TE, p. 110 (Identifying Misconceptions)
Physical Science TE, p. 112-113 (Assess and Lab)

Life Science:
The number and quality of the opportunities for the student to think critically, creatively, and reflectively in scientific investigations are almost overwhelming in Glencoe Biology program. The number of scientific investigations in the ancillary laboratory manuals in addition to the number of labs in the textbook far exceeds the number of days in the school calendar. The teacher has the opportunity to choose the best ones to fit the local circumstances and needs of the students. The “Data Analysis Labs” and “Document-Based Questions” (DBQ) cites the actual research source from which the questions are based. This information allows students to opportunity to delve deeper into the research and extend their learning experience.

The inquiry activities found in Glencoe Biology, students are asked to define the problem, form a hypothesis, and design an experiment to test their idea. Once they have their data, they are asked to modify the experiment’s design to remove uncertainties so they achieve clearer results. The textbook has special features (Cutting-Edge Biology, Biology & Society, In the Field) that describe how new technologies impact people’s life. Students are provided with opportunities to evaluate and write about the impact of human endeavors on their world.

The Glencoe Biology program provides a variety of laboratory manuals that further students’ opportunities to engage in inquiry experiments that supports understanding of major biology concepts. The Virtual Labs provide interactive manipulations of variables that support engineering design principles. The Video Lab online helps students with reviewing selected lab procedures. The web site offers students access to the virtual labs and WebQuest activities.

The eAssessment program on ConnectED allows teachers to build summative assessment that can be customized for each lesson of the student edition. ConnectED’s Plan and Present software includes formative and summative assessment. The Unit (Fast Files) resources booklets include formative assessment for each section of the text. Plus, the “Chapter Test” assessment is provided in three levels to support differentiated instruction. The program’s web site provides students additional formative and summative self-assessment practice. Students can email online assessment results to teachers and parents.

Earth Science:
Earth Science: Geology, the Environment, and the Universe provides the students with relevant information that builds on their personal experiences. The high interest special features in each chapter make a connection with some aspect of students’ everyday life and society at large. The unit openers depict a career focus that relates to various applications of Earth science. The “Expedition” features offer interesting and relevant connections that allow students to extend and enrich knowledge and skills regarding an earth science concept.

The program provides two lab manuals online. Inquiry instruction can be diversified with a suite of inquiry options that can reach students where they are, while challenging others to excel.

The online ConnectED platform is a simpler solution for students and teachers to explore, be engaged and supplied with all their resources tied to the textbook. This platform allows learning and teaching to happen anytime and anywhere with the supporting resources they need.
Earth Science: Geology, the Environment, and the Universe clearly highlights new and review vocabulary at the beginning of each section of instruction in the student edition. All key terms are boldfaced, highlighted and defined in context within the paragraph that it is used. The textbook integrates student-friendly margin features that provide vocabulary support to clues, root words, prefixes and suffixes; in order to help the student. Foldables ™ are three-dimensional graphic organizers that provide review and reinforcement of vocabulary related to the big idea of the chapter. The chapter-end Study Guide reviews all of the important key scientific vocabulary by section that is also related to the chapter’s big idea.

The Science Notebook is a student resource tool that provides unique vocabulary and writing support for key earth science concepts. The Plan and Present software in ConnectED provides the teacher with an interactive, editable presentation that has visual and auditory reinforcement as new vocabulary is being taught. The eBook on ConnectED provides audio that aids the acquisition of key scientific vocabulary related to earth science. The Media Library offers audio downloadable readings for each chapter. ConnectED offers “Vocabulary eFlashcards” and “Vocabulary eGames” in English and Spanish for review and practice of important terms used in Earth science.

Physical Science
The LearnSmart with SmartBook program allows students and teachers to constantly assess understanding of a given topic and automatically modify the content of the books to match the student’s learning needs. LearnSmart generates data for the student and teacher so that lessons and if necessary intervention can be precisely crafted for each student.

Glencoe Physical Science engages students through active learning and real-world applications to concepts. Inquiry-based activities along with strategies such as Foldables and Virtual Labs teach students the key concepts and processes of science while capturing their interest and curiosity. The program also offers alternative presentations of concepts through various media to insure that all learners have the opportunity to understand the concepts. The Student Edition is not only in print format, but is available online as an eBook and as LearnSmart. The electronic editions include Concepts in Motion animations, interactive tables and other enhancements such as access to student worksheets and additional practice and review. Virtual Labs allow students to explore concepts through lab simulations. Students can also use these engaging tools for practice and review. Foldables are three-dimensional, interactive, graphic organizers. They provide students with an interactive way to organize information. Reading Essentials is a leveled version of the text, providing all of the content of the Student Edition at a lower reading level. The Science Notebook then provide students with varied activities that encourage them to put concepts into their own words and interact with them at a higher level to reinforce understanding.
The instructional materials align with the conceptual shifts of the NGSS:

**Criterion 3 & 10: COHERENCE**

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

3e. Materials **across and throughout grades 9-12** build coherent learning progressions by integrating science and engineering practices, disciplinary core ideas, and crosscutting concepts.

- Biology TE, p. 121 (Applying Practices – Biodiversity in Leaf Litter is online)
- Earth Science TE, p. 691 (PBL = Environmental Consulting is online)
- Earth Science TE, p. 699
- Physical Science TE, p. 33

3f. Where appropriate, materials **across and throughout grades 9-12** provide multiple disciplinary core ideas and crosscutting concepts that are used together to explain phenomena.

- Biology TE, p. 216 (Launch Lab)
- Biology TE, p. 164 (Data Analysis Lab)
- Biology TE, p. 843
- Earth Science TE, p. 125

3g. Where appropriate, materials **across and throughout grades 9-12** include science and engineering practices that are integrated with other content area practices.

- Biology TE, p. 1039
- Biology TE, p. 81 (PBL Microbeads is online)
- Earth Science TE, p. 260 (Webquest is online)
- Earth Science TE, P. 172 (MiniLab)
- Earth Science TE, p. 543 (Data Analysis Lab)

10a. Materials provide relevant grade-appropriate connection(s) to the Common Core State Standards (CCSS) in Mathematics.

*Correlations have been completed to the CCSS Standards in Mathematics*

10b. Materials provide relevant grade-appropriate connection(s) to the Common Core State Standards (CCSS) in English Language Arts & Literacy.

*Correlations have been completed to the CCSS Standards in English Language Arts and Literacy*

10c. Materials provide relevant grade-appropriate connection(s) to the Oregon English Language Proficiency Standards.

Correlations are being completed to the Oregon English Language Proficiency Standards

**Life Science:**

Content is delivered via McGraw-Hill’s ConnectEd site. The site provides access to eBooks, audio, personal tutors, animations, self-check quizzes, and more. Various tools allow the teacher to create and customize lesson plans, edit worksheets, and use preloaded presentations or create their own to enrich student understanding. Programs are interactive and student-centered curricula. Materials integrate academic subjects including language arts, math, science, and social studies, where appropriate. Programs support teacher-facilitated learning through guided instruction methodology.

The combination of Applying Practices activities (Evaluating Impacts of Environmental Change on Populations), PBL projects (Microbeads, Mega-problem), WebQuests (Careers in Biology: Wildlife Biologist), and inquiry activities (A Pond in a Jar), provides students with multiple opportunities to experience relevant phenomena in both representation format and in firsthand experience. Within the lessons Data Analysis Labs and DBQs present results from research presented in scientific literature to bring scientists doing science to the classroom. These activities engage students in phenomenon from various disciplines and involve them in three dimension learning. Students utilize science and engineering practices to make choices, design investigations, make models, analyze data and draw conclusion as they move toward a solution in real-life relevant scenarios. These opportunities allow students to make connections to the world they live in as they develop crucial problem-solving and critical thinking skills.

Vertical alignment of science concepts is inherent in the NGSS, allowing students a progression in understanding of key concepts. Student activities and questions throughout *Glencoe Biology* provide opportunities for identifying gaps in prior knowledge.
knowledge and building on it in all three areas. The 5-Minute Unit Launch (TE p. 144) is a short pre-teaching activity, such as K-W-L, teachers can use as a warm-up and gauge of prior knowledge. The Chapter Diagnostic Test also probes prior learning and plan lessons. The Launch Lab at the beginning of each chapter provides structured inquiry into the content of the chapter and allows students to apply what they have already learned. LearnSmart with SmartBook is an online, interactive version of the textbook with adaptive, continual assessment and metacognitive tools to help teachers and students know what the student has mastered and what the student needs to focus on. Continuous formative assessments in the Student and Teacher Editions allow students to track progress toward deeper understanding and adjust instruction.

The teacher portion of each Applying Practices activity and PBL project includes correlation to the CCSS Math and ELA & Literacy standards. CCSS Math and ELA & Literacy standards are also woven throughout the lessons as Math in Biology and Writing in Biology questions (SE pp. 247, 258, 263.) Laboratory analyses and reports, research activities, and student-developed presentations also employ the CCSS Math and ELA & Literacy standards.

Earth Science:

Earth Science: Geology, the Environment and the Universe integrates the skills found in the Language Arts and Literacy Skills. Students have ample opportunity to write, to collaborate and to share their thoughts through presentations. Many of the embedded programs in the lesson plans online and available to the students through the resource tab online have the students do just that. The Webquests in every chapter and the Applying Practices Activities have students read, do research, write their answers in prose format and then present their findings in a variety of presentation types. The embedded science articles at the end of each chapter have students read relevant, non-fiction information about real work events that apply to the sections the student is studying.

Physical Science:

Glencoe Physical Science provides connections to Chemistry as well as to other curricular areas such as Math, Language Arts, & Social Studies. Students can apply higher level thinking to incorporate math in Labs, use Apply Math questions to analyze data, interpret graphs, tables & charts. In the Teacher Wraparound Edition, teachers are supplied with strategies for supporting math, and opportunities to make cross-curricular connections.
II. Instructional Supports

The instructional materials support instruction and learning for all students:

Student Engagement

11. Engages students in authentic and meaningful learning experiences that reflect real-world science and engineering practices in the NGSS performance expectations and are grounded in students’ experiences to provide a context for making sense of phenomena and/or designing solutions to problems.

a. The context of learning experiences, including relevant phenomena, questions, or problems, engages students in three-dimensional learning.

- Biology TE, p. 90 (Launch Lab is online)
- Biology TE, p. 92 (Essential Questions)
- Biology TE, p. 96 (Virtual Lab – Population Biology is online)

- Physical Science TE, P. 696

b. Provides relevant firsthand experiences or models that allow students to make sense of the physical and natural world.

- Biology TE, p. 331 (MiniLab)
- Biology TE, p. 351
- Biology TE, p. 254 (Virtual Lab – Cell Reproduction is online)
- Biology TE, p. 202 (Activity – Student Diffusion)

- Physical Science TE, P. 203 (Applying Practices – Modeling Magnetic Fields)

b. Provides relevant applications for students to relate science to life, home, school, and various careers, and to apply their knowledge and skills as scientifically literate citizens.

- Biology TE, p. 637 (Careers)
- Biology TE, p. 680 (Debate in Biology)
- Biology TE, p. 680 (Webquest is online)

Life Science:

The combination of applying practices, WebQuests, and inquiry activities provide students with multiple opportunities to experience relevant phenomena in both representation format and in firsthand experience. The problems are connected to their world. They have to make choices, analyze data and draw conclusions as they move toward a solution.

Each of the Project-Based Learning activities, inquiry activities, WebQuests, and applying practices activities not only have students designing solutions, but also are set in a real life relevant scenario and as students to make connections to the world they live in. These activities are found in the plan and present tab and the resources tab within the online teacher center.

Student activities and questions throughout Glencoe Biology provide opportunities for ongoing assessment and remediation. The Launch Lab is an entry-level guided inquiry activity that applies students’ prior knowledge at the beginning of a chapter. In the Teacher Edition, the Clarify a Misconception feature provides diagnostic assessment and remediation strategies. Formative assessment strategies are provided in the margins of the Teacher Edition. This Teacher Edition provides Assessment checks—an evaluation of key section concepts and an activity to re-teach students who are struggling to meet the learning objective.

Students produce tangible outcomes for Applying Practices activities, PBL projects, and student inquiry activities. The performance tasks, applying practices, and lab activities help students demonstrate their three dimensional learning by constructing explanations based on the application of the cross cutting concepts and the science and engineering practices.
focused on phenomenon targeting on the learning outcomes and the DCIs. A summative evaluation is provided by the Chapter Assessment at the end of each chapter.

Earth Science:
Each chapter and lesson begins with essential questions that focus student learning. Each lesson includes the beginning Earth Science 4 You. In addition, Project-Based Learning Activities, Science and Engineering Practices Handbook and the Applying Practices Worksheets provides students engagement in the three dimensions of disciplinary core ideas, science and engineering practices, and crosscutting concepts. The inquiry activities and labs are focused on phenomenon questions. The inclusion of real world relevance motivates students to explore the impact of Earth science on the world.

The combination of applying practices, STEMquests, WebQuests, and inquiry activities provide students with multiple opportunities to experience relevant phenomena in both representation format and in firsthand experience. The problems are connected to their world. They have to make choices, analyze data and draw conclusions as they move toward a solution.

Earth Science: Geology, the Environment, and the Universe offers Earth Science 4 You at the beginning of each section, providing students with an everyday relevant analogy that helps to clarify the key idea of the lesson. The program provides hands-on activities that relate Earth science to students’ everyday lives. The unit openers and career features encourage students to go beyond the classroom to investigate the Earth science behind the products and processes that are a part of their world. The “Expedition” features let students investigate a day in the life of people working in the field of Earth science. They also learn what is required of them if they are to prepare to join the scientists they read about. “What’s Earth Science Got to Do With it?” video series offers fast paced videos that connect concepts to contemporary examples found in the students’ world.

Earth Science: Geology, the Environment, and the Universe provides a strong assessment strand. The program provides leveled questions that give students opportunities to respond at various levels of problem-solving and understanding. “Think Critically” questions are found at the end of each chapter section and in the Chapter Assessment. Document-Based Questions (DBQ) provide questions based on real-world data. GeoLabs include opportunities for students to extend and apply the knowledge and skills to a related Earth science topic.

Physical Science:
Glencoe Physical Science is a research-based program that was developed in collaboration with educators to provide students with the skills and understandings of physical science concepts. The provided correlation provides the documentation that demonstrates how Glencoe Physical Science meets the goals and objectives of the Core and Content Standards. The chapters are built around the Big Ideas of physical science and every lesson supports the conceptual development of that broad science understanding. The focus of Physical Science is to afford all students the opportunity to experience the richness and excitement of the natural world around them, to help them acquire the skills needed for their future and to prepare them to address new and complex problems they will face as adults.

One of the fundamental goals of Glencoe Physical Science is to make the concepts relevant to students. There are multiple opportunities for students to apply their knowledge through labs and activities as well as in writing.

- Each chapter opens with a Science Journal activity that relates the chapter opening image to students’ experiences.
- The Launch Lab at the beginning of the chapter provides students with a common experience from which the teacher can build upon.
- Throughout the text, visuals present concepts in a familiar, real-world context.
- The Teacher Wraparound Edition includes strategies for teacher to help students tie concepts to prior knowledge, make analogies, and to apply concepts.
- Visualizing features present concepts in a more visual format allowing students to see familiar, visual applications of the concepts.
- Model and Invent Labs challenge students to solve a problem by applying the concepts of the chapter.
- The Labs in each chapter begin with a Real-World Question that students try to solve.
- There are multiple lab opportunities in each chapter (6-8 per chapter) that develop students’ ability to apply their knowledge and skills.

There are several features that reveal the real-world connections of the concepts such as Time Science and Society, Oops, Accidents in Science, and Science Stats.

Found throughout MHE Glencoe Physical Science textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the Glencoe Physical Science textbook are aligned to NGSS see attached link https://www.dropbox.com/s/fse9a28msduq2i9/PS%20Alignment%20Guide.pdf?dl=0

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The instructional materials support instruction and learning for all students:

**Student Engagement**

12. Facilitates deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts by building upon prior knowledge and identifying and correcting misconceptions.

- Biology TE, p. 359 (Introduce the Chapter)
- Biology TE, p. 360&361 (Develop Concepts)
- Earth Science TE, p. 164 (Identify Misconceptions)
- Earth Science TE, p. 179 (Identify Misconceptions)

**Life Science:**

McGraw-Hill Education’s *Glencoe Biology* provides Applying Practices activities and Project-Based Learning (PBL) projects, which appear at point of use, that is, correlated to the pertinent DCI and biology content. Each activity and project is written to a specific NGSS performance expectation using the science and engineering practices. These editable worksheets can be filled in online or downloaded. Students will be engaged and successful, integrating the three dimensions—disciplinary core ideas, science and engineering practices, and crosscutting concepts. Launch Labs, Mini Labs, Bio Labs, Data Analysis Labs, and DBQs, as well as guided and full inquiry activities and virtual labs online, further support the science content using science and engineering practices. All the projects and activities are supported by the Science and Engineering Practices Handbook online.

Students apply the DCIs within the context of application of the science and engineering practices activities in conjunction with the crosscutting concepts to conceptualize and then develop a solution to the performance expectation they are facing.

*Glencoe Biology* is built on the backwards mapping principle and ensures understanding with lessons that stem from Essential Questions, Big Ideas, and Main Ideas, which lead students to identify and connect topics and develop a deeper understanding of practices, disciplinary core ideas, and crosscutting concepts.

Student activities and questions throughout *Glencoe Biology* provide opportunities for ongoing assessment and remediation. The Launch Lab is an entry-level assessment (diagnostic) that assesses students’ prior knowledge at the beginning of a chapter. In the Teacher Wraparound Edition, the “Clarify a Misconception” feature provides diagnostic assessment. Formative assessment strategies are provided in the margins of the Teacher Wraparound Edition. This Teacher Wraparound Edition provides an “Assessment” check which provides an evaluation of key section concepts and an activity to re-teach students who are struggling to meet the learning objective.

“Reading Checks” are formative assessment questions integrated within the lesson for students to self-assess their reading comprehension before going onto the next lesson. The “Section Assessment” in the Student Edition provides students with summary statements and scaffold questions that tie to the learning objectives for that section. A summative evaluation is provided by the “Chapter Assessment” at the end of each chapter. It includes Vocabulary Review, Understand Key Concepts and Constructed Response which assess comprehension of the vocabulary and key concepts in each section. Think Critically, Writing in Biology, Extended Response and Essay Questions sections require students to demonstrate higher-order thinking and use their writing skills. Skill Review questions connect students to real-world applications as they evaluate real data from current research. Students analyze graphs, charts, and other displays of data. Cumulative Review questions assess student retention of material from earlier chapters. Standardized Test Practice aids students in mastering skills to be successful on local, state, and/or national tests. If students have problems with a standardized text question, a prescriptive guide is available to direct students to review specific lessons for remediation.

The eAssessment program on ConnectED allows teachers to build summative assessment that can be customized for each lesson of the student edition. ConnectED’s Plan and Present software includes formative and summative assessment. The Unit (Fast Files) resources booklets include formative assessment for each section of the text. Plus, the “Chapter Test” assessment is provided in three levels to support differentiated instruction. The program’s web site provides students additional formative and summative self-assessment practice. Students can email online assessment results to teachers and parents.

LearnSmart with SmartBook is an interactive and adaptive version of the book with continual assessment and metacognitive tools to help teachers and students know what the student has mastered and what the student needs to focus on. LearnSmart includes 3 stages: Preview (before), Assess (during), Review (after/mastery). Grade-appropriate evidence of the crosscutting concepts is found in the program materials.
Earth Science:

*Earth Science: Geology, the Environment, and the Universe* incorporates features to help students develop the skills essential for success in a first year-biology course. The program places a strong emphasis on student comprehension through visual literacy. The conceptual presentation is organized around Themes, Big Ideas, and the Main Ideas. Earth Science 4 You in each section draw the student’s attention into the narrative with relevant analogies that help clarify topics, making them more understandable. Relevant applications throughout the textbook are highlighted with instructional photos, illustrations, tables and high interest, student-centered special features. Inquiry-based learning is a strong strand throughout the textbook. Each chapter of the Student Edition offers a Launch Lab, MiniLab, Data Analysis Lab, and GeoLab. The program offers two lab manuals online that have a strong diverse inquiry approach.

*Earth Science: Geology, the Environment, and the Universe* technology and online assets are correlated throughout the program to support and extend the lessons for both the student and the teacher. These strategies, along with the content and the instructional materials, ensure that students have the skills necessary to achieve the Science Core and Content Standards.

Found throughout *Earth Science: Geology, the Environment and the Universe* textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the *Earth Science: Geology, the Environment and the Universe* textbook are aligned to NGSS see attached link.

https://www.dropbox.com/s/geh4axrywv5n29y/ES%20Alignment%20Guide.pdf?dl=0

Physical Science:

*Glencoe Physical Science* is a research-based program that was developed in collaboration with educators to provide students with the skills and understandings of physical science concepts. The provided correlation provides the documentation that demonstrates how Glencoe Physical Science meets the goals and objectives of the Core and Content Standards. The chapters are built around the Big Ideas of physical science and every lesson supports the conceptual development of that broad science understanding. The focus of Physical Science is to afford all students the opportunity to experience the richness and excitement of the natural world around them, to help them acquire the skills needed for their future and to prepare them to address new and complex problems they will face as adults.

*Glencoe Physical Science* was developed to provide teachers with a comprehensive and flexible set of resources to accommodate a broad range of students. In the Teacher Wraparound Edition there are six pages beginning each chapter that help teachers organize the available resources, provide content background and strategies for diagnosing and addressing misconceptions. Additionally, there are numerous resources that provide practice, enrichment, and remediation support for every lesson. The following is an abbreviated list of some of those online resources.

- Leveled Resources: Leveled versions of the labs and three levels of assessments
- Foldables™: Powerful strategies that help students organize information.
- Directed Reading for Content Mastery: Wksheets designed to help students with learning difficulties to learn and understand the vocabulary and major concepts
- Directed Reading for Content Mastery in Spanish: Spanish translations of the Directed Reading for Content Mastery worksheets.
- Reinforcement: Additional practice with the concepts of each lesson
- Enrichment: These worksheets extend and explore the key concepts in more depth
- Note-taking Worksheets: Content outlines designed to help students focus on the key points and to build skills in organizing information.

Found throughout MHE *Glencoe Physical Science* textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the *Glencoe Physical Science* textbook are aligned to NGSS see attached link.

https://www.dropbox.com/s/fse9a28msduq2i9/PS%20Alignment%20Guide.pdf?dl=0

The instructional materials support instruction and learning for all students:

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Student Engagement
13. Through scientific discourse in oral, visual, and/or written form, materials provide frequent opportunities for students to express, clarify, justify, interpret, represent their ideas, and respond to peer and teacher feedback.

Biology TE, p. 62 (Applying Practices – Local Ecosystem Dynamics in online)
Biology TE, p. 50 (Debate in Biology)
Earth Science TE, p. 552 (Writing in Earth Science)
Earth Science TE, p. 210 (MiniLab)

Life Science:
The new ConnectED digital platform for high school science brings a new level of engagement and effectiveness to your classroom. A one-stop shop where you can access the student eBook, digital resources, videos, worksheets, presentations, assessment tools, and planning and messaging tools.

Through the inquiry activities found in Glencoe Biology, students are asked to define the problem, form a hypothesis, and design an experiment to test their idea. Once they have their data, they are asked to modify the experiment’s design to remove uncertainties so they achieve clearer results. The textbook has special features (Cutting-Edge Biology, Biology & Society, In the Field) that describe how new technologies impact people’s life. Students are provided with opportunities to evaluate and write about the impact of human endeavors on their world.

The Glencoe Biology program provides a variety of laboratory manuals that further students’ opportunities to engage in inquiry experiments that supports understanding of major biology concepts. The Virtual Lab series provides interactive manipulations of variables that support engineering design principles. The Video Lab online helps students with reviewing selected lab procedures. The web site offers students access to the virtual labs and WebQuest activities.

The Glencoe Biology program provides the students with relevant information that builds on their personal experiences. The high interest special features in each chapter make a connection with some aspect of students’ everyday life and society at large. The unit openers depict a career focus that relates to various applications of biology. The Teacher Wraparound Edition offers service learning activities that engage students in meaningful community service in relation to biology and the real world. The Forensics Lab Manual online connects the technical and legal fields to biology. “What’s Biology Got to Do With it?” offers fast pace captivating videos that relate biology to the real world.

LearnSmart with SmartBook is an online, interactive version of the textbook with adaptive, continual assessment and metacognitive tools to help teachers and students know what the student has mastered and what the student needs to focus on.

Earth Science:
Earth Science: Geology, the Environment, and the Universe encourage students to think critically and build analysis and problem solving skills.

Every Lab in the Student Edition gives students the opportunity to analyze, conclude and apply. There is also a strategy for Communicating Your Data.

Design Your Own Labs, GeoLabs, Model and Invent Labs allow students creativity in solving the problem.

In the Leveled Resources book, there are leveled versions of the labs. The B version of each lab has a Challenge and Extension section that is an opportunity to go further.

The Teacher Wraparound Edition often includes alternative Inquiry labs that provide teachers with strategies for Inquiry and extension.

Earth Science: Geology, the Environment and the Universe uses inquiry-based learning opportunities where students participate in science discourse in and outside the classroom environment. Multiple lab opportunities such as Demo Labs, Launch Lab, Mini Labs, Data Analysis Labs, GeoLabs and virtual labs provides students with opportunities to collaborate and communicate findings. Specials features in the Earth Science: Geology, the Environment and the Universe such as Earth Science & Technology/Society & Expeditions provide students the opportunity to discuss and write in science. Other supporting resources found in the Earth Science: Geology, the Environment and the Universe textbook to support classroom discourse includes: Visualizing Activities, Projects, Academic Vocabulary, Word Origin, Science Usage v. Common Usage and Environmental Connections.

Foldables™ created by Dinah Zike provides research-based methods to organizing information for effective study and retention of content. The textbook encourages all learners to utilize the “Concepts-in-Motion” animations associated with selected images, tables, and timelines as an alternative format to acquired information. There are online electronic lessons
in “Interactive Tutor” that provide enhanced audio/visual concept presentations.

**Physical Science:**
*Glencoe Physical Science* encourages students to think critically and builds analysis and problem solving skills.
- Every Lab in the Student Edition gives students the opportunity to analyze, conclude and apply. There is also a strategy for Communicating Your Data.
- Design Your Own Labs and Model and Invent Labs allow students creativity in solving the problem.
- In the Leveled Resources book, there are leveled versions of the labs. The B version of each lab has a Challenge and Extension section that is an opportunity to go further.
- The Lab Videos on ConnectED are video versions of labs. If students have problems with the lab, they can use the video to observe where they may have erred and can see the expected results.
- The Teacher Wraparound Edition often includes alternative Inquiry labs that provide teachers with strategies for Inquiry and extension.

*Glencoe Physical Science* engages students through active learning and real-world applications to concepts. Inquiry-based activities along with strategies such as Foldables and Virtual Labs teach students the key concepts and processes of science while capturing their interest and curiosity. The program also offers alternative presentations of concepts through various media to insure that all learners have the opportunity to understand the concepts. The Student Edition is not only in print format, but is available online in the eBook and LearnSmart. The electronic edition includes Concepts in Motion animations, interactive tables and other enhancements such as access to student worksheets and additional practice and review. Virtual Labs and Interactive Dissections allow students to explore concepts through lab simulations. Students can also use these engaging tools for practice and review. Foldables are three-dimensional, interactive, graphic organizers. They provide students with an interactive way to organize information. Reading Essentials is a leveled version of the text, providing all of the content of the Student Edition at a lower reading level. The Science Notebook then provide students with varied activities that encourage them to put concepts into their own words and interact with them at a higher level to reinforce understanding.

The instructional materials support instruction and learning for all students:
Differentiated Instruction

14. Provides guidance for teachers to support differentiated and culturally responsive (i.e., purposefully represents diverse cultures, linguistic backgrounds, learning styles, and interests) instruction in the classroom so that every student’s needs are addressed by including:

Suggestions for how to promote equitable instruction by making connections to culture, home, neighborhood, and community, as appropriate.

- Biology TE, p. 513 (Service Learning)
- Biology TE, p. 520 (Writing Support)
- Earth Science TE, p. 177 (In the Field)
- Earth Science TE, p. 179 (Earth Science Journal)

Appropriate scaffolding, interventions, and supports, including integrated and appropriate reading, writing, listening, and speaking alternatives (e.g., translations, picture support, graphic organizers) that neither sacrifice science content nor avoid language development for English language learners, special needs, or below grade level readers.

- Biology TE, p. 390B (Teaching Strategies and then throughout)
- Biology TE, p. 390 (Foldable)
- Earth Science TE, p. 176-177 (EL, AL, BL Differentiated Strategies)
- Earth Science TE, 180 Differentiated Instruction

Digital and print resources that provide various levels of readability (e.g., based on the CCSS three part model for measuring text complexity).

- The Reading Essential for Biology provides both Digital and Print access with 2 to 3 grade levels below the regular text.
- Other programs have a variety of support resources for reading the text and the Science Notebook supplement integrates a variety of supports for accessing complex text.

Modifications and extensions for all students, including those performing above their grade level, to develop deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts.

- Biology TE, p. 324B (Fast File Resources)
- Biology TE, p. 326&327 (Modification / Differentiation Strategies)
- Biology TE, p. 14T&15T
- Biology TE, p. 24T&25T
- Biology TE, p. 170&171 (Writing Support)

Technology and digital media to support, extend, and enhance learning experiences.

- The online Portal (ConnectEd) and Online eBook have multiple types of resources including LearnSmart and PBLs to support, extend, and enhance learning experiences.

Materials in multiple language formats.

- The text and major support pieces come in English and Spanish for Biology. Other programs have some support materials in Spanish and there is a multi-lingual glossary in 13 languages with Key vocabulary.

Life Science:

*Glencoe Biology* offers a Teacher Edition print and online full of research-based strategies to support and differentiate instruction (TE pp. 222-233,) including Develop Concepts, Reading Strategy, Skill Practice, Writing Support, Differentiated Instruction, Critical Thinking, Demonstration, Content Background, Clarify Misconceptions, and Formative Assessments. The Teacher Edition teaching strategies and activities have been coded for ability-level appropriateness. A competency level is given for each activity using the following code: AL activities for students working above grade level; OL on grade level; BL below grade level; EL activities for English learners.

The Teacher Edition Chapter Organizer planning pages appear at the beginning of each chapter (TE pp. 216A-216B.) These pages detail all Essential Questions, lab materials, suggested pacing, ancillaries, and online resources for the chapter. The planning pages also show the leveling key which describes the differentiated instruction used in the chapter.

Reading Essentials, for struggling readers in both English and Spanish, provides the content at an accommodated level. Science Notebook guides students in making meaningful connections with the text through Cornell note-taking. Graphic organizers called Foldables are also available, as well as interactive dissections, Vocabulary eFlashcards and eGames in English and Spanish, minigames, and videos and animations. All of these resources can be used with EL students who need alternative strategies for reading and comprehending the text.

The Glossary/Glossario in the Student Edition, as well as the Multilingual Science Glossary online, provides vocabulary support for EL students. In addition, vocabulary margin features—Word Origins, Academic Vocabulary, and Science Usage v. Common Usage—support all readers. The Real-World Reading Link that introduces each lesson relates the upcoming text and science content to the student, the student’s world, or previous knowledge. Each Chapter Assessment includes Vocabulary Review to further enhance acquisition of science vocabulary and increase comprehension.
Rich visuals with caption questions, Reading Checks and Section Assessments provide formative assessment and student metacognition integrated within the lesson and Constructed Response which assess comprehension of the vocabulary and key concepts in each section. Think Critically, Writing in Biology, Extended Response and Essay Questions sections require students to demonstrate higher-order thinking and use their writing skills. Skill Review questions connect students to real-world applications as they analyze real data from research. Students analyze graphs, charts, and other displays of data. Cumulative Review questions assess student retention of material from earlier chapters. Standardized Test Practice aids students in mastering skills to be successful on local, state, and/or national tests. If students have problems with a standardized text question, a prescriptive guide is available to direct students to review specific lessons for remediation. The eAssessment program on ConnectED allows teachers to build summative assessment that can be customized for each lesson of the eStudent Edition. ConnectED’s Plan and Present software includes formative and summative assessment. The Unit (Fast Files) resources booklets include formative assessment for each section of the text. Plus, the Chapter Test assessment is provided in three levels to support differentiated instruction. The program’s ConnectED site provides students additional formative and summative online self-assessment practice.

Earth Science:
The Teacher Wraparound Edition provides teachers with strategies to help students of all ability levels. Strategies and activities have been coded for ability-level appropriateness (BL= Below-Level, OL=On Level, AL=Above Level). Enrichment suggestions are found in each chapter so students can continue to be challenged and develop more complex thinking skills. Concept Development is also provided so all learners can reach their potential. To make sure Earth science is relevant, there are various opportunities to connect across the curriculum and apply Earth science to the student’s world. In the Student editions, the idea of the graphic organizers, Foldables™, helps students to improve retention. The Student Edition offers vocabulary throughout the textbook. The website also provides extra vocabulary support with the use of electronic flashcards and Study-to-Go review of key terms. The exclusive Science Notebook supports learners with vocabulary and writing support. The Unit (Fast File) resource booklets contain a Study Guide which helps students having difficulties with the chapter’s Big Idea.

Student Edition: Foldable™; Vocabulary Support
Teacher’s Wraparound Edition: Across the Curriculum; Apply Earth Science; Differentiated Instruction
Ancillary: Science Notebook
ConnectEd: Vocabulary eFlashcards and eGames (English & Spanish); LearnSmart with SmartBook Adaptive Learning System

Physical Science:
Biology and Physical Science offer Reading Essentials, in both English and Spanish, for struggling readers. This provides the content at an accommodated level. All of the high school texts offer a Science Notebook, which guides students to make meaningful connections with the text through note-taking. Graphic organizers are also available, as well as interactive dissections in Biology, vocabulary eGames and eFlashcards, and videos and animations. All of these resources can be used with ELL or SPED students who need alternative strategies for reading and comprehending the text.

Differentiated Instruction activities are available for approaching level, on level, beyond level and ELL students and provide additional open-ended practice for students. There are also additional activity ideas provided in the TE that teachers can choose to assign or modify for additional inquiry practice. The Fast File Unit Resources contain a variety of resources that are useful for differentiation, such as leveled labs and assessments, as well as activities that range from remediation for struggling students to challenges for advanced learners.

Glencoe Physical Science provides teachers with comprehensive ongoing assessment opportunities.
Formative/Diagnostic
- At the beginning of each chapter there are several activities for preassessment. The first is a Science Journal activity that encourages students to connect their prior knowledge to the chapter opening photograph.
- We provide Start-up activities including Launch Labs and Foldables activities at the beginning of each chapter. Besides having other pedagogical benefits, they can assist teachers by helping to inform their instruction.
- Throughout the text we provide Reading Checks and caption questions as opportunities for ongoing assessment.
- The end of each section contains several questions at various difficulty levels to be used as a checkpoint prior to moving on to the next section.
- All of the labs include assessment opportunities.
- The Teacher Wraparound Edition provides teachers with many questioning strategies designed to help them assess student understanding. At the end of each lesson are strategies to Check for Understanding as well as Reteaching.
- ConnectED eAssessment includes quizzes for every chapter.
• Summative/Cumulative
• Each Chapter ends with a Chapter Review containing many questions at a range of levels that can help teachers assess student understanding. There are also two pages of questions in standardized test format.
• The eAssessment Suite offers an extensive bank of questions that can easily be searched and edited to create quizzes, tests for summative or cumulative assessment.
• The Leveled Resources book online provides three levels of summative assessments for every chapter.
• The Fast File Chapter Resources online for each chapter contains a Chapter Review and Chapter Test for each chapter.

The eAssessment program on ConnectED allows teachers to build summative assessment that can be customized for each lesson of the student edition. ConnectED’s Plan and Present software includes formative and summative assessment. The Unit (Fast Files) resources booklets include formative assessment for each section of the text. Plus, the “Chapter Test” assessment is provided in three levels to support differentiated instruction. The program’s web site provides students additional formative and summative self-assessment practice. Students can email online assessment results to teachers and parents.

The LearnSmart program allows students and teachers to constantly assess understanding of a given topic and automatically modify the content of the books to match the student’s learning needs. LearnSmart generates data for the student and teacher so that lessons and if necessary intervention can be precisely crafted for each student.

The instructional materials support instruction and learning for all students:
Differentiated Instruction

15. Provides research-based strategies to develop students’ academic language that are connected to the performance expectations (e.g., code-switching and interactive notebooks).
Biology TE, p. 180B (Science Notebook is online)
Biology TE, p. 163 (Academic Vocabulary)
Earth Science TE, p. 84 (Foldable)
Earth Science TE, p. 86 (New and Review Vocabulary)
Earth Science TE, p. 104&105 (Digital Vocabulary Support is online, Vocabulary Review)

Life Science:
Foldables™ created by Dinah Zike provides research-based methods to organizing information for effective study and retention of content. The textbook encourages all learners to utilize the “Concepts-in-Motion” animations associated with selected images, tables, and timelines as an alternative format to acquire information. There are online electronic lessons in Personal Tutor that provide enhanced audio/video lessons. The ConnectED platform contains an eStudent Edition with an audio reading of the text and many interactive learning tools such as Cyber Science.

The “Data Analysis Labs” and “Document-Based Questions” (DBQ) cites the actual research source from which the questions are based. This information allows students to opportunity to delve deeper into the research and extend their learning experience. Skill Review questions connect students to real-world applications as they evaluate real data from current research. Students analyze graphs, charts, and other displays of data.

Students participate in grade-level appropriate science discourse and scientific writing using academic vocabulary in several settings. These include class discussions initiated from activities and teacher demonstrations, during lab reports, Applying Practices activities (online in ConnectED), WebQuests, and PBLs (online in ConnectED), in chapter review critical thinking responses, Document-Based Questions, Short Answer, Extended Response, and Essay Questions, Debate in Biology, and in Writing in Biology. Vocabulary margin features—Academic Vocabulary, Word Origin, and Science Usage v. Common Usage—also support scientific writing and discourse.

Glencoe Biology has been created by broad range of professionals (teacher’s advisory board, reviewers, content consultants, reading specialist, safety consultants, lab testers, test consultants and reading consultants) that have developed safe age/level appropriate instruction for all learners. The Teacher Wraparound Edition provides teachers with instructional strategies designed to accommodate students of all ability levels, including English Language learners. Teaching strategies and activities have been coded for ability-level appropriateness. Differentiated Instruction strategies help meet the needs of all students.

All of the activities and projects—Applying Practices, PBLs, Webquests, and lab—contain detailed teacher plans, giving the teachers the freedom to give a high level of support or a minimal level of support. The teacher then can differentiate and move students along the inquiry spectrum from structured and guided to fully independent.

Earth Science:
Foldables™ created by Dinah Zike provides research-based methods to organizing information for effective study and retention of content. The textbook encourages all learners to utilize the “Concepts-in-Motion” animations associated with selected images, tables, and timelines as an alternative format to acquired information. There are online electronic lessons in “Interactive Tutor” that provide enhanced audio/visual concept presentations. Document-Based Questions (DBQ) connect students to real-world applications as they evaluate authentic data from current research.

Physical Science:
Glencoe Physical Science is a research-based program that was developed in collaboration with educators to provide students with the skills and understandings of physical science concepts. The provided correlation provides the documentation that demonstrates how Glencoe Physical Science meets the goals and objectives of the Core and Content Standards. The chapters are built around the Big Ideas of physical science and every lesson supports the conceptual development of that broad science understanding. The focus of Physical Science is to afford all students the opportunity to experience the richness and excitement of the natural world around them, to help them acquire the skills needed for their future and to prepare them to address new and complex problems they will face as adults.

The instructional materials support instruction and learning for all students:
Differentiated Instruction
16. Provides guidance for teachers throughout the unit for how learning experiences build on each other to support students in developing deeper understanding of the practices, disciplinary core ideas, and crosscutting concepts.

Physical Science TE, p. 274 (Focus)
Physical Science TE, p. 275 (Teach – Demo, Quick Demo, Identifying Misconceptions)
Physical Science TE, p. 276-277 (Discussion and Activity)
Physical Science TE, p. 280 (Mini-lab)
Physical Science TE, p. 281 (Applying Practices is online)

The high school science series is built on the backwards design principle and ensures understanding with lessons that stem from Essential Questions. Suggested responses for the Essential Questions are provided for the teacher, to guide him/her in leading students to a deeper understanding of practices, disciplinary core ideas, and crosscutting concepts. The plan and present tab on ConnectEd contains suggestions on supporting all levels of students.

Life Science:
The book is organized around Themes, Big Ideas, and Main Ideas of Biology. Themes are overarching concepts (Change, Diversity, Energy, Homeostasis, Science Inquiry) used throughout the entire book that help students tie what they learn together. They help students see the connections among major ideas and concepts. The Big Idea summarizes the chapter content in an overarching statement and helps students focus on topics within the Themes. The Big Idea is broken down into Main Ideas, which describe the focus of each section. This instructional strategy is further supported by the many instructional materials that make up this complete biology curriculum.

Glencoe Biology is an inquiry based program that is filled with meaningful laboratory-based activities. The Student Edition provides Launch Labs, Mini Labs, Data Analysis Labs, and BioLabs. The program offers six different laboratory manuals.

Through the inquiry activities found in Glencoe Biology, students are asked to define the problem, form a hypothesis, and design an experiment to test their idea. Once they have their data, they are asked to modify the experiment’s design to remove uncertainties so they achieve clearer results. The textbook has special features (Cutting-Edge Biology, Biology & Society, In the Field) that describe how new technologies impact people’s life. Students are provided with opportunities to evaluate and write about the impact of human endeavors on their world.

The eAssessment program on ConnectED allows teachers to build summative assessment that can be customized for each lesson of the student edition. ConnectED’s Plan and Present software includes formative and summative assessment. The Unit (Fast Files) resources booklets include formative assessment for each section of the text. Plus, the “Chapter Test” assessment is provided in three levels to support differentiated instruction. The program’s web site provides students additional formative and summative self-assessment practice. Students can email online assessment results to teachers and parents.

The Student Edition offers coherent lab options within each chapter, which allows students to develop strong inquiry skills. Students will develop a progression of knowledge and skills that allow them to think like a scientist to become successful with the chapter-end BioLab.

Grade-appropriate evidence of the crosscutting concepts is found in the program materials. An Alignment Guide can be found in the following link: https://www.dropbox.com/s/3vriyvqmmxwg4i/Biology%20Alignment%20Guide.pdf?dl=0

Earth Science:

Earth Science: Geology, the Environment, and the Universe incorporates features to help students develop the skills essential for success in a first year course. The program places a strong emphasis on student comprehension through visual literacy. The conceptual presentation is organized around Themes, Big Ideas, and the Main Ideas. Earth Science 4 You in each section draw the student’s attention into the narrative with relevant analogies that help clarify topics, making them more understandable. Relevant applications throughout the textbook are highlighted with instructional photos, illustrations, tables and high interest, student-centered special features. Inquiry-based learning is a strong strand throughout the textbook. Each chapter of the Student Edition offers a Launch Lab, MiniLab, Data Analysis Lab, and GeoLab. The program offers two lab manuals online that have a strong diverse inquiry approach.

Earth Science: Geology, the Environment, and the Universe technology and online assets are correlated throughout the program to support and extend the lessons for both the student and the teacher. These strategies, along with the content and the instructional materials, ensure that students have the skills necessary to achieve the Science Core and Content.
Standards.

*Earth Science: Geology, the Environment and the Universe* provides an inquiry strand with a wealth of laboratory options throughout the program. The inquiry-based options offer scientific practice, encouraging problem-solving strategies and developmental critical thinking and process skills. The program’s strong inquiry strand gets students actively involved in the learning process by allowing them to manipulate variables and develop and test appropriate procedures. The Student Edition offers coherent lab options within each chapter, which allows students to develop strong inquiry skills. Students will develop a progression of knowledge and skills that allow them to think like a scientist to become successful with the chapter-end GeoLab.

Found throughout *Earth Science: Geology, the Environment and the Universe* textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the *Earth Science: Geology, the Environment and the Universe* textbook are aligned to NGSS see attached link.

https://www.dropbox.com/s/geh4axrywv5n29y/ES%20Alignment%20Guide.pdf?dl=0

**Physical Science:**
The assessment tools help educators make instructional decisions before, during, and after instruction. The eAssessment software allows teachers to give online formative and summative assessments and easily generate data to inform their lessons as well as modify instruction for particular students. Teachers are given the necessary tools to guide instructional decision at every point.

The Reading Essentials in Biology resource provides on-level content at a lower-reading level for students who need extra assistance. The *Physical Science* web site aids learners with online content, review, practice, assessment, and remediation.

LearnSmart is an interactive version of the book with continual assessment and metacognitive tools to help teachers and students know what the student has mastered and what the student needs to focus on. LearnSmart includes 3 stages: Preview (before), Assess (during), Review (after/mastery).

Found throughout MHE *Glencoe Physical Science* textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the *Glencoe Physical Science* textbook are aligned to NGSS see attached link

https://www.dropbox.com/s/fse9a28msduq2i9/PS%20Alignment%20Guide.pdf?dl=0

The instructional materials support instruction and learning for all students:
Differentiated Instruction

17. Provides supports to help students engage in the practices as needed and gradually adjusts supports over time so that students are increasingly responsible for making sense of phenomena and/or designing solutions to problems.

Biology TE, p. 381
Biology TE, p. 131 (PBL - Cleaning up an Oil Spill is online)
Earth Science TE, p. 742 (PBL - Locking Up Carbon with teacher support is online)
Earth Science TE, p. 269 (Webquest is online)

Life Science:

All of the activities, Applying Practices, Webquests, Inquiry Activities, contain detailed teacher plans giving the teachers the freedom to give a high level of support or a minimal level of support. The teacher then controls the amount of support and can help students become more independent and can then draw their own conclusions and learn to cite evidence and make strong arguments to support the solutions to their problems.

Through the inquiry activities found in Glencoe Biology, students are asked to define the problem, form a hypothesis, and design an experiment to test their idea. Once they have their data, they are asked to modify the experiment’s design to remove uncertainties so they achieve clearer results. The textbook has special features (Cutting-Edge Biology, Biology & Society, In the Field) that describe how new technologies impact people’s life. Students are provided with opportunities to evaluate and write about the impact of human endeavors on their world.

The Glencoe Biology program provides a variety of laboratory manuals that further students’ opportunities to engage in inquiry experiments that supports understanding of major biology concepts. The Virtual Lab online provides interactive manipulations of variables that support engineering design principles. The Video Lab online helps students with reviewing selected lab procedures. The web site offers students access to the virtual labs and WebQuest activities.

Earth Science:

Earth Science: Geology, the Environment, and the Universe provides the students with relevant information that builds on their personal experiences. The high interest special features in each chapter make a connection with some aspect of students’ everyday life and society at large. The unit openers depict a career focus that relates to various applications of earth science. The “Expedition” features offer interesting and relevant connections that allow students to extend and enrich knowledge and skills regarding an Earth science concept.

All of the activities, Applying Practices, Webquests, STEMquests, Inquiry Activities, contain detailed teacher plans giving the teachers the freedom to give a high level of support or a minimal level of support. The teacher then controls the amount of support and can help students become more independent and can then draw their own conclusions and learn to cite evidence and make strong arguments to support the solutions to their problems.

The Laboratory Manual that is found in the ancillaries has an analysis section for each lab. It also allows students to make conclusions and applications for the information that they just learned. The laboratory manual has numerous choices for teachers to pick the best one for the needs of his or her students.

The eAssessment program on ConnectED allows teachers to build summative assessment that can be customized for each lesson of the student edition. ConnectED’s Plan and Present software includes formative and summative assessment. The Unit (Fast Files) resources booklets in ConnectED include formative assessment for each section of the text. Plus, the “Chapter Test” assessment is provided in three levels to support differentiated instruction. The program’s web site provides students additional formative and summative self-assessment practice. Students can email online assessment results to teachers and parents.

LearnSmart with SmartBook is an interactive and adaptive version of the book with continual assessment and metacognitive tools to help teachers and students know what the student has mastered and what the student needs to focus on. LearnSmart includes 3 stages: Preview (before), Assess (during), Review (after/mastery).

Physical Science:

Glencoe Physical Science is a research-based program that was developed in collaboration with educators to provide students with the skills and understandings of physical science concepts. The provided correlation provides the documentation that demonstrates how Glencoe Physical Science meets the goals and objectives of the Core and Content
Standards. The chapters are built around the Big Ideas of physical science and every lesson supports the conceptual development of that broad science understanding. The focus of Physical Science is to afford all students the opportunity to experience the richness and excitement of the natural world around them, to help them acquire the skills needed for their future and to prepare them to address new and complex problems they will face as adults.

Glencoe Physical Science engages students through active learning and real-world applications to concepts. Inquiry-based activities along with strategies such as Foldables, Active Folders and Virtual Labs teach students the key concepts and processes of science while capturing their interest and curiosity. The program also offers alternative presentations of concepts through various media to insure that all learners have the opportunity to understand the concepts. The Student Edition is not only in print format, but is available online (Online Student Edition) and on CD-ROM (StudentWorks Plus). The electronic editions include Concepts in Motion animations, interactive tables and other enhancements such as access to student worksheets and additional practice and review. Virtual Labs and Interactive Dissections allow students to explore concepts through lab simulations. Students can also use these engaging tools for practice and review. Active Folders are leveled manipulative activities that provide students with alternative presentations of key concepts. Foldables are three-dimensional, interactive, graphic organizers. They provide students with an interactive way to organize information. Reading Essentials is a leveled version of the text, providing all of the content of the Student Edition at a lower reading level. The Science Notebook then provide students with varied activities that encourage them to put concepts into their own words and interact with them at a higher level to reinforce understanding.

The instructional materials support instruction and learning for all students:
**Instructional Materials**

18. Digital and print materials are consistently formatted, visually focused, and uncluttered for efficient use.

Biology SE, p. 182-183

Earth Science SE, p. 164&165

**Life Science:**

**Digital:**
The ConnectED digital platform for *Glencoe Biology* brings a new level of engagement, communication, and effectiveness to the classroom. A one-stop shop where students and teachers can access the student eBook, digital resources, videos, worksheets, presentations, assessment tools, and planning and messaging tools.

Through the inquiry activities found in *Glencoe Biology*, students are asked to define the problem, form a hypothesis, and design investigations to test their ideas. Many involve peer review and allow students to extend the investigation with further refinements.

The textbook has special features in each chapter (Cutting-Edge Biology, Biology & Society, In the Field) that describe how science and technologies impact people’s life. Students are provided with opportunities to research, evaluate, and write about the topics. Some encourage class debates.

The Applying Practices activities, PBL projects, Webquests, and other phenomenon-based activities have students present their explanations and arguments in a larger setting and in a variety of media to expand the three-dimensional learning experience.

**Print:**

*Glencoe Biology* is visually appealing and interesting to students. Visuals are used to help students dissect the text and build literacy skills in both informational text and fiction.

**Earth Science:**

**Digital:**
The ConnectED platform allows students and teachers to have easy access to all resource needs in one place. The Teacher Lesson Center on ConnectED provides ease of use of creating personalized lessons with easy-to-use editing, attach resources for easy lesson planning, eAssessment suite supports teachers with diagnostic to summative evaluations.

The Student Learning Center on ConnectED provides students with assess to their e-book, aligned lesson resources and supporting materials to help make content connections. On ConnectED students and teachers can also find helpful videos guiding them through the online platform.

**Print:**

*Earth Science: Geology, the Environment, and the Universe* clearly highlights new and review vocabulary at the beginning of each section of instruction in the student edition. All key terms are boldfaced, highlighted and defined in context within the paragraph that it is used. The textbook integrates student-friendly margin features that provide vocabulary support to clues, root words, prefixes and suffixes; in order to help the student. Foldables ™ are three-dimensional graphic organizers that provide review and reinforcement of vocabulary related to the big idea of the chapter. The chapter-end Study Guide reviews all of the important key scientific vocabulary by section that is also related to the chapter’s big idea.

The design is highlighted with visual learning aids, supporting ancillaries, and integrated technology. The program provides a wide range of print and technology resources that addresses multiple learning styles.

**Physical Science:**

**Digital:**
The ConnectED platform allows students and teachers to have easy access to all resource needs in one place. The Teacher Lesson Center on ConnectED provides ease of use of creating personalized lessons with easy-to-use editing, attach resources for easy lesson planning, eAssessment suite supports teachers with diagnostic to summative evaluations.

Virtual Labs teach students the key concepts and processes of science while capturing their interest and curiosity.

The Student Learning Center on ConnectED provides students with assess to their e-book, aligned lesson resources and supporting materials to help make content connections.
On ConnectED students and teachers can also find helpful videos guiding them through the parts of the online platform.

The electronic Student edition includes Concepts in Motion animations, interactive tables and other enhancements such as access to student worksheets and additional practice and review. Virtual Labs and Interactive Dissections allow students to explore concepts through lab simulations.

Print:
*Glencoe Physical Science* engages students through active learning and real-world applications to concepts. Inquiry-based activities along with strategies such as Foldables teach students the key concepts and processes of science while capturing their interest and curiosity. The program also offers alternative presentations of concepts through various media to insure that all learners have the opportunity to understand the concepts. Foldables are three-dimensional, interactive, graphic organizers. They provide students with an interactive way to organize information. Reading Essentials is a leveled version of the text, providing all of the content of the Student Edition at a lower reading level. The Science Notebook then provide students with varied activities that encourage them to put concepts into their own words and interact with them at a higher level to reinforce understanding.

The instructional materials support instruction and learning for all students:
Instructional Materials

19. Provide virtual labs, simulations, and video-based learning experiences.
Biology TE, p. 148 (BrainPop Video is online)
Biology TE, p. 606 (Virtual Lab is online)
Earth Science TE, p. 478&479 (Concepts in Motion and Video)

Life Science:
Virtual Labs are available on ConnectED. These labs allow students to manipulate variables, collect and analyze data, and draw conclusions in a unique interactive inquiry format that is ideal for exploration, reinforcement, and extension of key concepts. Video Labs are used to help students gain confidence with laboratory process skills by first seeing them being done by students before they attempt the procedure in the laboratory. The program also includes an extensive Safety and Techniques video. Lab Manager online assists teachers in electronically selecting the right lab by sorting labs by key word, duration, or national standard.

McGraw-Hill Education’s Glencoe Biology provides Applying Practices activities and Project-Based Learning (PBL) projects, which appear at point of use, that is correlated to the pertinent DCI and biology content. Each activity and project is written to a specific NGSS performance expectation using the science and engineering practices. These editable worksheets can be filled in online or downloaded. Students will be engaged and successful, integrating the three dimensions—disciplinary core ideas, science and engineering practices, and crosscutting concepts. LaunchLabs, MiniLabs, BioLabs, Data Analysis Labs, and DBQs, as well as guided and full inquiry activities and virtual labs online, further support the science content using science and engineering practices. All the projects and activities are supported by the Science and Engineering Practices Handbook online.

Earth Science:

Earth Science: Geology, the Environment and the Universe use inquiry-based learning opportunities where students participate in science discourse in and outside the classroom environment. Multiple lab opportunities such as Demo Labs, Launch Lab, Mini Labs, Data Analysis Labs, GeoLabs and virtual labs provides students with opportunities to collaborate and communicate findings. Specials features in the Earth Science: Geology, the Environment and the Universe such as Earth Science & Technology/Society & Expeditions provide students the opportunity to discuss and write in science. Other supporting resources found in the Earth Science textbook to support classroom discourse includes: Visualizing Activities, Projects, Academic Vocabulary, Word Origin, Science Usage v. Common Usage and Environmental Connections.

Earth Science: Geology, the Environment, and the Universe gets students’ attention and keeps it with an innovative, comprehensive, conceptual presentation that creates optimum learning. The authorship team, consultants, and editorial staff have reviewed the Earth science content for accuracy. The design is highlighted with visual learning aids, supporting ancillaries, and integrated technology. The program provides a wide range of print and technology resources that addresses multiple learning styles.

Foldables™ created by Dinah Zike provides research-based methods to organizing information for effective study and retention of content. The textbook encourages all learners to utilize the “Concepts-in-Motion” animations associated with selected images, tables, and timelines as an alternative format to acquired information. There are online electronic lessons in “Interactive Tutor” that provide enhanced audio/visual concept presentations.

“What’s Earth Science Got to Do With it?” videos online provide enrichment lessons to that connect and extend learning in the Earth science classroom. ConnectED aids learners with online content, review, practice, assessment, and remediation.

Physical Science:
Cyber Science in ConnectED is a 3-D modeling, exploration, and labeling program for major concepts in physical science. Students can work independently or collaboratively to analyze structures and relationships in physical science and communicate their understanding with peers.

One of the fundamental goals of Glencoe Physical Science is to make the concepts relevant to students. There are multiple opportunities for students to apply their knowledge through labs and activities as well as in writing.
• Each chapter opens with a Science Journal activity that relates the chapter opening image to students’ experiences.
• The Launch Lab at the beginning of the chapter provides students with a common experience from which the teacher can build upon.
• Throughout the text, visuals present concepts in a familiar, real-world context.
• The Teacher Wraparound Edition includes strategies for teachers to help students tie concepts to prior knowledge, make analogies, and to apply concepts.
• National Geographic Visualizing features present concepts in a more visual format allowing students to see familiar, visual applications of the concepts.
• Model and Invent Labs challenge students to solve a problem by applying the concepts of the chapter.
• The Labs in each chapter begin with a Real-World Question that students try to solve.
• There are multiple lab opportunities in each chapter (6-8 per chapter) that develop students’ ability to apply their knowledge and skills.

There are several features that reveal the real-world connections of the concepts such as Time Science and Society, Oops, Accidents in Science, and Science Stats.

The instructional materials support instruction and learning for all students:
Instructional Materials
20. Allow teachers to access, revise, and print from digital sources (e.g., readings, labs, assessments, rubrics).
   All chapter resource files are word documents and can be obtained and edited digitally.
   Digital high school science solutions, solving real problems for the real world:
   Project-Based Learning Activities (PBLs)
   Science and Engineering Practices Handbook
   Applying Practices Worksheets
   New Applying Practices activities and Project-Based Learning activities, each written to a specific NGSS performance expectation, appear at point of use. These editable worksheets can be filled in online or downloaded.
Instructional Materials
21. Supplies and equipment, when provided, are high quality (e.g., durable, dependable) and organized for efficient use. Supplies and equipment, when provided, are high quality (e.g., durable, dependable).

McGraw-Hill Education, PreK-12 educational publishers, are committed to the creation of the highest quality textbooks, support materials, and technology products. We utilize the strictest standards for gathering input into our all our programs: market research representative of a wide variety of teachers/students from across the country, academic research from school districts of varying populations, diverse authorship teams, and carefully selected and balanced teacher advisory boards. Using input from this wide spectrum at the onset of program development allows us the opportunity to carefully construct content and instruction fairly representing and addressing the interests/needs of a truly diverse population. Throughout development content and instructional practices are monitored by our authorship teams and tested by educators to insure the careful balance is implemented so that the programs we send into the marketplace will meet the intellectual, cultural, and experiential needs of students across the country helping all students move successfully into our richly diverse society.
**Instructional Materials**
22. Provide thorough lists that identify by learning experience all consumable and non-consumable materials aligned for both instruction and assessment. There is a complete list of consumable and non-consumables for all investigations and demonstrations.

**Life Science:**

**INSTRUCTION:**
Science and Engineering Practices Handbook
Project-Based Learning activities
WebQuest
“What’s Biology Got to do With It?”
Launch Labs
Concept Mapping
Enrichment
Real World Biology
V Lessons
Concepts in Motion
Personal Tutors
Bellringers
BrainPOP
Interactive Tables
Reading Essentials: English and Spanish
Virtual Labs
Science Notebook
MultiLingual Glossary
Chemistry in Biology
Study Guides: English and Spanish
Vocabulary E-Games
Vocabulary eFlashcards and eGames: English and Spanish
Guided Inquiry Labs
Open Inquiry Labs
Pre-AP Labs
Forensics Labs

**ASSESSMENT:**
Applying Practices
Section Quick Check
Online Quiz: English and Spanish
Diagnostic Tests
Levelled Chapter Tests
Standardized Test Practice
LearnSmart with SmartBook
E-Assessment

**Earth Science:**

**INSTRUCTION:**
Science and Engineering Practices Handbook
Project-Based Learning activities
STEMquests
LearnSmart with SmartBook
Launch labs
V Lessons
Science Notebook
Concepts in Motion
Mini Labs
WebQuests
Interactive Tables
GeoLabs
Design Your Own Labs
Study Guides
Vocabulary eGames (English and Spanish)
Vocabulary eFlashcards (English and Spanish)

ASSESSMENT:
Section Self Check Quiz: English and Spanish
Applying Practices
Chapter Self Check Quiz
Chapter Assessments
Standardized Test Practice
Online Test Practice
“What’s Earth Science Got to do With It?”
Performance Assessment Activities
E-Assessment

Physical Science

INSTRUCTION:
Science and Engineering Practices Handbook
Project Based Learning
Project Based Learning Rubrics
Webquests
Directed Reading: English and Spanish
Mini Labs
Launch labs
V Lessons
BrainPops
Concepts in Motion
Virtual Labs
Levelled Labs
Teaching Transparencies
Enrichment
Reinforcement
Reading Essentials
Science Notebook
Multilingual Glossary
Interactive Concept Maps
LearnSmart/Smartbook
Vocabulary eGames (English and Spanish)
Vocabulary eFlashcards (English and Spanish)

ASSESSMENT
Online Quiz
Applying Practices Worksheets
Additional Practice Problems
Chapter Review
Online Test Practice
Standardized Test Practice
Levelled Chapter Tests
Assessment Transparencies
Mastering Standard Transparencies
E-Assessment
The instructional materials support instruction and learning for all students:

**Instructional Materials**

23. Use scientifically accurate and grade-appropriate scientific information, vocabulary, phenomena, and representations to support students’ three-dimensional learning.

- Earth Science TE, p. 344 (Vocabulary Introduction)
- Earth Science TE, p. 342 (Launch Lab – Phenomenon)
- Earth Science TE, p. 352 (Visual Representation)
- Earth Science TE, p. 347 (Visual Representation in Print and Digital online)
- Earth Science TE, p. 359 (Modeling)

McGraw-Hill Education and McGraw-Hill School Education, LLC, are committed to publishing pedagogically sound, high-quality, educational material that is fair, unbiased, and that recognizes the unique contributions of people of all races, cultures, and faiths. To ensure that our textbooks meet these high standards, all textbooks are authored by scholars and educators who are recognized experts in their areas of specialty. McGraw-Hill School Education, LLC also submits manuscripts to independent scholars and teachers for their review. To reach consensus on information with divergent interpretations, the recommendations of these educators and specialists are reviewed and discussed among the author and Academic Designers until final consensus is negotiated; changes are then incorporated into the manuscript to ensure that the materials are accurate and unbiased, present the materials in an age-appropriate and meaningful manner, and reflect the most current research in the subject area.
The instructional materials support instruction and learning for all students:

**Instructional Materials**

24. Adhere to safety laws, rules, and regulations and emphasize the importance of safety in science.

Biology TE, p. 1105-1109
Biology TE, p. 871
Biology TE, p. 38T-39T

Safety issues are clearly indicated in the student materials and provide simple and easy-to-understand practices/steps the students can follow to make sure no one is injured during activities and labs. The *Glencoe Biology* Student Edition provides an exclusive “Investigation and Experimentation” section at the beginning of the textbook that provides students with foundation of safety procedures that will be used throughout the course.
The instructional materials support instruction and learning for all students:

**Instructional Materials**

25. Make available ongoing and embedded professional development for implementation and continued use of the instructional materials.

Biology TE, p. 482A&B
Biology TE, p. 483 (Introduce and Assess)
Biology TE, p. 485 (Content Background)
Earth Science TE, p. 436 and 437 (Teacher Notes)
Biology TE, p. 10T-27T

McGraw-Hill School Education LLC is committed to assisting teachers, administrators, and district leaders achieve your curriculum goals. Our comprehensive, complimentary Professional Development Program offers workshops and interactive training sessions that address research-based practices and strategies to meet the needs of supervisors and classroom teachers. In addition, in just a few clicks you can quickly access relevant, timely, and ongoing Professional Development videos and webinars available to you, on-demand. Directly embedded in the McGraw-Hill high school science programs are your interactive professional learning program. Learn how other science educators have successfully implemented the program and increase your awareness of new science standards.

The professional development for teachers guides them into the proper use of instruction using pedagogical sound strategies. In addition to the above training mentioned, teachers can access a variety of professional development resources including but not limited to:

- The quick start and implementation courses are embedded into the online platform and are available 24/7 for teachers to access the training.
- The Blue Print for Success is a teacher reference guide that is available in print and digitally and has a wealth of strategies for differentiation support to guide teachers on how to support 3 dimensional learning for the students.
- A variety of professional development videos are also available that support both differentiated instruction and includes the use of Foldables as a learning tool. The foldable videos were created by McGraw Hill Education and Dinah Zike.
- The teacher’s edition has a wealth of embedded professional development including: addressing misconceptions, using visual literacy, differentiation and scaffolding, inquiry for learning, guided questioning, and many more.
Monitoring Student Progress

The instructional materials support monitoring student progress:

26. Elicits direct, observable evidence of three-dimensional learning by students using practices with core ideas and crosscutting concepts to make sense of phenomena and/or to design solutions that have been covered adequately in the instructional materials.

Biology TE, p. 601 (Service Learning / Community Project)
Biology TE, p. 606 (Virtual Lab – Biotechnology Knocking Out Genes is online)
Earth Science TE, p. 699
Earth Science TE, p. 185

Life Science:

Student activities and questions throughout Glencoe Biology provide opportunities for ongoing assessment and remediation. The Launch Lab is an entry-level guided inquiry activity that applies students’ prior knowledge at the beginning of a chapter. In the Teacher Edition, the Clarify a Misconception feature provides diagnostic assessment and remediation strategies. Formative assessment strategies are provided in the margins of the Teacher Edition. This Teacher Edition provides Assessment checks—an evaluation of key section concepts and an activity to re-teach students who are struggling to meet the learning objective.

Students produce tangible outcomes for Applying Practices activities, PBL projects, and student inquiry activities. The performance tasks, applying practices, and lab activities help students demonstrate their three dimensional learning by constructing explanations based on the application of the cross cutting concepts and the science and engineering practices focused on phenomenon targeting on the learning outcomes and the DCIs.

A summative evaluation is provided by the Chapter Assessment at the end of each chapter. It includes Vocabulary Review, Understand Key Concepts and Constructed Response. Think Critically, Writing in Biology, and DBQs sections require students to demonstrate higher-order thinking and use their writing skills. The cumulative Standardized Test Practice, which includes Extended Response and Essay Questions, aids students in mastering skills to be successful on local, state, and/or national tests. If students have problems with a standardized text question, a prescriptive guide is available to direct students to review specific lessons for remediation.

The eAssessment program on ConnectED allows teachers to build summative assessment that can be customized for each lesson of the Student Edition. ConnectED’s Plan and Present software includes formative and summative assessment. The Unit (Fast Files) resources booklets include formative assessment for each section of the text. Plus, the Chapter Test assessment is provided in three levels to support differentiated instruction. The program’s web site provides students additional formative and summative self-assessment practice. Students can email online assessment results to teachers and parents.

LearnSmart with SmartBook is an interactive and adaptive version of the book with continual assessment and metacognitive tools to help teachers and students know what the student has mastered and what the student needs to focus on. LearnSmart includes 3 stages: Preview (before), Assess (during), Review (after/mastery).

Rich visuals with caption questions, Reading Checks and Section Assessments provide formative assessment and student metacognition integrated within the lesson.

Reading Checks are formative assessment questions integrated within the lesson for students to self-assess their reading comprehension before going onto the next lesson. The Section Assessment in the Student Edition provides students with summary statements and scaffold questions that tie to the learning objectives for that section. Online Self-Check quizzes also provide formative assessment opportunities.

The eAssessment program on ConnectED also allows teachers to build formative assessment that can be customized for each lesson of the Student Edition.

eAssessment is a key element to teaching science. McGraw-Hill Education’s eAssessment suite supports you from diagnostic to summative evaluations, leveled questions, and online scoring. eAssessment allows teachers to create tests and other assignments that can be delivered online or offline.

Rubrics are provided online for PBL projects, Applying Practices activities, and labs to evaluate progress.

The opportunities for assessment represent a the range of assessment recognized in the Understanding by Design Continuum, including informal, formative, performance expectations, summative, written, and practical. These various methods of assessment are accessible and unbiased for all students.

Project-Based Learning activities, Applying Practices activities, WebQuests, and labs are integrated throughout Glencoe
Biology. Each focuses on science and engineering practices and provides the teacher with background information and strategies for effectively using the program.

Pre-, formative, summative, and self-assessment measures include
- Diagnostic Test for each chapter
- Scaffolded Section Quick Checks
- Reading Checks, Caption Questions, and Section Assessments within the lessons
- Chapter Assessments and Standardized Test Practice
- Online quizzes
- eAssessment
- LearnSmart with SmartBook Adaptive Learning System

These tools provide the means for pre-, formative, summative and self-assessment of three-dimensional learning.

Glencoe Biology has the broad range of opportunities to demonstrate understanding of DCI’s, the practices, and Crosscutting Concepts, as well as utilize mathematics and literacy skills.

Teachers have the options of:
- eAssessment with a variety of questions types; Online Self-Check Quizzes; LearnSmart with SmartBook Adaptive Learning System; Multiple inquiry activities that can be used as performance tasks; Project-Based Learning activities
- Applying Practices activities; Webquests and more
- All of these provide the student the opportunity to demonstrate the application and understanding of the practices within the context of the DCIs and the crosscutting concepts.

Earth Science:
Earth Science: Geology, the Environment, and the Universe offers Earth Science 4 You at the beginning of each section, providing students with an everyday relevant analogy that helps to clarify the key idea of the lesson. The program provides hands-on activities that relate Earth science to students’ everyday lives. The unit openers and career features encourage students to go beyond the classroom to investigate the Earth science behind the products and processes that are a part of their world. With these aspects of the program, students gain a greater appreciation for the applications of Earth science that make their world a better place. The “Expedition” feature lets students investigate a day in the life of people working in the field of Earth science. They also learn what is required of them if they are to prepare to join the scientists they read about. “What’s Earth Science Got to Do With it?” video series offers fast-paced videos that connect concepts to contemporary examples found in the students’ world.

Physical Science:
The assessment tools help educators make instructional decisions before, during, and after instruction. The eAssessment software allows teachers to give online formative and summative assessments and easily generate data to inform their lessons as well as modify instruction for particular students. Teachers are given the necessary tools to guide instructional decision at every point.

LearnSmart is an interactive version of the book with continual assessment and metacognitive tools to help teachers and students know what the student has mastered and what the student needs to focus on. LearnSmart includes 3 stages: Preview (before), Assess (during), Review (after/mastery).

Found throughout MHE Glencoe Physical Science textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the Glencoe Physical Science textbook are aligned to NGSS see attached link https://www.dropbox.com/s/fse9a28msduq2i9/PS%20Alignment%20Guide.pdf?dl=0
The instructional materials support monitoring student progress:
27. Includes editable and aligned rubrics, scoring guidelines, and exemplars that provide guidance for assessing student performance along all three NGSS dimensions to support teachers in (a) planning instruction and (b) providing ongoing feedback to students.
The program includes editable rubrics and the Blue Print for Success Teacher reference book has a section on performance assessment in the science classroom to provide guidance on planning instruction and providing ongoing feedback.

Life Science:
eAssessment is a key element to teaching science. McGraw-Hill Education’s eAssessment suite supports you from diagnostic to summative evaluations, leveled questions, and online scoring. eAssessment allows teachers to create tests and other assignments that can be delivered online or offline.

Rubrics are provided online for PBL projects, Applying Practices activities, and labs to evaluate progress.

The Glencoe Biology provides the students with relevant information that builds on their personal experiences. The high interest special features in each chapter make a connection with some aspect of students’ everyday life and society at large. The unit openers depict a career focus that relates to various applications of biology. The Teacher Wraparound Edition offers service learning activities that engage students in meaningful community service in relation to biology and the real world. The Forensics Lab Manual online connects the technical and legal fields to biology. “What’s Biology Got to Do With it?” series offers fast pace captivating videos that relate biology to the real world.

The number and quality of the opportunities for the student to think critically, creatively, and reflectively in scientific investigations are almost overwhelming in Glencoe Biology program. The number of scientific investigations in the ancillary laboratory manuals in addition to the number of labs in the textbook far exceeds the number of days in the school calendar. The teacher has the opportunity to choose the best ones to fit the local circumstances and needs of the students. The “Data Analysis Labs” and “Document-Based Questions” (DBQ) cites the actual research source from which the questions are based. This information allows students to opportunity to delve deeper into the research and extend their learning experience.

For You
You can build a wide variety of assignments in eAssessment. With a series of clicks, you can select questions by subject, standard, lesson, or a host of other factors. If you assign the work to be completed online, the system will collect data for every student and the class. Reports on proficiency and accuracy can help you make data-driven instructional decisions.

For Your Students
The online assignments are not limited to assessments. You can allow your students to practice by giving them multiple attempts at the assignment. You can also choose to allow students to see the right answer to each question or to receive feedback from each question. The system can also lock down the assignment with time restrictions. Rubrics are provided for WebQuests, Project-Based Learning Exercises, Performance Tasks and Essay and Thought Based Questions. These can be used to inform instruction as well as provide feedback to students.

Earth Science:
eAssessment is a key element to teaching science. McGraw-Hill Education’s eAssessment suite supports you from diagnostic to summative evaluations, leveled questions, and online scoring. eAssessment allows teachers to create tests and other assignments that can be delivered online or offline.

For You
You can build a wide variety of assignments in eAssessment. With a series of clicks, you can select questions by subject, standard, lesson, or a host of other factors. If you assign the work to be completed online, the system will collect data for every student and the class. Reports on proficiency and accuracy can help you make data-driven instructional decisions.

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Questions. These can be used to inform instruction as well as provide feedback to students.

**Physical Science:**
At the beginning of each chapter there are several activities for preassessment. The first is a Science Journal activity that encourages students to connect their prior knowledge to the chapter opening photograph. Throughout the text we provide Reading Checks and caption questions as opportunities for ongoing assessment.

The Teacher Wraparound Edition provides teachers with many questioning strategies designed to help them assess student understanding. At the end of each lesson are strategies to Check for Understanding as well as Reteaching.

Each Chapter ends with a Chapter Review containing many questions at a range of levels that can help teachers assess student understanding. There are also two pages of questions in standardized test format.

The eAssessment Suite offers an extensive bank of questions that can easily be searched and edited to create quizzes, tests for summative or cumulative assessment.

The Leveled Resources book online provides three levels of summative assessments for every chapter.

The Fast File Chapter Resources online for each chapter contains a Chapter Review and Chapter Test for each chapter.
The instructional materials support monitoring student progress:

McGraw Hill HS Science programs includes all of the above types of assessments in the online assessment.

Project-Based Learning activities are integrated throughout each text in the Science Programs for High School. Each of these PBLs and Applying Practices activities focus on the eight science and engineering practices and provide the teacher with background information and strategies for effectively using the programs.

**Life Science:**
The teaching strategies presented in the Teacher Edition support the overarching principles of the National Science Education Standards and the NSTA Position Statement on Inquiry Learning and Laboratory Activities by providing opportunities for science inquiry, scientific discussion and debate, formative and summative assessment of student understanding, and connection to other areas of learning.

Digital high school science solutions, solving real problems for the real world:
- Project-Based Learning activities (PBLs)
- Science and Engineering Practices Handbook
- Applying Practices Worksheets

New Applying Practices activities and Project-Based Learning activities, each written to a specific NGSS performance expectation, appear at point of use. These editable worksheets can be filled in online or downloaded. Your students will be engaged and successful, integrating the three dimensions—disciplinary core ideas, science and engineering practices, and cross-cutting concepts!

The optional LearnSmart Learning system allows students to do self-assessment in a strong learning environment that also uses the research and algorithmic basis to make it unique for each student.

**Earth Science:**
Digital high school science solutions, solving real problems for the real world:
- Project-Based Learning activities (PBLs)
- Science and Engineering Practices Handbook
- Applying Practices Worksheets

New Applying Practices activities and Project-Based Learning activities, each written to a specific NGSS performance expectation, appear at point of use. These editable worksheets can be filled in online or downloaded. Your students will be engaged and successful, integrating the three dimensions—disciplinary core ideas, science and engineering practices, and cross-cutting concepts!

The optional LearnSmart Learning system allows students to do self-assessment in a strong learning environment that also uses the research and algorithmic basis to make it unique for each student.

**Physical Science:**
*Glencoe Physical Science* provides teachers with comprehensive ongoing assessment opportunities.

**Formative/Diagnostic**
At the beginning of each chapter there are several activities for preassessment. The first is a Science Journal activity that encourages students to connect their prior knowledge to the chapter opening photograph.

We provide Start-up activities including Launch Labs and Foldables activities at the beginning of each chapter. Besides having other pedagogical benefits, they can assist teachers by helping to inform their instruction.

Throughout the text we provide Reading Checks and caption questions as opportunities for ongoing assessment.

The end of each section contains several questions at various difficulty levels to be used as a checkpoint prior to moving on to the next section.

All of the labs include assessment opportunities.

The Teacher Wraparound Edition provides teachers with many questioning strategies designed to help them assess student understanding. At the end of each lesson are strategies to Check for Understanding as well as Reteaching.

**Summative/Cumulative**
Each Chapter ends with a Chapter Review containing many questions at a range of levels that can help teachers assess student understanding. There are also two pages of questions in standardized test format.
The eAssessment Suite offers an extensive bank of questions that can easily be searched and edited to create quizzes, tests for summative or cumulative assessment. The Leveled Resources book online provides three levels of summative assessments for every chapter. The Fast File Chapter Resources online for each chapter contains a Chapter Review and Chapter Test for each chapter.

The eAssessment program on ConnectED allows teachers to build summative assessment that can be customized for each lesson of the student edition. ConnectED’s Plan and Present software includes formative and summative assessment. The Unit (Fast Files) resources booklets include formative assessment for each section of the text. Plus, the “Chapter Test” assessment is provided in three levels to support differentiated instruction. The program’s web site provides students additional formative and summative self-assessment practice. Students can email online assessment results to teachers and parents.

The LearnSmart program allows students and teachers to constantly assess understanding of a given topic and automatically modify the content of the books to match the student’s learning needs. LearnSmart generates data for the student and teacher so that lessons and if necessary intervention can be precisely crafted for each student.
The instructional materials support monitoring student progress:

29. Provides multiple opportunities for students to demonstrate and receive feedback on performance of practices connected with their understanding of disciplinary core ideas and crosscutting concepts.

Biology TE, p. 131 (PBL - Cleaning Up an Oil Spill is online)
Biology TE, p. 424 (Applying Practices is online)
Earth Science TE, p. 269
Earth Science TE, p. 270-271

Life Science:

Glencoe Biology has the broad range of assessment opportunities that give both the student and the teacher a variety difference way to demonstrate their understanding of DCI's, Practices and Crosscutting Concepts.

Teachers have the options of:
- eAssessment with a variety of questions types
- Multiple Inquiry Activities that can be used as performance tasks
- Performance Tasks
- Applying Practices Activities
- LearnSmart with SmartBook Adaptive Learning System
- Self Check Quizzes
- Webquests
- And others

Grade-appropriate evidence of the crosscutting concepts is found in the program materials. An Alignment Guide can be found in the following link: https://www.dropbox.com/s/3vriyqmmxwq7i/Biology%20Alignment%20Guide.pdf?dl=0

Earth Science:

The online assignments are not limited to assessments. You can allow your students to practice by giving them multiple attempts at the assignment. You can also choose to allow students to see the right answer to each question or to receive feedback from each question. The system can also lock down the assignment with time restrictions.

Earth Science: Geology, the Environment and the Universe has the broad range of assessment opportunities that give both the student and the teacher a variety difference way to demonstrate their understanding of DCI's, Practices and Crosscutting Concepts.

Teachers have the options of:
- eAssessment with a variety of questions types
- Multiple Inquiry Activities that can be used as performance tasks
- Performance Tasks
- Applying Practices Activities
- LearnSmart with SmartBook Adaptive Learning System
- Self Check Quizzes
- Webquests
- And others

Found throughout Earth Science: Geology, the Environment and the Universe textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the Earth Science: Geology, the Environment and the Universe textbook are aligned to NGSS see attached link.

https://www.dropbox.com/s/geh4axrywv5n29y/ES%20Alignment%20Guide.pdf?dl=0

Physical Science:

Glencoe Physical Science has a broad range of assessment opportunities that give both the student and the teacher a variety difference way to demonstrate their understanding of DCI's, Practices and Crosscutting Concepts.

Teachers have the options of:
- eAssessment with a variety of questions types
- Multiple Inquiry Activities that can be used as performance tasks
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Performance Tasks
Applying Practices Activities
LearnSmart Adaptive Learning System
Self Check Quizzes
STEM projects
Webquests
And others

Found throughout *Glencoe Physical Science* textbook there are too many Crosscutting Concepts to address individually in the rubric. All crosscutting concepts found in the *Glencoe Physical Science* textbook are aligned to NGSS see attached link https://www.dropbox.com/s/fse9a28msduq2i9/PS%20Alignment%20Guide.pdf?dl=0
The instructional materials support monitoring student progress:
30. Assesses student proficiency using methods, vocabulary, representations, models, and examples that are accessible and unbiased for all students.
McGraw Hill High School Science includes all of the above types of assessment items in the online assessment.

McGraw-Hill Education and McGraw-Hill School Education, LLC, are committed to publishing pedagogically sound, high-quality, educational material that is fair, unbiased, and that recognizes the unique contributions of people of all races, cultures, and faiths. To ensure that our textbooks meet these high standards, all textbooks are authored by scholars and educators who are recognized experts in their areas of specialty. McGraw-Hill School Education, LLC also submits manuscripts to independent scholars and teachers for their review. To reach consensus on information with divergent interpretations, the recommendations of these educators and specialists are reviewed and discussed among the author and Academic Designers until final consensus is negotiated; changes are then incorporated into the manuscript to ensure that the materials are accurate and unbiased, present the materials in an age-appropriate and meaningful manner, and reflect the most current research in the subject area.
The instructional materials support monitoring student progress:

31. Digital assessments are easy to manipulate and customize, are linked to Common Core State Standards, and have large problem banks.

McGraw Hill eAssessment is easy to use and customize, is correlated to the NGSS and has a minimum of 100 questions per chapter.

**Life Science:**
The eAssessment program on ConnectED allows teachers to build summative assessment that can be customized for each lesson of the student edition. ConnectED's Plan and Present software includes formative and summative assessment. The Unit (Fast Files) resources booklets include formative assessment for each section of the text. Plus, the Chapter Test assessment is provided in three levels to support differentiated instruction. The program's ConnectED site provides students additional formative and summative online self-assessment practice. Students can email online assessment results to teachers and parents.

**Earth Science:**
McGraw Hill Science Programs include standardized test practice formatted in form like state standardized tests. There is standardized test practice at the end of each chapter in the text with additional practice online, in McGraw Hill eAssessment which also has tech enhance questions as part of the question banks to prepare students for online testing.

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**Physical Science:**
McGraw Hill Science Programs include standardized test practice formatted in form like state standardized tests. There is standardized test practice at the end of each chapter in the text with additional practice online, in McGraw Hill eAssessment which also has tech enhance questions as part of the question banks to prepare students for online testing.

The eAssessment Suite offers an extensive bank of questions that can easily be searched and edited to create quizzes, tests for summative or cumulative assessment.
The instructional materials support monitoring student progress:
32. Digital assessment platform allows teachers to easily access student work and provide feedback. With McGraw Hill Educations eAssessment, assessments given online are automatically graded and provide instant feedback for both teachers and students.

Life Science:
The assessment tools help educators make instructional decisions before, during, and after instruction. The eAssessment software allows teachers to give online formative and summative assessments and easily generate data to inform their lessons as well as modify instruction for particular students. Teachers are given the necessary tools to guide instructional decision at every point. The eAssessment program allows teachers to prepare lesson assessments by selecting questions based on difficulty level. The Unit resource booklets offer an enrichment activity for each chapter of the student edition.

LearnSmart with SmartBook is an interactive and adaptive version of the book with continual assessment and metacognitive tools to help teachers and students know what the student has mastered and what the student needs to focus on. LearnSmart includes 3 stages: Preview (before), Assess (during), Review (after/mastery).

The LearnSmart program allows students and teachers to constantly assess understanding of a given topic and automatically modify the content of the books to match the student’s learning needs. LearnSmart generates data for the student and teacher so that lessons and if necessary intervention can be precisely crafted for each student.

Earth Science:
*Earth Science: Geology, the Environment, and the Universe* offers both formative and summative assessment opportunities with access to a tool that instantly creates customizable assessments. Teachers can then use the assessment data to create individualized student plans.

Teachers are given the necessary tools to guide instructional decision at every point. The eAssessment Suite allows for comprehensive management of their assessments. They can easily modify existing test items and create additional items as needed, adjust the format and even control the answers and create multiple versions of assessments.

LearnSmart with SmartBook is an interactive and adaptive version of the book with continual assessment and metacognitive tools to help teachers and students know what the student has mastered and what the student needs to focus on. LearnSmart includes 3 stages: Preview (before), Assess (during), Review (after/mastery).

Physical Science:
The ConnectED platform allows teachers to have easy access to all resource needs in one place. The Teacher Lesson Center on ConnectED provides ease of use of creating personalized lessons with easy-to-use editing, attach resources for easy lesson planning, eAssessment suite supports teachers with diagnostic to summative evaluations. The ConnectED Mobile app gives students and teachers complete access to the Physical Science eBook, alongside planning tools for teachers, reference materials, and other program resources.

The Student Edition is not only in print format, but is available online as an eBook and as LearnSmart. The electronic editions include Concepts in Motion animations, interactive tables and other enhancements such as access to student worksheets and additional practice and review.
The instructional materials support monitoring student progress:
33. Provides teachers with a range of data to inform instruction that can interface with multiple electronic grade book platforms.
McGraw Hill Education’s eAssessment provides access to 13 different reports to inform instruction and the data is easily exported into Excel or .csv files for import into grade book programs.

The new ConnectED digital platform for high school science brings a new level of engagement and effectiveness to your classroom. A one-stop shop where you can access the student eBook, digital resources, videos, worksheets, presentations, assessment tools, and planning and messaging tools.

**Features**
- Plan & Present: Create personalized lessons with easy-to-use editing tools.
- Manage classroom assignments: Keep everything organized. Send and receive assignments electronically to your students via their own ConnectED accounts.
- Comprehensive resources: Project-Based Learning activities integrate science and engineering practices while engaging students.
- Access to your student eBook makes it easy for you to plan wherever you are.
- Offers tools such as My Files, Planner, Notebook, and eGlossary.
- Search by keyword or standard.
- Contains quick calendar view and Message Center.

**For You**
ConnectED is a comprehensive resource containing everything you need to teach your class. You can access ConnectED anywhere — from any computer, at any time — giving you complete flexibility in preparing for your class.

**For Your Students**
Students have their own version of ConnectED, complete with student worksheets and digital resources, called the Student Center. Assignments you create will show up on their to-do lists, and they can message with you and submit work directly back to your ConnectED account via the Web.
The instructional materials support monitoring student progress:
34. Provides print and digital assessments that are platform- and device-independent.
McGraw Hill eAssessment provides the ability to give assessments digitally on any device or browser including smartphones and will work on any browser.
The McGraw-Hill high school science programs via ConnectEd are compatible with all devices. The ebook is available offline with an app for iOS, Android, Windows8 tablets 7” or larger.

For the most updated ConnectEd minimum system requirements, please refer to:
http://help.k12.mhedu.com/systemcheck/