2024 Instructional Material Summer Review Institute

Review Team Appraisal of Title

Grades 6-8 Earth and Space Science

This appraisal form is provided for use by educators responsible for the selection of instructional materials for implementation with districts and charter schools across New Mexico to meet the need of their student populations.

NMPED Adoption Information

Text Title	Inspire Science, New Mexico Earth & Space Science, Comprehensive Student Bundle with Actively Learn Science, 6-year Subscription	Publisher	McGraw Hill LLC
SE ISBN	9781266216268	TE ISBN	9780076883134
SW ISBN		Grade Level/Content	Grades 6-8 Earth and Space Science

Core Instructional Material Designation *(Core Instructional Material is the comprehensive print or digital educational material, including basal material, which constitutes the necessary instructional components of a full academic course of study in those subjects for which the department has adopted content standards and benchmarks.)*

Recommended (90% and above)	☑	**Recommended with Reservations** (80-89%)	☐	**Not Recommended and Not Adopted** (below 80%)	☐

Total Score - *The final score for the materials is averaged between the team of reviewers.*	Average Score
	94%

Cultural and Linguistic Relevance Recognition - *Materials are reviewed for relevant criteria pertaining to the support for teachers and students in the material regarding cultural relevance and the inclusion of a culturally responsive lens. Those materials receiving a score of 90% or above on the CLR portion of the review are recognized as culturally and linguistically relevant.*

		Average Score
CLR Recognized	☑	91%

FOCUS AREA 6: CULTURAL AND LINGUISTIC PERSPECTIVES
Instructional materials represent a variety of cultural and linguistic perspectives.
Statements of appraisal and supporting evidence:

The educational materials provide comprehensive support for dual language learners, focusing on earth and space content with resources and strategies. "Dual Language Support" offers teachers the "Bridge" strategy, guiding linguistic support and scaffolding tailored to different stages of language acquisition. "Dual Language Instruction" modules integrate these strategies into each lesson, specifically designed for Spanish-speaking students. Literature recommendations enrich the materials with diverse texts related to earth and space, enhancing cultural relevance and broadening perspectives. All units and resources are available in Spanish, including vocabulary lists, language-building activities, and teaching techniques, ensuring accessibility and support for Spanish-speaking students.

FOCUS AREA 7: INCLUSION OF CULTURALLY AND LINGUISTICALLY RESPONSIVE LENS
Instructional materials highlight diversity in culture and language through multiple perspectives.
Statements of appraisal and supporting evidence:

The educational materials demonstrate a commitment to inclusivity and diversity through various components and resources. All units provide a "Historical Connections" subtopic that offers insights into diverse perspectives and historical contexts relevant to the content. In the STEM connections and STEM careers sections of the online resources, there is a focus on highlighting diverse individuals and their contributions, although perspectives are generally presented from a single viewpoint per concept. The "Letter to Home" activities encourage family engagement by connecting science content to students' daily lives and local environments. The "Universal Access" resource provides extensive support strategies for diverse student groups, addressing needs such as language learning, poverty, and students with disabilities.

Science Standards Review - *Materials are reviewed for alignment with the state adopted content standards, benchmarks and performance standards. The science standards include the performance expectations (PEs), disciplinary core ideas (DCIs), science and engineering practices (SEPs), crosscutting concepts (CCCs), and connections (CONNs) of the Next Generation Science Standards (NGSS). They also include the six NM StemReady! science standards.*

Average Score
92%

OVERALL ALIGNMENT
Materials align with the science standards overall.
Statements of appraisal and supporting evidence:

The instructional materials reviewed offer a comprehensive approach to middle school science education, focusing on astronomy, geological processes, and environmental studies. The material integrates theoretical knowledge with hands-on learning. Students engage in activities where they simulate wind effects, model tectonic plates, and analyze earth's materials cycling. The materials promote critical thinking skills and scientific literacy. Discussions on environmental challenges encourage systematic problem-solving by the students. The materials also emphasize data analysis and modeling to refine solutions and support students in making informed decisions based on evidence. Overall, the materials align with Earth and Space standards, fostering interdisciplinary learning and skill development in science, mathematics, and literacy.

EARTH'S PLACE IN THE UNIVERSE
Materials align to the earth and space science performance expectations (PEs) and related components (DCIs, SEPs, CCCs, CONNs, and NM Standards) for this focus area.
Statements of appraisal and supporting evidence:

The materials align with performance expectations in the Earth's Place in the Universe science topic. The materials provide a thorough exploration of astronomy and scientific modeling. Students investigate how earth's rotation and tilt influence the seasons, lunar phases caused by the moon's orbit, and the mechanics of eclipses through practical modeling exercises. The text combines theoretical explanations with hands-on activities, enhancing understanding of gravitational forces, celestial mechanics, and geological concepts like fossil analysis. By focusing on observation, modeling, and inquiry, the materials promote a deep understanding of celestial phenomena and earth's history. The material encourages scientific literacy and critical thinking among students.

EARTH'S SYSTEMS
Materials align to the earth and space science performance expectations (PEs) and related components (DCIs, SEPs, CCCs, CONNs, and NM Standards) for this focus area.
Statements of appraisal and supporting evidence:

The materials align with performance expectations in the Earth's Systems science topic. They include practical activities, such as simulating wind effects, modeling tectonic plates, and charting geological features, which promote hands-on learning and understanding of Earth’s processes. Students are guided to investigate the cycling of earth's materials and the forces driving these processes through modeling, lab experiments, and research assignments. The materials cover historical and geological changes through activities like reconstructing Pangea and analyzing seafloor spreading. The tasks in the materials are designed to enhance critical thinking, data interpretation, and scientific modeling skills, addressing the educational objectives set forth in the performance expectations.

EARTH AND HUMAN ACTIVITY
Materials align to the earth and space science performance expectations (PEs) and related components (DCIs, SEPs, CCCs, CONNs, and NM Standards) for this focus area.
Statements of appraisal and supporting evidence:

The materials align with performance expectations in the Earth and Human Activity science topic. The Inspire Science material aligns with earth and space science expectations, incorporating core ideas, scientific practices, and crosscutting concepts as outlined by New Mexico standards. Students analyze the distribution of earth's mineral, energy, and groundwater resources influenced by ongoing geological processes, conducting experiments and using scientific evidence to substantiate their findings. The materials also provide opportunities for students to explore the impact of human activities on natural resources, examining both short-term and long-term effects on the environment and human health through hands-on labs and tasks that promote scientific reasoning.

ENGINEERING DESIGN
Materials align to the engineering design performance expectations (PEs) and related components (DCIs, SEPs, CCCs, CONNs, and NM Standards) for this focus area.
Statements of appraisal and supporting evidence:

The materials align with performance expectations in the Engineering Design science topic. Inspire Science materials provide a structured approach to addressing environmental challenges through systematic problem-solving and critical analysis. Students engage in evaluating solutions for water pollution and assessing human impact on global climate change, considering multiple criteria and constraints in their design processes. The material integrates discussions on agriculture's dual role in feeding people and contributing to deforestation, fostering an understanding of societal needs and technological influences on energy use. The materials include practical activities, such as constructing and evaluating landfill models. The text emphasizes the importance of data analysis and modeling in refining solutions, encouraging students to develop informed decisions based on evidence and iterative improvement.

CCSS for ELA and Math in Grades 6-8 NGSS
Materials align to the ELA and math standards identified in grades 6-8 Earth and Space Science NGSS.
Statements of appraisal and supporting evidence:

The materials align with the CCSS ELA and math in grades 6-8. The materials encompass a wide range of scientific and mathematical concepts aimed at middle school students. The materials integrate mathematical skills by having students convert temperatures, plot planetary data, scale solar system models, calculate slopes and travel times, and analyze water usage data.

Science Content Review- *Materials are reviewed against relevant criteria pertaining to the support for teachers and students in the specific content area reviewed.*

Average Score
100%

FOCUS AREA 1: PHENOMENA-/PROBLEM-BASED AND THREE-DIMENSIONAL APPROACH
Instructional materials are centered around high quality phenomena and/or problems and require a three dimensional approach to make sense of the phenomena or to solve the problems.

The instructional materials focus on phenomena and problems that engage students in a three-dimensional approach, integrating NM STEM Ready! Standards across appropriate grade-level progressions. Lessons are driven by natural and designed phenomena that are meaningful to students, supporting their understanding through science and engineering practices, crosscutting concepts, and disciplinary core ideas. Students explore and apply their knowledge through activities such as modeling the Earth-Sun-Moon system's cyclical patterns, understanding gravity's role in star and solar system formation, and classifying galaxies, ensuring coherence across different learning areas.

FOCUS AREA 2: THREE-DIMENSIONAL ASSESSMENT
Assessments provide tools, guidance and support for teachers to collect, interpret and act on data about student progress toward the learning goals of the 3 dimensional standards.

The assessments in the materials provide support in gathering and interpreting data on students' progress aligned with the three-dimensional learning standards. Students engage in diverse tasks and assessment types across all dimensions to understand phenomena and solve problems. Students receive feedback from both teachers and peers, with opportunities for self-reflection integrated into the learning process.

FOCUS AREA 3: TEACHER SUPPORTS
Materials include opportunities for teachers to effectively plan and utilize materials.

The provided online materials offer a detailed list of all supplies needed for teaching investigations and labs, organized by module. The teacher edition includes guidance to maintain the pacing of lessons and ensure a balance between discovery-based learning and direct instruction. This involves ensuring teachers have materials, minimizing downtime, and providing guiding questions for student groups. The materials offer strategies to meet the needs of diverse students, with differentiated tasks tailored to various proficiency levels. They also provide teacher supports, including guidance on interpreting student evidence, an online grading rubric, and communication tools for delivering feedback.

FOCUS AREA 4: STUDENT CENTERED INSTRUCTION
Materials are designed for each student's regular and active participation in science content.

The materials offer a structured approach to engaging middle school students in earth science concepts. The students use collaboration for inquiry-based learning. The "Encounter Phenomenon" initiates students' exploration by encouraging them to brainstorm and discuss the formation of mountains and beaches, fostering critical thinking and concept development. The module "Project Launch" provides a clear roadmap of lessons and project goals, supported by an accessible online rubric that helps students understand and meet expectations. The materials emphasize active participation and reflection and using chart paper to document ideas and preconceptions, which aids in tracking learning progression.

FOCUS AREA 5: EQUITY
Materials are designed for all learners.

The materials are designed inclusively to cater to the needs of all learners, ensuring that every student can engage deeply with grade-level science and engineering content. The materials are accessible through various approaches and "Universal Design for Learning" principles, allowing multiple ways for students to build knowledge and reflect on their learning. The materials incorporate diverse opportunities for student self-reflection and includes online resources like "LearnSmart" and "Reading Essentials" to support students who need additional help or clarification on concepts.

All Content Review - *Materials are reviewed against relevant criteria pertaining to the support for teachers and students in the material regarding the progression of the standards, lesson structure, pacing, assessment, individual learners and cultural relevance.*

Average Score
97%

FOCUS AREA 1 COHERENCE:
Instructional materials are coherent and consistent with the New Mexico Content Standards that all students should study in order to be college- and career-ready.
Statements of appraisal and supporting evidence:

The materials provide a comprehensive framework for middle school science education, emphasizing alignment with Next Generation Science Standards (NGSS) and cross-curricular integration. The "Performance Expectations at a Glance" and "Correlations by Module" highlight how students engage with the three dimensions (science and engineering practices, disciplinary core ideas, crosscutting concepts) essential for mastering the standards. The "Module Planner" outlines various assessment tools,including formative assessments, STEM module projects, and Mc-Graw Hill Assessments. Science progressions across grade bands guide learning by building on prior knowledge and mapping progression in scientific concepts. "Learning Objectives", "Module Project Launch", and the "Teacher Toolbox" illustrate how standards are embedded within each lesson, supporting educators in delivering structured, standards-aligned instruction. These materials provide a robust framework for fostering scientific literacy and competency among students, supported by clear learning objectives and assessment strategies.

FOCUS AREA 2 WELL-DESIGNED LESSONS:
Instructional materials take into account effective lesson structure and pacing.
Statements of appraisal and supporting evidence:

The instructional materials are designed with a purposeful structure and pacing to enhance the learning experience. The teacher edition introduces the scope and sequence of the science content, providing a logical progression that builds on previously taught concepts. Each lesson starts with relevant standards and clear objectives, incorporating guides for integrating language instruction in reading, writing, speaking, and listening. The materials include online resources to support vocabulary acquisition and maintain a consistent layout across print and digital formats to engage students. Lessons, articles, investigations, and labs are designed to reinforce and review content.

FOCUS AREA 3 RESOURCES FOR PLANNING:
Instructional materials provide teacher resources to support planning, learning, and understanding of the New Mexico Content Standards.
Statements of appraisal and supporting evidence:

The instructional materials are designed to aid teachers in planning, understanding, and teaching the New Mexico content standards. These resources include a comprehensive teacher edition that clearly outlines lessons, cross-references standards addressed, and provides estimated instructional times for each lesson, chapter, and unit. The materials also offer instructional strategies to support teachers in guiding students' academic growth, with annotations and suggestions for presenting content in both student-facing materials and supplementary resources. Additionally, the materials integrate interactive digital components that enhance learning experiences, fostering student engagement through exploring phenomena and driving their inquiry-based learning journeys.

FOCUS AREA 4 ASSESSMENT:
Instructional materials offer teachers a variety of assessment resources and tools to collect ongoing data about student progress related to the standards.
Statements of appraisal and supporting evidence:

The instructional materials offer a suite of assessment resources and tools for teachers to monitor student progress related to the standards. Assessment is integrated throughout the lessons with formative suggestions and summative evaluations at the end of each module, available in both print and digital formats. The digital assessments can be customized to meet diverse student needs, including English learners, culturally and linguistically diverse students, advanced students, and those with special needs. Multiple assessments within each lesson clearly indicate the science objectives being evaluated. Rubrics are provided for assessments and projects.

FOCUS AREA 5 EXTENSIVE SUPPORT:
Instructional materials give all students extensive opportunities and support to explore key concepts.
Statements of appraisal and supporting evidence:

The instructional materials provide extensive opportunities and support for all students to explore key concepts. Lessons offer differentiated instructional strategies for students working at varying levels, including scaffolding for English learners and culturally and linguistically diverse students, supported by print and video resources. Each module includes a "Letter for Home" in multiple languages, outlining content and suggesting at-home activities to reinforce understanding. The materials feature investigations and labs that promote critical thinking through open-ended tasks, hypothesis testing, appropriate grade-level calculations, and collaborative work to justify scientific claims.

FOCUS AREA 6 CULTURAL AND LINGUISTIC PERSPECTIVES:
Instructional materials represent a variety of cultural and linguistic perspectives.
Statements of appraisal and supporting evidence:

The educational materials provide comprehensive support for dual language learners, focusing on earth and space content with resources and strategies. "Dual Language Support" offers teachers the "Bridge" strategy, guiding linguistic support and scaffolding tailored to different stages of language acquisition. "Dual Language Instruction" modules integrate these strategies into each lesson, specifically designed for Spanish-speaking students. Literature recommendations enrich the materials with diverse texts related to earth and space, enhancing cultural relevance and broadening perspectives. All units and resources are available in Spanish, including vocabulary lists, language-building activities, and teaching techniques, ensuring accessibility and support for Spanish-speaking students.

FOCUS AREA 7 INCLUSION OF CULTURALLY AND LINGUISTICALLY RESPONSIVE LENS:
Instructional materials highlight diversity in culture and language through multiple perspectives.
Statements of appraisal and supporting evidence:

The educational materials demonstrate a commitment to inclusivity and diversity through various components and resources. All units provide a "Historical Connections" subtopic that offers insights into diverse perspectives and historical contexts relevant to the content. In the STEM connections and STEM careers sections of the online resources, there is a focus on highlighting diverse individuals and their contributions, although perspectives are generally presented from a single viewpoint per concept. The "Letter to Home" activities encourage family engagement by connecting science content to students' daily lives and local environments. The "Universal Access" resource provides extensive support strategies for diverse student groups, addressing needs such as language learning, poverty, and students with disabilities.

Reviewers' Professional Summary - *These materials are reviewed by Level II and Level III educators from across New Mexico. The reviewers have brought their knowledge, experience and expertise into the review of these materials. They offer here their individual summary of the material as a whole.*

Reviewer #: 25

Background and experience:

I earned a Bachelor of Interdisciplinary Studies in Early Childhood/Elementary Education and a Master of Education in Educational Administration. Additionally, I hold certifications in early childhood, elementary, bilingual/ESL-Spanish, TESOL, reading, instructional leader--birth through 8th grade, modern & classical languages, and educational administration. My educational experience spans over twenty years, with roles as a bilingual elementary teacher, Title I Reading Specialist, Literacy Leader, Instructional Coach, and various administrative positions. The most current science professional learning includes my participation as a science content expert for the NMPED Instructional Material Bureau; Building Science Leaders Program-NMPED Leading For Change; and NGSS Equity and Shifts in Instruction (NMPED Building Science Leaders).

Professional summary of material:

Inspire Science instructional materials comprehensively address Earth and Space science standards by integrating fundamental disciplinary concepts, scientific methods, and crosscutting themes aligned with New Mexico educational standards. Students actively explore the uneven distribution of earth's mineral, energy, and groundwater resources through hands-on experiments and scientific inquiry, while also examining the impacts of human activities on these resources and the environment. The materials maintain coherence by linking standards across lessons and units, providing structured learning progressions and effective teaching strategies through the teacher edition. The materials also include diverse assessments and customized supports to meet the needs of all learners, including English learners and students from diverse cultural backgrounds. Additionally, the materials incorporate interdisciplinary connections and real-life applications, fostering students' engagement and understanding across various subjects and perspectives.

Reviewer #: 26

Background and experience:

I have a bachelor's and master's degree in psychology. I am beginning my second year as an academic coach. I was a 5th and 6th grade general education teacher for 16 years before becoming a coach. Recently, some of the professional learning I have gained includes STEMScopes Science, Open SciEd Science, and NGSS Equity and Shifts in Instruction (NMPED Building Science Leaders). Within my district's coaching team, I was a member of the science content-area focus team, for which I attended multiple trainings and facilitated science PDs at the site and district level. This past school year I also had the opportunity to observe, coach, and model science planning and instruction.

Professional summary of material:

The middle school instructional material, Inspire Science, covers astronomy, geological processes, and environmental studies with practical activities and modeling. Students explore earth's rotation, lunar phases, and eclipses, and learn about gravitational forces, celestial mechanics, plate tectonics, and fossil analysis through hands-on learning. Discussions on solving environmental issues like water pollution and climate change encourage critical thinking and scientific literacy. Aligned with the Earth and Space standards, the materials support interdisciplinary learning in science, math, and literacy, offering robust assessment tools for tracking progress and aiding lesson planning. They emphasize inclusivity by incorporating diverse cultural and linguistic perspectives, ensuring equitable learning opportunities for all students to grasp essential scientific concepts.

Reviewer #: 27

Background and experience:

I have a BA in education, MA in curriculum and instruction, TESOL certification, a reading endorsement, and hold National Board Certification. I have 25 years experience in the field of education having taught kindergarten, 1st grade, and 2nd grade. Within my school and district, I have served in multiple leadership and curriculum writing positions to promote high student achievement in all required subjects.

Professional summary of material:

In my view, Inspire Science Earth and Space provides a strong foundation for students to understand key scientific ideas, like Exploring Space, Water and Climate, Impacts on the Environment, and The Changing Earth. The instructional materials provide extensive opportunities for all students to explore key concepts through differentiated instructional strategies, scaffolding for diverse learners, and numerous investigations and labs that promote critical thinking. Teachers can customize the materials for local relevance, and each module includes multilingual "Letters for Home" to engage families in reinforcing science concepts. The materials support varied learning needs with clear guidance, additional resources, and space for documenting phenomena, ensuring comprehensive content understanding.