2024 Instructional Material Summer Review Institute

Review Team Appraisal of Title

Fifth Grade 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 Grade 5, Comprehensive Student Bundle, 6 Year Subscription	Publisher	McGraw Hill LLC
SE ISBN	9781266158612	TE ISBN	9780077007270
SW ISBN		Grade Level/Content	Fifth Grade 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
	95%

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.*

CLR Recognized	☑	Average Score
		95%

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

The materials support culturally and linguistically responsive teaching by recognizing students' backgrounds in the content and discussions. The materials include diverse images, stories, and information, representing various demographic groups, without making assumptions or reinforcing stereotypes. Also, the materials give examples and activities that help students connect what they're learning to their own lives and the world around them. Different cultures and languages are represented throughout the material.

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 online materials offer resources such as STEM careers exploration videos and presenting diverse perspectives on specific concepts. In part, students are prompted to reflect critically on their lives and communities, integrating historical and contemporary cultures within New Mexico. The teaching materials, Inspire Science Online Resource: Impact News, include representation of different ethnic descriptions, interpretations, or viewpoints on events and experiences.

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
95%

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

The materials offer diverse opportunities for students to explore and understand scientific concepts, particularly focusing on matter, motion, stability, energy flow in ecosystems, and astronomical phenomena. Through hands-on activities like designing prototypes, conducting investigations, and creating models, students engage with key scientific principles. The materials provide information about the conservation of matter, the mixture of substances, and the effects of air, sunlight, and water on plant growth. Each is supported by activities such as grade level reading and participating in online simulations. The materials provide comprehensive coverage of earth and space science, aligning with performance expectations and encouraging students to analyze human impacts on the environment. The incorporation of engineering design principles allows students to develop critical thinking skills while solving real-world problems. Overall, the materials effectively blend theoretical knowledge with practical application, promoting active engagement and deeper understanding of scientific concepts.

MATTER AND ITS INTERACTIONS
Materials align to the physical 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 provide opportunities for students to develop models to describe matter, such as designing a prototype and drawing a diagram. The standard regarding conservation of matter and identifying properties is evident through students making predictions, investigating, measuring and graphing quantities, and explaining their observations and results. The materials provide students with the opportunity to learn about the mixture of substances with activities like reading and watching videos, planning and revising steps for investigations and collecting observational data over many trials.

MOTION AND STABILITY: FORCES AND INTERACTIONS
Materials align to the physical 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 meet all the standards and performance expectations related to motion and stability along with related components (DCIs, SEPs, CCCs, CONNs, and NM standards). The materials give students opportunities within each module to read, write and investigate gravity with a variety of experiments. The materials direct students to make predictions about gravitational force through investigations as they collect and record data, and then return to their prediction to determine if their evidence supports or disproves their prediction. The instructional materials allow students to support an argument that the earth pulls objects downward.

ENERGY
Materials align to the physical 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 provide a clear and coherent explanation of the process by which energy originates from the sun and subsequently transfers through producers to consumers. They articulate the concept of energy flow within ecosystems, emphasizing the role of food webs in fulfilling animals' energy requirements for growth, motion, repair, and warmth. The inclusion of activities such as drawing labeled food chains and participating in an "Ecosystem Tag" game effectively reinforces these concepts, engaging students in hands-on learning experiences.

FROM MOLECULES TO ORGANISMS: STRUCTURES AND PROCESSES
Materials align to the life 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 instructional materials guide students in understanding how plants obtain materials for growth primarily from air and water, aligning with the performance expectation 5-LS1-1. The materials highlights key elements such as the virtual plant online activity and the use of scientific explanations derived from observing different settings. The materials also involve students in predicting and recording findings related to the effects of air, sunlight, and water on plant growth. The materials use diagrams to support arguments about the roles of various plant parts and the flow of energy, water, and air.

ECOSYSTEMS: INTERACTIONS, ENERGY, AND DYNAMICS
Materials align to the life 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 present a comprehensive approach to teaching about ecosystems, emphasizing both theoretical understanding and practical application. Through activities such as answering written response questions about animal/plant population dynamics, reading leveled readers on matter recycling, and designing compost heaps, students engage actively with the concepts presented. The clear definition and explanation of ecosystems, including their components and interactions, provide a solid foundation for further exploration.

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 provide a thorough look at astronomy concepts, mixing history and hands-on tasks to involve students in learning about the Milky Way and its celestial objects. The materials allow the students to discuss Herschel's mapping of the Milky Way in the 1700s. The resources clarify how the sun and stars look different based on how far they are from the earth. Activities include making models of the earth's movements and explanations about the various objects in our galaxy.

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 allow students to engage with various forms of evidence including reading a passage and watching a video on the interactions of earth systems. The instructional materials task students to demonstrate their knowledge by researching and presenting details of an ecosystem. The material directs the students to collaborate with a partner to illustrate characteristics of the ecosystem and connections to the water cycle. The investigation involves charting data at regular intervals to observe and analyze stages of the water cycle, as well as mapping rainfall data to identify patterns. The tasks collectively provide a comprehensive view of students' ability to develop models and describe interactions among earth's systems.

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 instructional materials align to the earth and space science performance expectations (PEs) and related components (DCIs, SEPs, CCCs, CONNs, and NM standards) for this topic. The lessons expose students to how different communities use science to protect the earth's resources and environment. The materials utilize investigation techniques about how human activities, like farming and industry, can have big effects on the land, water, air, and more. The materials help students discover that people are working together to find ways to keep our planet healthy and safe. The materials direct students to read and gather information from books and other trusted sources to explain how things work or to solve problems.

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 to the engineering design Performance Expectations and related components (DCIs, SEPs, CCCs, CONNs, and NM standards) for this topic. The materials help students understand and meet the expectations for engineering design by providing opportunities to act like engineers. The lessons guide students to create or improve technologies and how to make them better and safer for society. The materials offer students the opportunity to test their ideas fairly (fair testing trials) and look for areas where they can make improvements. The materials allow students to investigate different solutions and results to see which one works best for solving the problem. The lessons allow students to reflect while considering what they need to achieve and any limitations the solutions have.

CCSS for ELA and Math Grade 5 NGSS **Materials align to the ELA and math standards identified in the fifth grade NGSS.** *Statements of appraisal and supporting evidence:*
The CCSS for ELA and math grade 5 NGSS are reflected within the materials with the exception of math 5.NF.B.7. The materials provide students opportunities to recall, read, and write using various genre styles. The lessons also provide opportunities for students to integrate information, including quotes from articles, to support their key ideas and details in their multimedia presentations. The lessons include foldables to organize important information on what students have learned. The materials support students' learning through the creation of models, and recording their data using graphs, tables and drawing diagrams.

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
99%

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 are designed with a focus on high-quality phenomena and problems, requiring a three-dimensional approach to understanding. Evidence of this approach is seen in the Module Opener, which incorporates elements such as student discourse, pre-assessment for grade-level readiness, and instructional supports like phenomena, expectations, and vocabulary connections. The STEM Module Project maintains continuity by centering on related phenomena throughout lessons, ensuring a cohesive learning experience with a three-dimensional perspective.

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 assessment materials effectively support teachers in collecting, interpreting, and utilizing data to measure student progress aligned with three-dimensional standards in science and engineering practices (SEP), disciplinary core ideas (DCI), and crosscutting concepts (CCC). Through the use of three-dimensional thinking, the materials guide students to measure and graph quantities, providing clear evidence of matter conservation. Additionally, lesson review pages serve as a useful summative assessment tool. Furthermore, the incorporation of reflective strategies, such as the "I used to think, but now I know" approach, encourages students to articulate their evolving understanding, promoting metacognitive development.

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

The teacher materials give teachers many chances to plan and use resources well, making sure lessons are effective. The planner organizes materials clearly for each lesson, showing what can be used up and what can be used again. Also, having videos and interactive presentations helps both teachers and students access the materials easily. The material also helps teachers teach different kinds of learners with special instructions and strategies. It encourages students to think critically by making claims and backing them up with evidence from the text, which helps them understand the lesson better as it progresses.

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

The instructional materials offer a clear and straightforward learning path that both teachers and students can easily navigate, incorporating a narrative approach to unit progression while actively involving students by prompting them to tap into their prior knowledge through questions about content understanding or phenomena/problems. The materials offer opportunities for students to get interested, engaged, and involved by building on what they already know and connecting their learning to real-world problems. Lessons flow smoothly from one unit to the next, making sense and showing students how everything fits together.

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

The materials are created to ensure that every learner can access and benefit from them. The materials provide multiple opportunities for student-designed experiments/design challenges and for students to share their learning, to include reflective practice by thinking about science and what they have learned. The materials facilitate the process for all students to dive deeper into learning science and engineering at their grade level.

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 instructional materials are coherent and align with the New Mexico content standards, ensuring that students are prepared for college- and career-readiness. The materials facilitate student mastery of most standards through direct instruction, student workbook applications, online resources, and investigations that demonstrate standards in action. Lessons engage students in peer discussions to validate and refine their understanding. The content is appropriate for 5th graders, involving reading passages, completing investigations, collaborating with peers, and presenting findings. The materials follow a logical scope and sequence, connecting previous concepts with subsequent material, and consistently linking content to the standards.

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 take a comprehensive approach to teaching science. They carefully outline how standards progress across grade levels, providing a clear path for student learning. Lesson objectives focus on the three dimensions of science education, supported by related disciplinary core ideas, and language objectives are integrated to help students understand the content. Vocabulary is emphasized through tools like flashcards, and color coding aids navigation. Strategies for understanding complex texts and comprehension questions enrich text engagement, while various review and practice resources, such as close reading selections and STEM connections, offer students opportunities to reinforce and apply concepts.

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 provide comprehensive resources to support teacher planning, learning, and understanding of the New Mexico content standards. The table of contents, module planner, and NGSS are detailed separately across several pages, yet when used together, they offer a correlated list of lessons with cross-referenced standards. The Module Planner specifies the approximate time required for instruction on various concepts. Both the teacher edition (TE) and online materials include instructional strategies and video models to aid all students in their academic development. Though not scripted, the TE contains annotations and suggestions for guiding instruction, including EL support, discussion prompts, online video resources, a teacher toolbox, rubrics, materials lists, and strategies for differentiating instruction. Additionally, the materials incorporate online learning opportunities through readers, videos, songs/music, simulations, and digital forms.

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 effectively engage students by fostering curiosity and encouraging reflection on their learning progression. Each lesson within the module is logically structured to connect to the overarching big idea and phenomenon, facilitating a clear understanding of how concepts build upon each other. The STEM Module Project offers insight into how students are encouraged to apply their learning in a real-world context. Varying types of assessments include the "Talk About It", which is about student discourse; a pre-assessment to assess grade-level readiness; and instruction supports such as phenomena, expectations, and vocabulary. Other assessment types include summarizing, fishbowl strategy, and having students revisit the probe to change or justify their response.

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 are designed to cater to the needs of all learners, evident in the inclusion of various support sections such as differentiated instruction, advanced learners and gifted learners, literacy support, and universal access. Additionally, online resources further enhance accessibility through features like literature recommendations and English language support. The materials address language barriers with sections dedicated to cognates and language building resources, ensuring that diverse student populations can effectively engage with the content.

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

The materials support culturally and linguistically responsive teaching by recognizing students' backgrounds in the content and discussions. The materials include diverse images, stories, and information, representing various demographic groups, without making assumptions or reinforcing stereotypes. Also, the materials give examples and activities that help students connect what they're learning to their own lives and the world around them. Different cultures and languages are represented throughout the material.

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 online materials offer resources such as STEM careers exploration videos and presenting diverse perspectives on specific concepts. In part, students are prompted to reflect critically on their lives and communities, integrating historical and contemporary cultures within New Mexico. The teaching materials, Inspire Science Online Resource: Impact News, include representation of different ethnic descriptions, interpretations, or viewpoints on events and experiences.

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:

The "Inspire Science" materials effectively integrate disciplinary core ideas (DCIs), crosscutting concepts (CCCs), and science and engineering practices (SEPs) in a way that is suitable for the grade level. Each unit's learning objectives are interconnected to develop grade-appropriate skills that progress throughout the grade band. Engaging phenomena and problems drive the units, while formative and summative assessments incorporate these phenomena and SEPs, including opportunities for student presentations. The materials include rubrics for self-assessment and peer feedback, along with safety protocols and lab setups to enhance student learning. The materials utilize multimedia resources to engage students meaningfully and provide guidance for differentiated instruction, monitoring student progress, and accessing prior knowledge. The learning pathway is transparent and follows a storyline approach, offering multiple opportunities for student-designed experiments, challenges, and sharing their learning, thus ensuring multiple access points to engage all students.

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 "Inspire Science" materials offer diverse opportunities for students to explore scientific concepts like matter, motion, stability, energy flow in ecosystems, and astronomical phenomena. Through hands-on activities, such as designing prototypes and conducting investigations, students engage with fundamental scientific principles. The materials support understanding of concepts like conservation of matter and the impact of environmental factors on plant growth, aided by leveled readers and online simulations. They encourage critical thinking through the integration of engineering design principles and emphasize a three-dimensional approach to problem-solving. The materials also provide tools for teachers to track student progress and ensure inclusivity and accessibility for all learners.

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:

The "Inspire Science" provides a strong foundation for students to understand key scientific ideas, focusing on matter, motion, stability and energy flow in ecosystems, and astronomical phenomena. Through hands-on activities like designing prototypes, conducting experiments, and creating models, students engage directly with these principles. They learn about conservation of matter, mixing substances, and how air, sunlight, and water affect plant growth. Leveled readers and online simulations enhance their learning. The materials cover earth and space science comprehensively, meeting educational standards and encouraging critical analysis of human impacts on the environment. By integrating engineering design, students develop problem-solving skills, combining theory with practical application for a deeper understanding of scientific concepts that govern our planet.