2024 Instructional Material Summer Review Institute

Review Team Appraisal of Title

Fourth 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 4, Comprehensive Student Bundle, 6 Year Subscription	Publisher	McGraw Hill LLC
SE ISBN	9781266155253	TE ISBN	9780077007263
SW ISBN		Grade Level/Content	Fourth 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
91%

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
66%

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

The instructional materials represent a variety of cultural and linguistic perspectives. The materials provide students the opportunities to work collaboratively in projects and discussions about science content. The materials provide English language supports including cognates. However, opportunities to affirm students' backgrounds is not evident.

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 instructional materials include information demonstrating various perspectives; however, there are no tools to facilitate this. The materials give students prompts to engage in critical reflection about their own lives. The materials do not provide the connection to New Mexico culture past and present. Ethnic descriptions and interpretations of events and experiences are not evident in the instructional materials.

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
91%

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

Overall, the instructional materials align with the science standards. The materials provide opportunities for students to construct explanations and design solutions to various inquiry activities and STEM projects that meet the standards. The materials prompt students to present their findings while demonstrating their understanding of grade level concepts and standards.

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 align with the physical science performance expectations and related components for Energy. The materials provide students the opportunity to demonstrate understanding of energy by using and gathering evidence to construct an explanation on how energy is transferred. The materials define energy while explaining conservation of energy and energy transfer. Furthermore, the materials give students the opportunity to build understanding of the idea that energy can be transferred between objects via completion of "Inquiry Activities". The materials allow students to apply their three-dimensional learning to show their understanding of constraints, failure points, and other criteria as stated in the standards. Additionally, the materials require students to ask questions that can be investigated to determine reasonable predictions and outcomes.

WAVES AND THEIR APPLICATIONS IN TECHNOLOGIES FOR INFORMATION TRANSFER
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 instructional materials align with the physical science performance expectations and related components for Waves and Their Applications in Technologies for Information Transfer. The materials provide information about the patterns of waves and includes activities for students to develop models via online simulations. The materials also explain wave properties and wave patterns and how they can be sorted, classified, and analyzed. Included in the materials are how waves are part of earthquakes and other natural phenomena. In addition, the materials offer opportunities for students to understand the various ways information processes and transfers.

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 materials align with the life science performance expectations and related components for the topic From Molecules to Organisms: Structures and Processes. The materials provide students the resources to construct arguments and to provide evidence to support claims about plant and animal structures and functions. Additionally, the materials require students to observe the interactions related to the three dimensions of learning. For understanding, the materials provide students the opportunity to develop models to test interactions of a natural system.

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 earth and space science performance expectations and related components for Earth's Place in the Universe. The instructional materials provide students the opportunity to identify evidence from patterns in rock formations and fossils to support an explanation for changes in the landscape. The materials provide explanations about the history of the planet for students to gather more evidence to support their claim about changes in the earth. Patterns of these changes are explained to add to students' understanding of changes in the earth’s landscape.

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 instructional materials align with the earth and space science performance expectations and related components for Earth's Systems. The materials provide students the opportunities to analyze and interpret data on effects of weathering and erosion. In addition, the materials require students to analyze maps and their patterns to understand and explain landforms and where they are located. The materials include visuals and simulations for students to support their learning.

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 with the earth and space science performance expectations and related components for the topic Earth and Human Activity. The materials include information about natural resources and hazards and their effects on the environment. They require students to combine and obtain the information to describe energy and fuels that derive from natural resources and how their uses affect their environment. Additionally, the materials explain natural hazards and their impact while providing students the opportunity to design models to lessen the impact these hazards have on humans and buildings.

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 partially align with the performance expectations and related components for Engineering Design. The instructional materials provide opportunities for students to engage in the engineering process through participating in STEM module projects in which constraints and criteria for success are included. Inquiry activities include opportunities for students to investigate and observe different design solutions while comparing the success of the design based on criteria. The materials include information about how solutions are developed through research and testing. However, the materials do not address how people's needs and wants change over time. The materials also include how technology can be used within the engineering process and how technologies can be improved.

CCSS for ELA and Math Grade 4 NGSS
Materials align to the ELA and math standards identified in the first grade NGSS.
Statements of appraisal and supporting evidence:

The materials partially align with the ELA and math standards identified in the fourth grade NGSS. They provide students opportunities to refer to details and examples in their text when explaining and inferring information about science concepts. Students are prompted to integrate information from more than one source to explain and write opinion pieces with supporting evidence. Throughout the materials, students are expected to conduct research and share their learning through writing, speaking, and presenting. The inquiry activities in the materials provide students opportunities to calculate, measure, and solve problems using mathematics. The materials provide students with an understanding for making sense of quantities by contextualizing real-world problems and writing and solving equations based on the word problem provided. However, the materials do not provide students the opportunity to draw perpendicular and parallel lines and identify those in two-dimensional figures. Also, the materials do not provide the opportunity to draw and identify symmetrical figures and lines of symmetry.

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 materials are centered around phenomena and problems that require a three-dimensional approach to making sense of the phenomena. The materials integrate and describe the three-dimensional standards as well as the performance expectations by providing the correlations with the standards by each module and showing how the standards are interwoven to meet performance expectations. The materials support each lesson with videos to engage students; incorporate discussions and questions; and introduce the science content through a three-dimensional approach. In addition, the materials include phenomena that are meaningful to students by providing them with opportunities to learn, investigate, and observe the phenomena while aligning with the three dimensions.

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 materials engage students in meaningful tasks as well as assessment types and opportunities to demonstrate understanding across the three dimensions. At the end of the lessons, the materials offer opportunities for students to apply their three-dimensional learning about the science content as well as obtain feedback from teachers and peers. "Lesson Reviews" provide suggestions to teachers for both formative and summative assessments that include online lessons and vocabulary checks. Those checks are based on the DCIs for the lesson.

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

At the beginning of each lesson, the materials provide a "Lesson at a Glance" section for teachers to preview and prepare for each module activity. Pacing and resource pages are provided. The materials include "Activity planners" that provide comprehensive lists of materials utilized for the lesson. The materials provide teachers guidance for the use of technology to support and enhance learning by including interactive presentations and videos to explain phenomena. Additionally, the materials offer prompts for ideas and guidelines for student outcomes while providing guidance for teachers to direct and assess students at different levels. Assessments are included at the end of each lesson in both formative and summative formats.

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

The materials provide opportunities to engage students' curiosity and participation by offering engaging visuals that prompt students to relate what they are learning through a "Design" activity. The flow of lessons from one unit to the next is coherent and meaningful. A table of contents is provided for students, listing the names of each lesson along with the corresponding activities. The materials prompt students to recall and build on their prior knowledge as they connect it to the phenomenon being addressed.

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

The materials include opportunities, supports and extensions to all students of various abilities by providing strategies to scaffold instruction. In addition, the materials provide English language support to students to build background on the topics and content. The materials and assessments are designed in various formats to provide students with access to the content, utilizing differentiated instruction to meet the needs of students at different levels. In addition, there are multiple opportunities for students to self-reflect, such as revisiting science probes.

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
85%

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 address the full content contained in the standards for all students by providing the performance expectations that are tied to meeting the expectations at the grade level. The correlations in the materials provide information on how they address the standards within the unit, modules, and lessons. To show mastery of standards, the materials provide multiple assessment opportunities which include pre-, summative, and formative assessment formats. The materials provide opportunities for students to demonstrate mastery of the content by using evidence and asking questions. The lessons throughout the units follow a predictable pattern of consistently following the format of Engage, Explore, Explain, Elaborate, and Evaluate. The "Three Dimensions at a Glance" in the materials provide exactly where the standards are addressed within the unit.

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

The design of the assignments within the materials show purposeful sequencing of teacher and learning expectations as it consistently prompts students to engage, explore, explain, elaborate, and evaluate. The materials contain color-coded objectives which are standards-aligned, stating what the students will be able to understand and do by the end of the lesson. While language objectives are sometimes tied to the content objectives, they are not consistent throughout the materials. The materials prompt teachers to encourage students to use context clues to derive the meaning of the vocabulary. In addition, the materials include online vocabulary practices and checks. The student edition also provides a list of vocabulary words as well as highlighted and bolded words for students to easily access the new words. The incorporated materials support students in making meaning of the text via glossaries, charts (foldables), and opportunities for annotations in the "Close Readings". The materials offer students continuous review and practice by encouraging them to re-read the "Close Reads" and revisit the Keeley Science Probes to revise their answers throughout the lesson.

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 a list of lessons in the teacher edition and the Essential Planning Guide. These resources can also be found online. The teacher edition and the Essential Planning Guide allow the teacher to cross reference the standards addressed with a list of needed materials and estimated instructional time for each lesson. The materials provide prompts for teachers to engage students in the learning process as well as guides for their thinking. The lessons include a "Teacher Toolbox" that provides helpful annotations and suggestions on presenting the content, covering topics like "Science Background" and "Identifying Preconceptions".

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 materials offer multiple opportunities for students to demonstrate their knowledge of the standards via both summative and formative assessments, such as lesson checks, vocabulary checks, STEM module projects, inquiry activities, and lesson reviews. Students revisit the rubric to ensure their model fits all of the criteria. The materials provide the "Lesson Review" pages with an alternative of the online lesson and vocabulary checks. There is a section at the end of each lesson review which provides suggestions for students approaching level, on level, and beyond level. Additionally, there are EL support sections that provide suggestions for all EL levels, and a language building resource is available online that is meant to appeal to the different types of learning styles (kinesthetic, tactile, auditory, written, and visual). The materials provide a summative assessment online for the module tests as well as provide online lesson and vocabulary checks at the end of each lesson.

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 give all students opportunities and support to explore key concepts. They can be customized to meet the needs of different student populations. Throughout the teacher's edition are suggestions and supports for students at different levels. In addition, the materials provide differentiated strategies and activities to meet the needs of diverse learners. In addition to the teacher edition, there is an online resource called "Differentiated Paths", which provides opportunities for different tiers of support. For each tier there are suggestions on how to support different learners. The materials also offer appropriate linguistic support for English learners, culturally and linguistically diverse students, and special populations to enhance their participation in learning. Additionally, the materials include resources for teachers and students to inform families about the concepts while providing suggestions for how families can support student progress and achievement. Lastly, the materials include opportunities to encourage and support critical and creative thinking, inquiry, and complex problem-solving for all students.

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

The instructional materials represent a variety of cultural and linguistic perspectives. The materials provide students the opportunities to work collaboratively in projects and discussions about science content. The materials provide English language supports including cognates. However, opportunities to affirm students' backgrounds is not evident.

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 instructional materials include information demonstrating various perspectives; however, there are no tools to facilitate this. The materials give students prompts to engage in critical reflection about their own lives. The materials do not provide the connection to New Mexico culture past and present. Ethnic descriptions and interpretations of events and experiences are not evident in the instructional materials.

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 #: 22

Background and experience:

I have been in education for 24 years and currently hold a position as a K-5 Instructional Coach. I hold a master's degree in curriculum and instruction with a focus of English language arts. I also have a reading endorsement and I am TESOL certified. I have participated in HQIM reviews for three years.

Professional summary of material:

The instructional materials reviewed are in alignment with the science standards. They provide teachers with multiple resources and guidance to teach and engage students in science content while having students participate in engineering practices. Furthermore, the materials provide an integration of standards including ELA and math standards, making learning more cohesive and meaningful. The materials' format allows for ease of use for both teachers and students. The consistent format of the 5 Es (Engage, Explore, Explain, Elaborate, and Evaluate) strengthen student understanding as it helps them apply their three-dimensional learning in engaging investigations. The Inquiry Activities and STEM projects allow students to not only demonstrate and apply their learning, but provide them a sense of independence and may foster an interest in engineering, math, and/or science. The instructional materials provide great opportunities for students and teachers, but there will always be a concern about time and how to implement. That is why the integration of content and standards is important when implementing new materials.

Reviewer #: 23

Background and experience:

I have been in education for five years and currently teach the fourth grade in the general education setting. I hold a master's degree in elementary education and a bachelor's degree in psychology and Spanish. My licensure is in K-8 elementary education with endorsements in modern and classical languages and bilingual education. I am also TESOL certified.

Professional summary of material:

Overall, the instructional materials are consistent with the current state standards for science. The materials are consistently engaging for both students and teachers because they maintain coherence and accessibility throughout each unit, following a clear timeline for every lesson. The lessons within the units are effectively structured and paced for understanding, and offer different forms of assessment to assess student learning of the content. There are a variety of well-organized resources, both in text and online, for teachers and students to learn and understand the New Mexico content standards.

Reviewer #: 24

Background and experience:

I just completed my 22nd year as an educator in New Mexico where I have taught Spanish at the middle and high school levels. My teaching experience also includes having been a Spanish instructor at two universities. I hold a B.A. in Spanish and international studies as well as in elementary and secondary education. In addition, my master's degree is in Latin American literature. My licensure is in K-12 modern and classical languages and social studies. This is my 3rd year as a reviewer for the NMPED.

Professional summary of material:

The instructional materials are very user-friendly. The lessons are predictable from start to finish and engage students with engaging materials, graphics, activities and assessments. The "Lessons at a Glance" offer pacing and resource pages. Each activity includes a list of materials needed for student engagement and success in their exploration of the content. At the end of each project, students reflect on their observations and share with peers, which I found to be meaningful. Annotations provide guidance for the teacher to take students from one activity to another and reference the student edition. The online activities and resources engage students with fun and interesting activities, one being the interactive presentation introducing sliding scales for students to observe cause and effect relationships and phenomena. There are also hands-on activities and opportunities to experience and observe the phenomena in real life by going outside and locating aspects of the phenomena in the school environment. I also find the supports and suggestions for reaching students of all learning levels and abilities to be helpful. While some of the standards are found consistently throughout the materials, some (language standards) are found in a scattering of the lessons/activities. Overall, I find this material to be of good quality. If I were to find myself teaching elementary school tomorrow, I would be able to with ease, as these materials would make the instruction of science accessible and engaging to students.