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	Amplify Earth and Space Science Digital Student License (6 year license)	Publisher	Amplify Education, Inc.
SE ISBN	9781644821268	TE ISBN	9798885705608
SW ISBN	9781642762259	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
92%

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
76%

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 promote culturally and linguistically responsive teaching by validating students' backgrounds through their content and in student discussions. They include a collection of stories and information avoiding generalizations and stereotypes. These materials offer context, illustrations, and activities that encourage students to make interdisciplinary connections and relate their learning to real-life experiences and various cultural and linguistic backgrounds.

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 tools and resources that relate to each content area. However, there is no evidence of instructional materials being appropriately related to diversity in culture and language through multiple ethnic descriptions, interpretations, or perspectives of 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
92%

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

Overall the materials align with the NGSS by highlighting rigorous, relevant instruction. The materials include an extensive repertoire of strategies, visual aids, digital media, teacher support, informational articles, assessments, unit maps, lesson briefs, and much more. The instructional materials aligned with the New Mexico STEM Ready Standards.

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 Earth's Place in the Universe unit is aligned with the New Mexico Content Standards, Benchmarks, and Performance Standards assessed in the Earth and Space Science focus area. The materials effectively integrate performance expectations (PEs), disciplinary core ideas (DCIs),science and engineering practices (SEPs), crosscutting concepts (CCCs) and connections to other scientific disciplines (CONNs) in accordance with NM standards. For example, materials offer an understanding of how gravity affects the motion of objects in the solar system and in the galaxy, describe that the sun is in the center of the solar system and that its gravity pull on the planets is what keeps them orbiting, and describe the role of the black hole at the center of the Milky Way 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 Earth Systems' materials align with the performance expectations and related components by having students engage in multiple activities that aid in their learning. The materials offer opportunities to utilize hands-on strategies as well as reading, writing, and discourse during their learning. Evident in the materials are various ways for students to get engaged using hands-on activities. One clear example is in the Moon Sphere Model activity where they can make connections and visualize a lunar eclipse.

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 NGSS and incorporate the three dimensional approach for this focus area. The materials provide an opportunity for students to engage in constructing a scientific explanation while analyzing evidence. For example, students are asked to construct a scientific explanation about how the South American and African Plates move based on valid and reliable sources.

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:

Amplify Science's Engineering Design unit provides a comprehensive, standards-aligned approach that offers students a robust understanding of engineering design concepts through hands-on, inquiry-based learning experiences. The material addresses PEs such as activities and assessments that require students to engage in the engineering design process, from problem definition, to evaluation, and iteration of design solutions. Students engage in identifying problems, brainstorming solutions, and refining their designs based on testing and feedback, promoting a thorough understanding of the engineering design process.

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 instructional materials align with CCSS for ELA in science. Students engage in a variety of ELA instructional strategies (i.e. active reading, science seminar, evidence cards, vocabulary and information text) to aid their understanding of the key concepts. The instructional materials partially align with CCSS for math in science as it includes activities involving ratios, writing expressions, and writing simple equations and inequalities.

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 are designed with real-world phenomena in mind. Each unit incorporates the use of a three-dimensional approach as well as being aligned to NGSS and the math and ELA common core standards. The instructional materials are geared toward an understanding of natural science phenomena and utilize various modalities to observe, analyze, describe, understand and overall make sense of the phenomena.

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 instructional materials offer opportunities for students to engage in meaningful tasks and offer multiple assessment types and opportunities across all dimensions in order to make sense of phenomena and design solutions to problems. The materials include student self-reflection and opportunities to gain feedback from teachers and peers. The assessment system is comprised of various types of assessments, as well as progress monitoring such as written assessments, verbal assessments, and question answering. The materials offer opportunities for students to reflect on how science seminar affects their thinking.

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

The instructional materials are comprehensive and well-structured, offering extensive opportunities for effective planning and utilization of the available resources. These supports ensure that teachers are well-equipped to deliver high-quality science instruction and foster student success. The resources include detailed lesson plans that outline clear objectives, essential questions, and step-by-step instructional procedures, facilitating efficient planning and ensuring comprehensive coverage of content. The alignment with New Mexico content standards is clearly documented in the teacher guides, making it easy for teachers to connect their instruction with state requirements.

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

The instructional materials are designed to engage students in actively participating in making sense of the science phenomena. Evident are various opportunities for groups to participate in guided questions, projects, teacher- or student-led discussions, simulators, visual aids, videos, and small group discussion to generate understanding of the science content. The unit structure is cohesive throughout the instructional materials. Specifically, the instructional material Futura Engineering Internship provides students with the challenge of acting as engineers to investigate solutions through an engineering lens. The digital simulators like Earth, Moon, and Sun Simulation also offer opportunities to engage students to actively participate and observe the natural science phenomena.

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

The materials offer expanded chances for every student to participate in exploring science and engineering at their grade level in more detail. These resources are crafted to be accessible, featuring various methods for students to develop and contemplate their scientific understanding, access content, and engage in self-reflection. Each unit and lesson offers teachers guidance for differentiating the lessons for each of their students, such as embedded supports for diverse learners (physical models); potential challenges and how to address them (i.e. complex spatial reasoning); specific strategies for English learners (bilingual glossary); and strategies for students that need more support (i.e. more teacher guidance, visuals) and students that need a greater challenge (i.e. creating more complex models).

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
89%

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 in Amplify Science demonstrate coherence and alignment with the New Mexico content standards, supporting students in becoming college- and career-ready. The materials consistently align with the standards, covering key concepts and skills outlined in the them. For example, the unit on Earth's Systems comprehensively addresses NGSS MS-ESS2 Earth's Systems, ensuring students develop a deep understanding of Earth's processes and interactions.

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 structured by units. Each unit is based on a scientific phenomena of the natural world. The unit is broken down by chapters and each chapter contains a lesson. Each lesson, chapter and unit has an overview and learning expectations, including a scope and sequence of skills. The lessons build on each other to support the overall learning objective. Lessons include classroom slides and 3-D statements, which are written objectives incorporating a three-dimensional lens. The digital classroom slides are designed to provide teachers and students with visual aids and a pace for the lesson and the activity. Some of the beginning activities in the lesson are warm-ups that appropriately pace each lesson. These warm-ups ask students to use previously learned knowledge to answer an open-ended scientific question. Other warm-ups are to enhance students learning or to make predictions prior to 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 offer a comprehensive list of lessons that cross-reference addressed standards in the teacher's edition (TE), along with estimated time allocations for each lesson, chapter, and unit. These materials assist teachers with effective instructional strategies to facilitate students' academic growth. They include a teacher's edition and supplementary materials with helpful annotations and recommendations for presenting content in student-facing and supporting materials. Additionally, the instructional materials incorporate digital learning opportunities, including interactive components.

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 provide a variety of assessments (i.e. on-the-fly assessments, pre-unit/post-unit assessment, project observations, inquiry-based questioning, written responses, and rubrics among others) to measure students progress and address the NGSS. The online instructional materials are all accessible in Spanish. Teacher-led discussions and student-to-student discussions are embedded with the lessons as well as hands-on activities and digital activities.

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 in Amplify Science for 6th grade provide extensive support for all students to deeply explore key scientific concepts. With differentiated instruction, scaffolding, hands-on activities, personalized feedback, and accessibility features, the materials offer the opportunity for students to engage meaningfully regardless of learning styles or abilities. This comprehensive approach fosters inclusive learning and a robust understanding of science.

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 promote culturally and linguistically responsive teaching by validating students' backgrounds through their content and in student discussions. They include a collection of stories and information avoiding generalizations and stereotypes. These materials offer context, illustrations, and activities that encourage students to make interdisciplinary connections and relate their learning to real-life experiences and various cultural and linguistic backgrounds.
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 tools and resources that relate to each content area. However, there is no evidence of instructional materials being appropriately related to diversity in culture and language through multiple ethnic descriptions, interpretations, or perspectives of 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 #: R16

Background and experience:

I am an administrator with a MEd. in Secondary Education/Administration and a BA in Communication Studies with a minor in English. I hold a Level III license and have been in the education field for 16 years. I participated in the writing of the NMPED Writing Standards and Instructional Scope. Additionally, this is my third year reviewing instructional materials.

Professional summary of material:

The reviewed materials are recommended for New Mexico teachers and districts. They are a very comprehensive set of materials that give teachers a new perspective of teaching science, and encourage students to rethink the way they learn. It is interactive and offers a variety of assessments and progress monitoring to address all students' needs. In regard to cultural and linguistic responsiveness, the material provides minimal opportunities for teachers to engage students in critical reflection about their own lives and societies. EL, gifted, advanced, and special needs accommodations and modifications are addressed within this material. Although only available online, all materials are offered in PDF form.

Reviewer #: 17

Background and experience:

I have a BA in Spanish Philology and Communication & Media, MA in Education and am working towards my PhD. I am a Level III teacher with 8 years of teaching experience. I taught in Spain for about 4 years before working in New Mexico. I worked in the special education department as a reading and math interventionist. Currently I am an ELL coordinator in my school.

Professional summary of material:

Amplify Science for 6th grade is a comprehensive science resource designed to engage students in a blend of hands-on investigations, literacy-rich activities, and interactive digital tools. The material aligns with the Next Generation Science Standards (NGSS) and focuses on fostering a deep understanding of scientific concepts through inquiry-based learning. Each unit begins with a real-world phenomenon to spark curiosity and integrates three-dimensional learning: disciplinary core ideas, science and engineering practices, and crosscutting concepts. The materials emphasize student-centered investigations, scientific literacy, and critical thinking through reading and writing activities. Various assessment tools monitor student progress, and differentiated instruction accommodates diverse learners. Digital tools, including interactive simulations and multimedia content, enhance understanding and engagement, supported by an online platform for teachers. These materials offer limited chances for students to participate in critical reflection about their own lives and societies concerning cultural and linguistic responsiveness.

Reviewer #: 18

Background and experience:

I have been a New Mexico public school teacher for 17 years. I hold a master's degree in education with a focus on reading, language and culture and a BA in education. I am a Level III-A, Instructional Leader K-8 elementary teacher with an endorsement in bilingual education. I have completed the Administration Leadership Development (ALD) program. I taught in elementary and middle school settings. I have experience in teaching 4th and 5th grade dual language framework, middle school science, math, and algebra, and bilingual education.

Professional summary of material:

The instructional material in Amplify Science Grades 6-8 Earth & Space Science is well-designed with many opportunities for students to investigate and engage in real-world phenomena. The material is cohesive with the lessons and activities aligned with a NGSS lens and cooperative learning. The materials include an extensive repertoire of strategies, visual aids, digital media, teacher support, informational articles, assessments, unit maps, lesson briefs, and much more. Overall, the instructional materials align to the NGSS. In the area of cultural and linguistic perspectives, the instructional materials are limited in demonstrating multiple perspectives, addressing multiple ethnic descriptions, interpretations, or perspectives of events and experiences.