2024 Instructional Material Summer Review Institute

Review Team Appraisal of Title

First 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	STEMscopes New Mexico 3D Grade 1 Core Online Bundle (Online, Student Notebook Set per year for 1 Yr)	Publisher	Accelerate Learning Inc.
SE ISBN	9798891928329	TE ISBN	
SW ISBN	9781643049298	Grade Level/Content	First 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
99%

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
89%

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 by offering lessons that access prior knowledge and include diverse cultural representations through images and stories. They spotlight scientists from various backgrounds and integrate connections to reading, writing, math, and physical activities. Each lesson includes real-life applications and interdisciplinary connections, fostering engagement with the material. The materials promote culturally and linguistically responsive pedagogy by affirming diverse backgrounds and facilitating discussions that reflect students' experiences. They feature diverse demographic representations without stereotypes and encourage exploring real-world phenomena. E ngage activities, parent involvement resources, and cross-curricular approaches further support meaningful learning and connections to students' lives.

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 highlight diversity in culture and language. The materials highlight culturally diverse scientists, including NM scientists and their contributions, as well as diverse individuals in career connection videos. Providing multiple entry points through Engage activities values individual perspectives based on students' prior knowledge. Tools and resources support diverse perspectives and Explore activities encourage discussions that allow learners to express their understanding. The materials are limited with addressing 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
100%

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

The instructional materials align with the New Mexico content standards and support engagement in critical thinking, inquiry, and problem-solving through the 5E Inquiry-Based Framework. They provide opportunities to explore physical science concepts, such as sound and light, through hands-on investigations and the use of graphic organizers to document findings. Life science concepts are covered through activities related to animal and plant structures, functions, and adaptations, supported by interactive digital components and research-based activities. The materials also address inheritance, variation, and adaptation in animals and plants, promoting critical thinking and evidence-based claims. Additionally, they align with engineering design performance expectations by providing activities for designing tools based on scientific principles and natural phenomena. The materials include math tasks involving addition, subtraction, and measurement. Furthermore, the resources emphasize factual recall, comprehension, and collaborative discussions, ensuring comprehensive coverage of key ELA concepts.

WAVES AND THEIR APPLICATION 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 materials align with the physical science performance expectations and related components for this focus area. STEMscopes instructional materials provide extensive opportunities for engagement in critical thinking, inquiry, and problem-solving skills through the 5E Inquiry-Based Framework. The materials support the New Mexico content standards by offering a variety of activities to conduct experiments, collect data, and record observations in their workbooks or online. The materials include opportunities to explore sound and light through hands-on investigations, such as experimenting with sound waves using simple materials and observing light behavior with different objects. The STEMscopedia provides explanations of scientific concepts and the use of graphic organizers to document findings. Additionally, opportunities are given to design and build communication devices, allowing students to apply their understanding of light and sound to real-world problems.

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 provide comprehensive resources aligned with the New Mexico content standards, focusing on life science concepts related to animal and plant structures. The STEMscopedia offers detailed information on the parts of plants and animals, supported by interactive digital components accessible online for engagement. Activities such as journal entries and design challenges encourage exploration and application of understanding about animal body parts, their functions, and adaptations in real-world scenarios. Additionally, the materials provide opportunities to investigate how animals protect their offspring through research-based activities and interactive simulations, promoting a deeper understanding of animal behaviors and adaptations. The materials facilitate both individual and collaborative learning opportunities, enhancing comprehension and application of life science concepts in practical contexts.

HEREDITY: INHERITANCE AND VARIATION OF TRAITS
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 this focus area. The instructional materials support the exploration and understanding of inheritance, variation, and adaptation in animals and plants, aligned with the New Mexico content standards. These materials facilitate active learning through various activities such as matching animal offspring with their parents based on physical traits, exploring plant trait inheritance through hands-on modeling, and investigating the functions of animal body parts for survival and growth. There are opportunities for observational activities, role-play simulations, and data recording to deepen understanding of how offspring inherit traits and vary from their parents. The materials encourage critical thinking by prompting claims based on evidence gathered from investigations. Overall, these resources provide comprehensive support for teachers in facilitating learning and exploration of life science concepts related to heredity and adaptation.

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 the earth and space science performance expectations and related components for this focus area. The instructional materials provide comprehensive resources for educators to facilitate learning aligned with the New Mexico content standards, specifically focusing on observations of the sky and seasonal patterns. A series of structured activities are provided, including observing the sky at various times, recording findings in journals, and sequencing the sun and moon's motions. The materials incorporate detailed explanations of the sun's apparent movement and seasonal variations in daylight, supported by practical exercises such as daylight data collection and comparative analysis across seasons. Additionally, activities allow for exploration of daily and seasonal changes, formulation of claims based on evidence, and provide opportunities to participate in collaborative research projects. The materials consistently emphasize hands-on exploration and critical thinking, fostering a deep understanding of natural patterns and their implications.

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 the engineering design performance expectations and related components for this focus area. The instructional materials provide comprehensive resources for teachers to facilitate engagement with the New Mexico content standards. Diverse activities such as designing tools based on scientific principles and natural phenomena are provided. The materials emphasize hands-on exploration and application of scientific concepts, supported by clear instructions and digital resources. Opportunities for collaboration and engagement in the engineering design process enhance problem-solving skills, aligning with objectives. The structured approach fosters inquiry and understanding, promoting active learning experiences across various scientific disciplines.

CCSS for ELA and Math Grade 1 NGSS

Materials align to the ELA and math standards identified in the first grade NGSS.

Statements of appraisal and supporting evidence:

The materials align with first-grade NGSS ELA and math standards. They provide diverse opportunities for reading and interacting with informational text through Linking Literacy activities and the STEMscopedia, promoting factual recall, comprehension, and collaborative discussions. Math tasks include solving word problems using addition and subtraction, comparing two-digit numbers, and adding within 100 using concrete models or drawings. Manipulatives like seeds and paper clips are used for solving math problems and measuring objects. Activities also involve ordering objects by length, comparing tree heights, and using rulers and cubes for measurement. These materials emphasize abstract and quantitative thinking, ensuring comprehensive coverage of key ELA and math concepts.

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
	98%

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 centered around high-quality phenomena. Each bundle features an anchoring phenomena event, which is referenced in explore activities. The teacher materials integrate and describe the three-dimensional NM STEM Ready! Standards with a grade-level appropriate progression, detailed explanations, and effective questioning opportunities. The materials are 3D aligned, with meaningful anchoring phenomena questions and 3D discussion questions in Engage and Explore components. Lessons and activities are driven by natural and designed phenomena, supporting sensemaking with the three dimensions and promoting student discourse.

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 align with the New Mexico content standards and include various assessments to support learning. Each scope features summative assessments such as claim-evidence-reasoning, open-ended response, and multiple choice, along with formative assessments integrated into each activity. Tasks like researching animal care and designing tools provide opportunities for presentations, feedback, and revisions using 21st-century rubrics for self and peer reflection. Teachers use CCC and SEP scoring rubrics for analysis, feedback, and instructional adjustments based on performance data. These diverse assessments ensure comprehensive evaluation and alignment with educational standards.

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

The instructional materials provide comprehensive resources for planning, learning, and understanding. The teacher edition provides timelines, progressions, lesson planning guides, and sample lesson plans to assist in effective planning. The Teacher Toolbox includes a master materials list, safety information, and equipment details. Digital materials provide resources such as educational videos, games, and activities, with concept review games and content connect videos available in all scopes. Digital features also include text-to-speech, dictionaries, and highlighting tools to enhance accessibility. The digital STEMscopedia features nonfiction articles, videos, photographs, and interactive photos to enhance learning. Tabs on each scope page link to intervention and acceleration opportunities.

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

The instructional materials include a year-long lesson plan, bundle snapshot, and scope overview, along with text and graphics, demonstrating how the lessons are coherent, meaningful, and direct. Following the 5E Inquiry-Based Framework, each lesson promotes engagement in activities that stimulate curiosity and participation, facilitated by teacher discussion questions. These activities include investigative phenomena, hooks, and accessing prior knowledge. Regular and active participation in science content is fostered through the use of hands-on experiences coupled with facilitation questions and high-interest media.

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

The instructional materials are designed for all learners. The 5E Inquiry-Based Framework stimulates curiosity and connects prior knowledge to new learning. Materials and assessments are built in an accessible manner, with multiple ways to build and reflect on science knowledge, including student-centered projects using the engineering design process. Opportunities for acceleration and cross-curricular activities in ELA, math, and current events are included. Each scope includes acceleration activities such as project-based learning, critical thinking and art science to deepen engagement and connect to anchoring phenomena. Each scope also includes intervention activities to help re-teach the science content and practice science vocabulary. A variety of assessment tools, like model creation, peer critique, and self-reflection rubrics, help track progress.

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
95%

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 align with the New Mexico content standards to foster college- and career-readiness. Each bundle and scope lists the relevant standards and provides activities, experiments, and assessments to demonstrate mastery. They address the full content of the standards and support grade-level appropriate engagement. Using the 5E inquiry-based framework, the materials integrate literacy, math, social studies, and art, and offer resources for intervention and acceleration. Hands-on learning, project-based activities, peer critiques, and group discussions are included. Visual aids, graphic organizers, and technology enhance learning. Performance expectations and connections to standards are clearly detailed, building coherence and meaningful links within lessons and units.

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 provide effective lesson structure and pacing. The teacher edition presents learning progressions that provide an overview of the scope and sequence of skills and concepts, with assignments showing a purposeful sequencing of teaching and learning expectations. Each lesson includes clear, measurable, standards-aligned content objectives and language objectives tied directly to the content objectives. The materials offer focused resources to support the acquisition of general academic and content-specific vocabulary. The visual design maintains a consistent layout, supporting engagement and aiding comprehension through features such as visual aids, graphic organizers, and technology. The 5E inquiry-based framework facilitates easy navigation and meaningful learning. Instructional materials provide ongoing review and practice to retain previously acquired knowledge, with opportunities for hands-on learning, peer critiques, and group discussions.

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 align with the New Mexico content standards and provide comprehensive resources for planning, learning, and understanding. The Teacher Edition and online resources offer detailed lesson plans aligned with NGSS, with clear standards, timelines, and a coherent learning progression. They include strategies for academic development, intervention, acceleration, and language acquisition. Instructions are scripted, with notes for additional activities. Digital resources such as videos, games, interactive visuals, vocabulary flashcards, and assignable activities enhance engagement. Lessons are listed with standards and estimated times in the TE Scope Timeline and Sample Lesson Plans. The materials use the 5E Inquiry-Based Framework and offer review and enrichment activities, cross-disciplinary connections, and accessible digital formats. The Grade 1 Bundles Snapshot and Stop and STEM model provide cross-references and times.

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 align with the New Mexico content standards and offer a variety of assessments to measure student progress. Each scope includes formative and summative assessments, such as multiple-choice, short answer, and performance tasks, along with rubrics for SEPs and CCCs. Assessments target specific standards through content and language objectives and include journaling, organizers, claim-evidence-reasoning prompts, and project-based tasks. Scoring guides offer proficiency levels and support differentiation, intervention, and acceleration. Assessments are available in English and Spanish, with online tools supporting accessibility features like text-to-speech and customizable text size.

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 extensive opportunities and support that are interactive and adaptable for diverse learners. The materials feature hands-on activities, intervention and acceleration sections, and Spanish components with language support. The teacher toolbox includes resources for development and tiered support, while parent letters and resources are available both in print and online. Explore activities focus on key concepts that involve problem-solving and critical thinking, with assessments available in English and Spanish, customizable for differentiated instruction. The online platform offers tools for language support and accessibility. The materials emphasize inquiry-based learning through the 5E model and include culturally diverse content, promoting cooperative group work and critical thinking.

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 by offering lessons that access prior knowledge and include diverse cultural representations through images and stories. They spotlight scientists from various backgrounds and integrate connections to reading, writing, math, and physical activities. Each lesson includes real-life applications and interdisciplinary connections, fostering engagement with the material. The materials promote culturally and linguistically responsive pedagogy by affirming diverse backgrounds and facilitating discussions that reflect students' experiences. They feature diverse demographic representations without stereotypes and encourage exploring real-world phenomena. E ngage activities, parent involvement resources, and cross-curricular approaches further support meaningful learning and connections to students' lives.

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 highlight diversity in culture and language. The materials highlight culturally diverse scientists, including NM scientists and their contributions, as well as diverse individuals in career connection videos. Providing multiple entry points through Engage activities values individual perspectives based on students' prior knowledge. Tools and resources support diverse perspectives and Explore activities encourage discussions that allow learners to express their understanding. The materials are limited with addressing 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 #: 1

Background and experience:

Reviewer 1 is a Level III Master Teacher with 18 years of educational experience ranging from K-8th grade in a bilingual setting, holding a bachelor's in Community Health Education and a Master of Arts in Elementary Education with endorsements in bilingual, TESOL, reading, Science, and Health. The focus of instruction has primarily been within grades first and second with extensive instruction in Science. Currently, Reviewer 1 serves as an Educational Specialist for Early Childhood in the district.

Professional summary of material:

The instructional materials comprehensively cover the Next Generation Science Standards (NGSS), focusing on three-dimensional learning and integration of literacy components through the 5E Inquiry-Based Framework. They support students' mastery of standards through science instruction, literacy development, and technology integration. The material includes resources for intervention and acceleration, clearly outlines standards and performance expectations, and maintains a consistent layout for easy navigation. The materials offer numerous vocabulary acquisition opportunities, diverse instructional strategies, and varied assessments, catering to different student needs and aligning with the New Mexico content standards. Additionally, digital resources enhance interactive learning and promote culturally responsive pedagogy.

Reviewer #: 2

Background and experience:

Reviewer 2 is a Level III Master Teacher with 22 years of experience as an educator. Reviewer 2 earned a Bachelor of Science in Elementary Education and a Master of Arts in Teaching (Curriculum and Instruction). Reviewer 2 has taught kindergarten, 1st Grade, 2nd Grade, 4th Grade, and in a multi-age K-2 classroom. Reviewer 2 is currently an elementary science content specialist for a school district.

Professional summary of material:

STEMscopes provides a robust educational framework designed to engage students in hands-on, inquiry-based learning aligned with the Next Generation Science Standards (NGSS). The material emphasizes critical thinking and problem-solving through a variety of activities, such as collaborative, hands-on exploration activities facilitated by the teacher and real-world problems requiring students to engage in the engineering design process collaboratively within a small group to design solutions to the problems. Students engage in diverse tasks, including planning and creating models, engaging in science investigations, using evidence to support claims, and engaging in all four language domains throughout each lesson. The program includes comprehensive resources, such as detailed rubrics for self-reflection and teacher feedback, a variety of assessment types, and thorough safety and materials support. It also offers technological features like digital assignments, accessibility tools, and bilingual options, ensuring equitable access to learning.
The instructional materials in STEMscopes support student mastery of standards by providing clear timelines, coherent lesson sequences, and multiple opportunities for practice and extension. Vocabulary and language development are reinforced through explicit instruction and integrated activities. While the material effectively integrates real-life experiences and interdisciplinary connections, it could enhance its cultural representation to better reflect diverse demographics. Overall, STEMscopes is a well-rounded program that supports diverse learning needs and promotes an inquiry-based approach to science education, encouraging students to explore, analyze, and apply scientific concepts through engaging and practical activities.

Reviewer #: 3

Background and experience:

Reviewer 3 is a level III Master Teacher with 36 years of educational experience. Reviewer 3 earned a Bachelor of Science degree in Elementary Education and a Master of Arts degree in Curriculum and zzinstruction. Reviewer 3 has taught Kindergarten through 3rd grade and is currently teaching 2nd grade. Thirty years of teaching experience was in a Title I school serving 75% Native American population. Reviewer 3 is currently on the math and science team in their district.

Professional summary of material:

STEMscopes provides an NGSS-aligned educational framework, emphasizing hands-on, inquiry-based learning for grade 1. It comprehensively covers performance expectations, SEPs, DCIs, and CCCs with clear standards and varied assessments, including formative and summative options. Using the 5E model, it offers engaging activities and experiments in English and Spanish, providing accessibility. The teacher's edition includes detailed lesson plans, instructional strategies, timelines, printable vocabulary cards, online components, and interactive content. Lessons build on prior knowledge, connect to real-life experiences, and support diverse learners with intervention and acceleration sections. The materials reflect cultural diversity, promote critical thinking and problem-solving skills, and include accessibility features like text-to-speech and customizable assessments. Parent involvement is encouraged through informational letters and resources, creating a holistic educational environment. Overall, STEMscopes is well-rounded material that suppports diverse learning needs and provides opportunities for all students to learn the science content standards for the grade level.