2024 Instructional Material Summer Review Institute

Review Team Appraisal of Title

Grades 6-8 Life 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 Life Science Digital Student License (6 year license)	Publisher	Amplify Education, Inc.
SE ISBN	9781644821343	TE ISBN	9798885705646
SW ISBN	9781642762624	Grade Level/Content	Grades 6-8 Life 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
	84%

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
		87%

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 meet focus area 6, cultural and linguistic perspectives. Lessons include articles and promote collaboration between students when they are asked to discuss, share, and present their annotations. Every unit includes an activity that elicits personal experience and cultural backgrounds. An example of one activity can be found in a traits and reproduction lesson. Students complete a list of traits in their household and add friends, neighbors, and family members who do not live with them. The instructional material provides a collection of multiple demographics. Examples include "Meet a Scientist Who Studies the Human Microbiome", "Metabolism Engineering Internship Target Populations", and "Matter & Energy in Ecosystems" that incorporate stories/journals of Econauts from different demographics.

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:

Although the material does address different languages and cultures, the perspectives lack complete diversity. Material is offered only in English and Spanish. The authors of the assigned reading articles throughout text do come from diverse backgrounds; however, there is no mention of the cultures of New Mexico in the 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
80%

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

The Amplify material for Life Science somewhat aligns with the science standards. The scope and sequence of the materials provides comprehensive learning of the NGSS. Activities and lessons meet the needs of all types of learners. The material revolves around high-quality phenomena and mostly uses a three dimensional approach to solve problems. However, we are unable to connect several components (DCI, SEPs, CCCs, CONNs) to the PEs.

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:

Overall, the materials are aligned to life science performance expectations (PE) of From Molecules to Organisms. Lessons and instruction introduce students to the fact that all living things are made up of cells as they participate in investigations. Lessons include instruction and activities that discuss the structure and function of cells, both unicellular and multicellular. The materials task students to create a model of a molecule in order to deepen their understanding of the connection between genes and cells.

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 align with life science Performance Expectations (PE) for Ecosystems by engaging students in activities that analyze and interpret data on resource availability's effects on organisms and populations; predict interaction patterns among organisms across ecosystems; develop models for matter cycling and energy flow; construct evidence-based arguments on ecosystem changes; and evaluate solutions for maintaining biodiversity and ecosystem services. However, the materials lack in fully addressing the systematically evaluating solutions with respect to how well they meet criteria and constraints of a problem, as well as in effectively engaging students in constructing convincing arguments based on evidence to evaluate competing design solutions according to jointly developed and agreed-upon criteria.

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 **teacher** materials partially align to life science performance expectations (PEs) for Heredity: Inheritance and Variation of Traits. There isn't consistent evidence of three dimensional learning (DCIs,SEPs, CCCs). However, the **student** materials align to life science performance expectations for Heredity: Inheritance and Variation of Traits as they include models, simulations, images, and informational text about variation, genes, mutations, and reproduction.

BIOLOGICAL EVOLUTION: UNITY AND DIVERSITY
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 material mostly aligns to the life science PEs and related components for this focus area. Lessons have students analyze and interpret data for patterns in the fossil record. The materials ask students to investigate the "Mystery Fossil" at the National History Museum and discover the similarities it has with both a wolf and whale. Students investigate why the distribution of poisonous traits in the rough-skinned newt population changed over time. Lessons allow students to interpret charts and graphs about different organisms throughout the history of the Earth and document changes that have happened over time. Although most of the related components are addressed in materials, some do not align with the given performance expectation.

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 material effectively incorporates engineering design standards by engaging students in problem-solving, designing and testing solutions, making cross-disciplinary connections, applying scientific principles, and using technology. This alignment ensures that students not only learn biological concepts, but that they also develop critical engineering skills, preparing them for future scientific and engineering challenges.
CCSS for ELA and Math in Grades 6-8 NGSS **Materials align to the ELA and math standards identified in grades 6-8 Life Science NGSS.** *Statements of appraisal and supporting evidence:*
The material meets the CCSS for ELA/literacy and math in Grades 6-8 by integrating key standards into science and technical contexts. It ensures students can cite textual evidence, determine the meaning of domain-specific terms, integrate information visually, and distinguish between facts and speculation. The material supports argument evaluation, writing, research skills, and effective communication. In math, it promotes abstract reasoning, mathematical modeling, understanding of ratios and variables, and data representation. While it aligns well with many NGSS performance expectations, it partially meets the criteria for summarizing texts (RST. 6-8.2) and solving multi-step real-life math problems (7.EE.B.3).

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 effectively integrate phenomena-based, problem-based, and three-dimensional learning by engaging students in real world challenges, hands-on investigations, critical thinking, data collection, use of models, and collaboration. The instructional materials effectively ensure students are gaining knowledge in life science disciplinary core ideas.

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 meet the criteria set out in Focus Area 2 by providing a robust framework that supports student engagement through meaningful, multi-dimensional tasks and assessments. Additionally, the emphasis on feedback and self-reflection ensures that students are well-supported in their learning process, making these materials an excellent resource for achieving the three-dimensional learning goals.

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

The materials provide a comprehensive list of supplies and teacher guidance on instruction. Amplify material provides instructions and directions that help teachers use embedded technology effectively. There is guidance for teachers in the use of assessments for all learning types. Materials direct teachers in ways of interpreting and monitoring students' progress while providing ideas to modify instruction.

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

The materials meet the criteria for Focus Area 4 by providing a robust framework for student-centered instruction. The materials effectively engage students' curiosity and participation by connecting new learning to their prior knowledge and real-world phenomena. Additionally, the clear and meaningful flow of lessons ensures that students can navigate through the units with ease, enhancing their overall learning experience.

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

The instructional materials meet focus area 5 as they are designed to support a diverse range of learners by incorporating various strategies and resources that address different learning needs and styles. The materials are differentiated through the following ways: scaffolding; extension activities; multimodal, hands-on activities; emergent bilingual supports; audio supports, and culturally relevant content.

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
94%

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 material incorporates NM content standards and is geared toward college- and career-readiness. Each unit has an end-of the unit assessment to show mastery of each standard. The activities and lessons throughout the materials require students to engage at an appropriate level of maturity. The Coherence Flow Chart provides evidence of consistency and meaningful connections of the standards and material.

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

The materials meet the criteria for Focus Area 2: Well-Designed Lessons by ensuring effective lesson structure and pacing. The teacher edition provides a comprehensive overview of learning progressions, ensuring a purposeful sequencing of teaching and learning expectations. Each lesson includes clear, measurable, standards-aligned content and language objectives directly tied to the instructional goals. Additionally, the materials offer focused resources for vocabulary acquisition, both general and content-specific, and feature a consistent visual design that enhances student engagement. Furthermore, the materials incorporate features that facilitate comprehension and provide ongoing review and practice, helping students retain previously acquired knowledge effectively.

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 materials offer a scope and sequence document that lists lessons, cross-referencing the standards addressed and providing timeframes for completion of lessons. Material provides teachers support with instructional strategies to guide student learning with a "Teacher Support" tab in each lesson. Material provides annotations and tips throughout each unit to guide teachers on how to present the material for students. There are opportunities for digital learning throughout, as seen in the many science simulations.

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 meet focus area 4 for assessment, as they offer a variety of assessment resources and tools to collect ongoing data about student growth related to the standards. The instructional materials provide a variety of summative and formative assessments to measure students' understanding (e.g. Pre-Unit Assessment, On-the-Fly Assessments, Student Self-Assessments, End-of-Chapter assessments, Critical Juncture Assessment).

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 meet the criteria for Focus Area 5: Extensive Support, providing all students with opportunities and robust support to explore key concepts. These materials are highly adaptable, offering customization to address the needs of diverse student populations. They include differentiation strategies and activities for students working below proficiency and for advanced learners, alongside appropriate linguistic support for English Learners and Culturally and Linguistically Diverse students. Additionally, accommodations for special populations ensure active participation in learning content. The materials also provide strategies to engage parents and caregivers, and foster critical and creative thinking, inquiry, and complex problem-solving skills among 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 materials meet focus area 6, cultural and linguistic perspectives. Lessons include articles and promote collaboration between students when they are asked to discuss, share, and present their annotations. Every unit includes an activity that elicits personal experience and cultural backgrounds. An example of one activity can be found in a traits and reproduction lesson. Students complete a list of traits in their household and add friends, neighbors, and family members who do not live with them. The instructional material provides a collection of multiple demographics. Examples include "Meet a Scientist Who Studies the Human Microbiome", "Metabolism Engineering Internship Target Populations", and "Matter & Energy in Ecosystems" that incorporate stories/journals of Econauts from different demographics.

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:

Although the material does address different languages and cultures, the perspectives lack complete diversity. Material is offered only in English and Spanish. The authors of the assigned reading articles throughout text do come from diverse backgrounds; however, there is no mention of the cultures of New Mexico in the 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 #: 55

Background and experience:

I have a bachelor's degree in liberal studies and a master's in early childhood education with a reading endorsement. I have 18 years of teaching experience. I taught 7th grade ELA for 12 years and 9th grade ELA for the past 3 years. I am the department head for ELA and a district mentor. I just obtained my K-12 Administrative License and am looking forward to working in a leadership position. This is my 3rd review for the NM PED. I have reviewed ELA and CTE material. I also work as a facilitator for the microcredentials program offered through the NMPED in Family Engagement.

Professional summary of material:

The Amplify material for Life Science Grades 6-8 provides many opportunities for active engagement and critical thinking. The material allows students to engage in activities that puts them in the role of scientists and engineers. The materials include engagement in core scientific principles and also deepen understanding through other science domains. The material addresses special populations of students such as ELs, special needs and advanced learners in most learning activities. Science simulations, extension activities, Engineering Internships, and hands-on experiments engage students in all standards. Overall, the material is centered around high quality phenomena and uses a three dimensional approach to solve problems. The materials are student centered and are designed for all learners. Materials are coherent, well designed and provide strong resources for planning.

Reviewer #: 56

Background and experience:

I hold a BA in Elementary Education, MA in Reflective Practices, and hold a Level III-A instructional leader K-8 license. I have seven years of teaching experience. Three of those years I taught 8th grade Physical Science along with what I currently teach, which is 7th grade Life science. I will be participating in my second middle school science adoption committee. During the summer of 2024, I will be facilitating sessions for new middle school science teachers during the Secondary New Teacher Induction. I am a member of the National Science Teaching Association (NSTA) and submitted a proposal to present at the fall conference.

Professional summary of material:

The material is recommended, but with reservations. Amplify Life Science does well with focusing on real-world phenomena and providing opportunities for students to engage deeply with scientific concepts through hands-on, inquiry-based activities. This alignment ensures that students develop a comprehensive understanding of life sciences in a manner consistent with contemporary science education best practices. Some reservations include needing connections to New Mexico students; strategies to promote student agency; the ability to customize the online platform to make the materials accessible for all learners; and the amount of reliance on online data collection (simulations).

Reviewer #: 57

Background and experience:

With 12 years of experience in teaching science, I hold a bachelor's degree in secondary education with a major in biological science. Most of my years in education I was assigned to handle Physical science subjects, including Physics, Chemistry, and Geology. I have been a licensed Professional Teacher in the Philippines since 2012. Furthermore, I obtained my master's degree in science education and acquired my New Mexico teaching license in 2019.

Professional summary of material:

The Amplify material for Life Science demonstrates substantial alignment with the science standards and provides a comprehensive educational framework that supports diverse learners through well-designed lessons and extensive support mechanisms. The material effectively integrates phenomena-based, problem-based, and three-dimensional learning, engaging students in real-world challenges and critical thinking. While the materials align well with performance expectations in key life science areas such as ecosystems and biological evolution, there are areas for improvement in consistently connecting all components to the PEs, particularly in heredity. The material is adaptable, offering differentiated strategies for varied proficiency levels and extensive linguistic support. It also incorporates robust teacher resources for planning, effective lesson pacing, and meaningful assessment tools. Despite addressing different cultural and linguistic perspectives, there is a need for broader diversity representation, particularly in reflecting New Mexico's cultures. Overall, the material promotes active student participation, critical thinking, and problem-solving, preparing students for college- and career-readiness.