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	OpenSciEd LIFE SCIENCE BUNDLE - Teacher's Guides	Publisher	Kendall Hunt Publishing
SE ISBN		TE ISBN	9781792499678
SW ISBN	9781792499661	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
88%

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
68%

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

Evidence is partially found for community driven learning in one unit. Different parts of the world are represented and are used to support evidence. Interviews or articles with scientists of different backgrounds and various occupations are present. Phenomena attempts to engage differences in student backgrounds and languages. There is no evidence of a collection of images representing a broad range of 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:

Materials are mostly given in English and Spanish, but no other language is represented. Though the SE and selected reading material can be provided in Spanish, the TE does not include language diversity. There are limited times when students have an opportunity to share their community background. No evidence of cultures in New Mexico are found 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
89%

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

The materials align with the Next Generation Science Standards. The units are storyline based and cover most of the required standards. The science and engineering practices and the cross cutting concepts are present and integrated.

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 disciplinary core ideas (DCI) cover the idea that all living things are made of cells, unicellular vs multicellular organisms and how body systems interact. There are a variety of activities to create student understanding. The materials use modeling throughout the lesson to understand how body systems work together. There are opportunities for oral arguments and feedback from peers as well as the teacher. The science and engineering practices (SEP) and cross cutting concepts (CCC) are mostly addressed; however, the materials do not have student created inquiry activities as per the standard. The standard MS LS 1-8 is more aligned with light instead of focusing on brain processes.

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 the performance expectations (PE) for this focus area in full. Materials cover drawing conclusions about ecosystems, creating models of ecosystems and their interactions, making predictions about populations and considering the effects of humans on ecosystems. This unit contains engineering lessons that allow for creating a plan to fit criteria and constraints.

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 PEs in this unit are aligned with the standards. The DCI for chromosomes, proteins and changes in traits are present in the materials and are addressed. The phenomena are given and not developed through questioning.

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:

For this PE, the units align to the DCI. The materials compare extinct organisms to present day organisms, looking for commonalities, and understanding natural selection and selective breeding. The materials provide opportunities for students to create timelines, analyze data, make predictions about data, and compare similarities and differences in embryos. This unit is hands-on and integrates with data sets and math practices.

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 standards with comprehensive activities. The materials include articles about ecosystems, discuss the constraints and limitations of each, and work on improving a design or constructing a solution. The materials give opportunities to complete a design challenge and for evaluating designs based on the criteria set by stakeholders. These tasks ensure that engineering principles are taught.

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:*
There are a wide variety of texts, podcasts, and videos that are engaging. Writing is also used to reflect and create projects and arguments from evidence. There are two instances when math is used: data and models of data to help with understanding are included.

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
91%

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 align with the three-dimensional approach to teaching science standards. The phenomenon is present at the beginning of each unit and anchors the lessons that follow. The phenomenon follows the students throughout the lessons and is referenced too often. The SEPs and CCCs are present throughout the lessons.

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.

At the end of all units, assessment overviews are included. The materials give opportunities to demonstrate mastery by making connections to the phenomenon and self-assessing knowledge of the standards. The materials allow for opportunities to give and receive feedback. There are opportunities for formative assessments in the units. Summative assessments are task-based and aligned to the standard.

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

In each unit, the TE gives a suggested timeline for each lesson, material list, and background science information. There is additional guidance in the TE for embedding technology and the materials can be downloaded into Google Classroom. In the TE, there are "callouts" to differentiate instruction or attend to equity. Rubrics and answer keys are available in print and online.

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

All of the units flow well from one lesson to another. There are active participation opportunities embedded in every lesson. The materials allow for connections to prior knowledge or previous lessons and give opportunities to develop curiosities, make models, share with a group, and participate in scientist circles. It encourages conversations with parents about the content.

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

The units meet the equity standards by incorporating various key practices. The TE provides a dedicated "Attending to Equity" section, which offers guidance on engaging at various levels and finding entry points for diverse abilities. Additionally, in the "Student-Facing Science Notebook", feedback opportunities are given, ensuring equitable access to learning materials. Lessons include prompts directly related to assessments. Finally, a prompt to develop a class consensus is reached at the end of each lesson, promoting inclusive decision-making and ensuring equity.

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
80%

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:

Instructional materials meet the NM STEM READY! standards. The units are aligned with the maturity and appropriate grade level. The standards that are taught are rigorous and the TE explains how the standards are to be met. The units build on each other by presenting a progression of skills with self-monitoring by using a progress tracker.

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

The TE "Lesson by Lesson Assessment Opportunities" aligns with a measurable standard. While reading, writing, listening and speaking are embedded in lessons, explicit language objectives are not delineated. Each lesson begins with a review or reflection on the previous lesson and at the end of each lesson, prompts for reflecting on learning is present. Resources include close reading strategies, collaboration skills, and how to give and receive appropriate feedback.

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:

Instructional materials have a common structure. The units are sequenced with each lesson including a learning plan snapshot, which provides a breakdown of each lesson and the materials needed to teach it. The TE has resources for Universal Design that promote learning development. Units include simulations, as well as various videos. Each lesson has suggested prompts on what to "Look/Listen For."

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:

Materials provide opportunities to assess learning. At the end of the lesson, there is a summative assessment that is task-based. There are no alternative assessments for struggling or advanced learners present or further opportunities or guidance on instruction, differentiation, or remediation of the standards. There is not an online platform or a technology-based 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:

In the materials, there are a variety of ways to show options to approach the lesson. There are alternative activities within the lessons. In the TE, there is additional guidance; there is a section that informs teachers on how to group students based on how they are retaining information. How-to guidance in the TE on how to use and implement a word wall is present as well. The materials do not provide for culturally or linguistically diverse students. Translations for Spanish materials are found in the Google Drive. There is no guidance for modifying for IEPs.

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

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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:*
Materials are mostly given in English and Spanish, but no other language is represented. Though the SE and selected reading material can be provided in Spanish, the TE does not include language diversity. There are limited times when students have an opportunity to share their community background. No evidence of cultures in New Mexico are found 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 #: 40

Background and experience:

I have 17 years experience in teaching science. I have taught both middle and high school ages. I am a Level III teacher with a BS in Elementary Education with a Science emphasis and a MS in Curriculum and Instruction for Secondary. I have a science content endorsement as well and facilitate Making Sense of Science for the state.

Professional summary of material:

I recommend with reservations the reviewed material for life science. The lessons are rigorous and include varied types of activities and skills. Students are often making sense of what they see and ask their own questions. While no material is perfect, this meets most of the standards in a complete way. The material is easy to navigate for new teachers. I found the student workbooks to be difficult for the students to keep all of their work together and coherent. The only reservation I have is that there are a few missed opportunities for math integration.

Reviewer #: 41

Background and experience:

I have 15 years experience in teaching science - most years were from high school and 4 years in middle school. I am a Level III teacher with endorsements in science and computer science. My foundation includes a bachelor's degree in secondary education, specializing in general science, and a master's degree in biology. Currently, I am furthering my academic journey with a PhD in special education, driven by a commitment to inclusive teaching practices.

Professional summary of material:

I recommend with reservations the adoption of the OpenSciEd middle school science materials. The lessons in the materials are well-structured with varied and engaging content activities. The materials incorporate real-world examples, and hands-on experiences for deeper understanding and engagement. Various forms of assessment are provided to assess student learning. Most of the science standards are addressed across the units. The materials provide teacher support and guidance on how to implement the instructional material in the classroom. However, the materials do not address certain Common Core standards in English language arts and mathematics.

Reviewer #: 42

Background and experience:

I have been teaching for 20 years at both the elementary and middle school level. The last 10 years have all been in middle school math and science. I am a level III teacher with a masters degree in curriculum and instruction and another in administration and supervision. I hold endorsements in TESOL, Spanish and mathematics.

Professional summary of material:

I recommend the adoption of the OpenSciED materials, albeit with some reservations. The materials are well-structured and user-friendly, with each unit clearly outlining the number of days required and each lesson broken down into minutes. The majority of science standards are comprehensively addressed across the units. Various assessment opportunities and suggestions are integrated throughout the material, including detailed criteria for evaluation. Students are provided with numerous opportunities for collaborative work, peer assessment, and feedback exchange. However, it is important to note that the material does not address certain Common Core State Standards (CCSS) in English language arts (ELA) and mathematics.