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Bid Summary

Reviewer's Name: Paul Cottle
Title: STEMscopes Science Florida - Physics 1
Publisher: Accelerate Learning
Author: Accelerate Learning Inc.
Copyright: 2024
Edition: 3
Grade Level: 9-12
Bid Cycle: 2023-2024 K-12 Science
Bid ID: 766
Course: Physics 1
Major Tools: STEMscopes Science Florida - Physics 1 (Online - 1 YR), (Major Tool (Priced)), (Special Instructions)
• Digital Platform (Teacher, Student, & District) • Assessment package • Reports & Analytics (Teacher, Campus, & District) • Suggested Lesson Planning & Scope and Sequence • Initial PD (based on # of student digital licenses - 35 attendees/session)
STEMscopes Science Florida - Physics 1 (Online - per year for 5 YRS), (Major Tool (Priced)), (Special Instructions)
• Digital Platform (Teacher, Student, & District) • Assessment package • Reports & Analytics (Teacher, Campus, & District) • Suggested Lesson Planning & Scope and Sequence • Initial PD (based on # of student digital licenses - 35 attendees/session)
STEMscopes Science Florida - Physics 1 Student Bundle (Online and Student Notebook(s) - per year for 1 YR), (Major Tool (Priced)), (Special Instructions)
• Digital Platform (Teacher, Student, & District) • Assessment package • Reports & Analytics (Teacher, Campus, & District) • Suggested Lesson Planning & Scope and Sequence • Initial PD (based on # of student digital licenses - 35 attendees/session)
STEMscopes Science Florida - Physics 1 Spanish Student Bundle (Online and Student Notebook(s) - per year for 1 YR), (Major Tool (Priced)), (Special Instructions)
• Digital Platform (Teacher, Student, & District) • Assessment package • Reports & Analytics (Teacher, Campus, & District) • Suggested Lesson Planning & Scope and Sequence • Initial PD (based on # of student digital licenses - 35 attendees/session)
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Questionnaire

Authors & Credentials: List full name of author(s), with major or senior author listed first. Briefly provide credentials for each author.

Answer: Amanda McGee and Dawn Alvarez uphold primary responsibility for developing and enhancing the products offered by Accelerate Learning Inc. with immediate and direct support provided by their managers. We may match multiple consultants according to final, prioritized needs, development strengths, and background experiences. More than 100 highly experienced, certified practitioners support STEMscopes Leadership and our efforts across the nation. More information regarding the leadership qualifications within Accelerate Learning Inc. is provided below for the individuals most closely tied to our product offerings.

AMANDA MCGEE, M. ED., SENIOR VICE PRESIDENT, CURRICULUM DEVELOPMENT AND PRODUCTION

Prior to joining Accelerate Learning Inc., Amanda was the Secondary Coordinator of Science and Health in Humble ISD. In that role, she was able to help teachers and students by designing curriculum, instruction, and assessments around best science practices. Her former role also allowed her to influence teachers during professional development opportunities while she was the Project Director for the Lake Houston Science Collaborative (affiliated with the Texas Regional Collaborative). In addition, Amanda spent eight years in the classroom as a middle and high school science teacher and as an instructional coach.

In 2014, Amanda chose to leave the public education space to join Accelerate Learning, Inc. in order to have a larger impact on STEM education. With the company, she has served as a Curriculum Manager, a Director of Curriculum Development, the Vice President of Curriculum Development and now as Senior Vice President of Curriculum Development. In this role, she has led an amazing team of Curriculum Managers who have spearheaded the charge to share STEMscopes Math and Science across the nation and even internationally with our STEMscopes Streaming powered by CNN product.

Amanda truly believes that our mission at Accelerate Learning Inc. is to equip teachers with a "one-stop-shop" for hands-on, constructivist, standards-aligned math and science lessons to increase student performance and engagement. She is proud and humbled to be able to support the teachers who use our product.

DAWN ALVAREZ, M. S., VICE PRESIDENT, SCIENCE CURRICULUM

Dawn graduated from the University of Denver with a Bachelor of Science degree in Biology and went on to earn a Master of Science in Education Administration from Texas A&M University. Her passion for science and learning started her career in education, leading to 16 years in the classroom as a teacher, team leader, and instructional coach, and most recently four years at the district level as the Program Director of Secondary Science in Galena Park ISD. She has taught grades 6-12 in a traditional, accelerated, and discipline alternative setting from remediation to Advanced Placement courses.

In 2017, Dawn joined Accelerate Learning where she has served as a Curriculum Manager, Senior Manager for Science Curriculum, and now Vice President of Science Curriculum. She has helped to develop K-12 products that provide teachers an opportunity to impact our future with science instruction in the classroom.

Students: Describe the type(s) of students for which this submission is intended.

Answer: As an inquiry-based curriculum with built-in support, STEMscopes Science Florida is intended for all students in all stages of science development. The very nature of our constructivist approach makes STEMscopes suitable for all learners to access and apply the science content. Our digital platform allows teachers to individually assign activities to students to seamlessly personalize their instruction.

STEMscopes Science Florida is 100% aligned to Florida's State Academic Standards for Science, including special attention to the Nature of Science (NOS) Standards through hands-on and reflective experiences. Embedded within our program are English language learner (ELL) strategies, a multitiered system of support strategies, and literacy strategies. Additional supports, found within the Resources section, include tiered intervention and various development interventions in the areas of communication, physical, cognitive, social/emotional, and adaptive behaviors. Students who show mastery of the content and require further study are not left out; we offer advanced strategies embedded within activities, acceleration elements, and varied assessment types to extend and deepen their understanding of the science content.

English Language Learner Supports

Our philosophy at Accelerate Learning Inc. is that students learn most efficiently when new content is introduced and taught in tandem with hands-on student experiences. Our Explore activities guide teachers in attaching new academic vocabulary to student experiences, and students are encouraged to use their speaking, writing, and listening skills to communicate about the content they are learning. All of these strategies, used together, help to fully address the needs of English language learner (ELL) students. We also include additional support for ELL students throughout our lessons. Without watering down the curriculum, and while maintaining the integrity of rigorous science content, we offer ideas on how to modify instruction for students with unique needs.

Special Education and Below-Grade-Level Supports

Our platform includes several user-friendly features, such as text-to-speech, note-taking tools, and adjustable font size and background color for easier accessibility. Each scope contains an Intervention section for students who may need additional support to meet the standards and performance expectations. Teachers can provide an entirely new, hands-on activity that is streamlined and can be used as a small group or 1:1 lesson with specific independent assessments. This is designed for students who have not yet mastered the standard or who have limited science instruction due to pull-out intervention services.

Additionally, our digital platform allows teachers to individually assign activities to students to seamlessly personalize their instruction.

Within the Engage (Pre-Assessment), Explore (activities), Explain (STEMscopedia), Elaborate (Science Connection and Reading Science), and Evaluate (Scope Assessment), differentiation strategies are embedded to support teachers in creating more accessible experiences for learners with unique needs. These strategies are designed to provide intervention ideas that support learners in tiers 1, 2, and 3.

Advanced Learner Supports
While all activities within a scope (lesson) are geared toward all learners, certain Explore activities provide advanced strategies that help advanced learners extend their thinking beyond the required content. Acceleration activities offer additional opportunities to take the content above and beyond what is required. These are real-world enrichment activities that challenge students and apply topics in new, relevant methods that connect learning to the world around them, prompting students to think more deeply about the content and its applications.

Inclusive Learning
Accelerate Learning Inc. is committed to representing how the world actually looks in illustrations, references, images, and other media throughout the STEMscopes Science Florida product. We select our images and references to combat stereotypical and biased depictions of gender roles, race, people of different cultures and socioeconomic backgrounds, people with disabilities, and aging adults. STEMscopes features women in STEM careers, a sector that is usually perceived as male-dominated, to show that girls can “do” science in active roles. Applying a lens of inclusion, our product illustrates a wide array of races, ages, and genders in visual representations throughout the curriculum. Regional and cultural references are addressed when appropriate, most notably in the Scientist in the Spotlight section of the STEMscopedia element. We understand that these types of exemplars throughout our curriculum help students build understanding and shape positive perceptions of others. STEMscopes Science Florida is truly a curriculum for all students.

1. List the Florida districts in which this program has been piloted in the last eighteen months.

Answer: N/A

2. HOW ARE YOUR DIGITAL MATERIALS SEARCHABLE BY FLORIDA STATE STANDARDS (SECTION 1006.33(1)(E), FLORIDA STATUTES)?

Answer: STEMscopes Science Florida shows alignment to Florida’s State Academic Standards for Science in multiple ways:

• Each scope (lesson) is specifically written to Florida’s State Academic Standards for Science. The suggested scope and sequence and the Florida standards snapshot in the Resources section show where each standard is covered.

• The Standards Planning element in each scope specifically calls out the standard related to that scope and further dissects the standard into nouns and verbs to help teachers understand the intention of the standard implementation in the classroom.

• On the STEMscopes Science Florida website, along the blue bar at the top of each page, there is a Standards drop-down menu that allows teachers to find specific standards that link to the specific scopes.

3. IDENTIFY AND DESCRIBE THE COMPONENTS OF THE MAJOR TOOL. The Major Tool is comprised of the items necessary to meet the standards and requirements of the category for which it is designed and submitted. As part of this section, include a description of the educational approach of the submission.

Educational Approach: (The information provided here will be used in the instructional materials catalog in the case of adoption of the program. Please limit your response to 500 words or less.)

Answer: The STEMscopes Science Florida philosophical approach is based on research and best practices in education. Listed below are the embedded philosophies.

The 5E Model
Centered on a gradual transition from teacher-led instruction to student-driven learning, the 5E (Engage, Explore, Explain, Elaborate, and Evaluate) model allows students to explore context before content to develop deep scientific understanding.

Learning within Real-World, Relevant Context
Student learning is rooted in real-world scenarios. The Scope Phenomenon and Explore activities engage students throughout the learning process in relevant situations. Science Today provides an opportunity for students to make connections using authentic, real-world photographs or articles provided by The Associated Press.

Collaborative Exploration
Most of the elements in STEMscopes Science Florida involve student collaboration and require a learning community within the classroom. In Engage and Explore activities, students work together to gain an understanding of a new science concept. In Elaborate activities, students work together to apply the new skills they just learned.

Promoting Equity
STEMscopes Science Florida provides access to high-quality, challenging learning opportunities for every student. The activities within the program are scaffolded and differentiated so that all students find the content accessible and challenging.

Content Knowledge of Teachers and Parents
STEMscopes Science Florida provides support for teachers or parents who need additional background knowledge to support their student's understanding. Science Outside the Classroom addresses why a concept is being taught a certain way and gives insight to the concepts students will learn next.

Building Academic Language
STEMscopes Science Florida provides multiple opportunities for students to communicate their ideas and share their thoughts and reasoning in writing. Explore activities include teacher facilitation points on how to attach vocabulary to instruction and discussion prompts to guide students in communicating their thoughts using academic language. The embedded language support strategies help English language learners acquire new vocabulary. Picture Vocabulary presentations are support tools for teachers to represent new vocabulary with a picture and a student-friendly definition.

Major Tool - Student Components: Describe each of the components, including a format description.

Answer: Students in 1:1 classrooms are able to use STEMscopes Science Florida as a digital science journal. Note-taking tools are available for students to write ideas online as they process curriculum content, and a comment/annotation tool is accessible in the same toolbar as the highlighting function. For students not in 1:1 classrooms, print books allow the same recording ability. For schools not using print books, PDFs of the student journals are available on the website for teachers to print out, or even project, allowing students to write in their own journals.

STEMscopes Science Florida is a modular product that offers unique flexibility to meet the unique needs found in classrooms. With the option of assigning content digitally, teachers can tailor assignments as needed. Each scope provides digital opportunities that allow students to interact with content using the Virtual Explore and Virtual Experience elements.

Major Tool - Teacher Components: Describe each of the components, including a format description.

Answer: Each STEMscopes Science Florida lesson (scope) is based on specific Florida's State Academic Standards for Science content and is written as a 5E + IA (Engage, Explore, Explain, Elaborate, and Evaluate, plus Intervention and Acceleration) lesson cycle. Each scope also includes Nature of Science standards. On the scope Home page, teachers find an in-depth explanation of these standards and how students should apply them in their learning throughout the scope. Within the scope, these standards are embedded in each Explore lesson.

Each lesson focuses on hands-on experiences for students and easy-to-use facilitation instructions for teachers. In addition to the online product, we offer kits so that teachers can quickly prepare for class. Our kits assist teachers with implementing the hands-on pieces that support the constructivist approach of STEMscopes. Hands-on kits are offered by grade level (K–8) and include materials organized by lesson. Replenishment kits are also available to replace materials used during a lesson. Print books contain key elements of the digital curriculum. In 1:1 classrooms, teachers can have students answer assessments, keep online student journals, and much more. But STEMscopes Science Florida is built to be a modular curriculum so that every element is also easily implementable in non-1:1 classrooms. Teachers can choose which elements to digitally assign students, collect grades, and give feedback. The Home tab of each scope provides teachers with standards correlations, a dissection of the standard by nouns and verbs, student misconceptions, and background knowledge about the science content.

The list below includes selected points of interest within each scope tab:

Home
• Teacher Background (K-12) - A brief overview designed to give the teacher a quick reference to the science content covered in the scope.
• Standards Planning (K-12) - A deep dive into the standards, practices, and recurring themes and concepts covered in the scope. This includes vocabulary, student-friendly objectives, and cross-curricular connections.
• Parent Letter (K-2) and Science Outside the Classroom (3-HS) - A tool to help students connect the science content they are

learning beyond the classroom.

Engage
• Pre-Assessment (2-12) - A five-question multiple-choice pre-assessment that assesses students' current knowledge of the content covered in the scope.
• Accessing Prior Knowledge (K-12) - A brief probing activity to gauge students' prior knowledge and uncover possible misconceptions covered in the scope.
• Scope Phenomenon (K-12) - Introductory activity that facilitates a connection between the content and real-world phenomena and encourages students to ask why or how something happens.
• Progress Monitoring and Reflection (3-12) - A tool to help students and teachers track their understanding of the scope's fundamental ideas using the formative and summative assessment tools as they move throughout the scope.

Explore
• Hands-On Explore (K-12) - Students complete rigorous, hands-on activities. Teachers will highlight how students interact with everyday phenomena that relate the Scope Phenomenon to personally experienced situations.
• Virtual Explore (K-12) - Explore activities designed for students to interact with science concepts in a synchronous or asynchronous virtual environment.

Explain
• Interactive Science Notebook (ISN) (K-12) - Science notebook strategies designed to allow students to organize and process the content they learned during the Explores and from the STEMscopedia readings.
• STEMscopedia (2-12) - Expository text designed to present standard-specific information in an easy-to-reference text format.
• Picture Vocabulary (K-12) - A slide presentation of important vocabulary terms along with a picture and definition. Instructions for developing interactive word walls so students can interact with the vocabulary terms to better comprehend and recall their meaning.
• Pulse Check (3-12) - A gamelike assessment to help measure comprehension of scope concepts.

Elaborate
• Science Connection (3-12)- A class activity in which students use different forms of communication to discuss scientific topics connected to the content of the scope.
• Technology Connection (Grades 6-12) - A research activity based on a driving question that shows application of the content.
• Engineering Connection (K-12) - An activity designed to utilize the steps of the engineering design process.
• Math Connection (K-12) - An activity that allows students to interact with data using graphing and data analysis skills.
• Science Today (3-12) - Students explore real-world connections and applications of science content through interactions with media provided by the Associated Press.
• Reading Science (3-12) - A reading passage about the science concept covered in the scope, which includes connections to RLA standards. The passage is provided in two Lexile levels.
• Writing Science (K-12) - A narrative or expository writing prompt based on the content of the scope.
• Virtual Experience (K-12) - A computer-based activity in which students interact with content using a self-guided interactive.
• Active Readers (K-2) - An interactive text designed to actively engage young learners with science content.
• Leveled Readers (K-2) - Leveled Readers provide teachers with science reading selections appropriate for students with varied reading levels. They can be used in literacy blocks, guided reading blocks, or any other time designated for reading during the day.
• Centers (K-2) - Activities created to be used during center time that connect the science content of the scope to literacy, math, writing, science, technology, and art.

Evaluate
• Claim-Evidence-Reasoning (K-12) - A writing assessment in which students write a scientific explanation to show their understanding of the concept using evidence.
• Scope Assessment (2-12) - A ten-question standards-based assessment containing question types that reflect the state science assessment.
• Data Sheets (K-2) - Data tracking method that provides Key Concepts for the scope, allowing teachers to verify students' understanding and mastery of the standards.

Intervention
• Small-Group Intervention (K-12) - A small group activity designed to address key vocabulary and concepts.
• Concept Attainment Quiz (K-12) - A formative assessment based on vocabulary and key concepts.

• Science Rock (K-8) - A music video created around the content of the scope that allows students to sing and dance.

Acceleration
• STEAM Choice Board (3-5) OR STEM Choice Board (6-12) - A menu board in which students use different approaches to apply content in relevant ways.
• Science Art (6-12)- An activity that allows students to represent the content in an artistic format.

• Teachers are offered a variety of student tools within the STEMscopes Science Florida application. Teachers can manage assignments, grades, and communication with students using our integrated student assignments feature. (Format: Online.)

• Our Resource section is organized to support teachers with state specific supports, as well as utilizing the STEMscopes framework for planning and implementing instruction. Teachers can also find additional tools such as support for class instruction, support for all learners, literacy resources to support the science of reading as well as additional assessments. (Format: Online.)

4. IDENTIFY AND DESCRIBE THE ANCILLARY MATERIALS. Briefly describe the ancillary materials and their relationship to the major tool.

Ancillary Materials - Student Components: Describe each of the components, including a format description.

Answer: Student Notebook (Format: Print)
These workbooks contain each lesson's Scope Phenomenon, Explore activity handouts and Interactive Science Notebook pages for all lessons. One notebook per student is recommended.

STEMscopedia book (Format: Print)
This book contains the expository text found for each scope that explains content in student-friendly language written at the appropriate Lexile for the grade level. The content includes everyday phenomena, real-world applications, scientist spotlights, key vocabulary, embedded questioning and a short formative assessment.

Material Kit (Format: Material Components)
Designed for 32 students in Grades 6-8 and 24 students in Grades K-4, our material kit includes several items needed for students to complete the hands-on Explore activities in STEMscopes Science Florida.

Ancillary Materials - Teacher Components: Describe each of the components, including a format description.

Answer: Teacher Guide (Format: Print)
The Teacher Guide is a physical lesson-planning guide made for the convenience of teachers. It does not replace the digital teacher facilitation found in each element of the online platform.

5. Identify which industry standard protocols are utilized for interoperability?

Answer: STEMscopes will support the following rostering and SSO systems:
• Clever
• OneRoster Rest
o ClassLink
o CSV
• EdFi
• SAML

STEMscopes will support the following LMS integrations:
• Canvas
• Schoology
• Safari Montage
• Google Classroom
• SRG
• TCC

STEMscopes will provide grade pass back with the following LMS integrations:

- Canvas
- Schoology
- Google Classroom

STEMscopes is 1EdTech certified for the following protocols: LTI 1.3, LTI Deep Linking 2.0, LTI Assignment & Grade Services 2.0, OneRoster 1.1, and Thin Common Cartridge 1.3. You can find our 1EdTech Certification page at https://site.imsglobal.org/certifications/accelerate-learning/stemscopes#cert_pane_nid_177376

6. HOW MUCH INSTRUCTIONAL TIME IS NEEDED FOR THE SUCCESSFUL IMPLEMENTATION OF THIS PROGRAM? Identify and explain the suggested instructional time for this submission. If a series, state the suggested time for each level. The goal is to determine whether the amount of content is suitable to the length of the course for which it is submitted.

Answer: STEMscopes Science Florida was built by educators from the ground up to meet today's standards. This means that the STEMscopes course length fits the course requirements of each individual scope. Each scope is its own 5E + IA (Engage, Explore, Explain, Elaborate, and Evaluate, plus Intervention and Acceleration) lesson. Timing per scope is dependent on how a campus or teacher decides to use the scope. The Resources section features a Lesson Planning Guide that maps out suggested pacing depending on the number of Explore lessons in a scope. The elements in each Explain, Elaborate, and Evaluate, plus Intervention and Acceleration are created to allow for the teacher's choice. This choice allows teachers flexibility to use elements that will best reflect the needs of their students. A scope typically takes 5–7 days to complete:

Days 1 and 2 – Engage and Explore
Day 3 – Explore and Explain
Day 4 – Elaborate
Days 5 and 6 – Evaluate and Intervention
*Acceleration is created for students who show proficiency on a standard in the Engage and can complete these activities instead of a full 5E lesson.

7. WHAT PROFESSIONAL DEVELOPMENT IS AVAILABLE? Describe the ongoing learning opportunities available to teachers and other education personnel that will be delivered through their schools and districts as well as the training/in-service available directly from the publisher for successful implementation of the program. Also provide details of the type of training/in-service available and how it may be obtained. (The information provided here will be used in the instructional materials catalog in the case of adoption of the program.)

Answer: STEMscopes 1-Hour Implementation Training
This 1-hour implementation training equips teachers with the essential knowledge and skills needed to use the essential elements of the STEMscopes curriculum. It can be combined with 3-hour implementation training.
Objectives:
1. Learn to navigate the STEMscopes digital platform
2. Identify resources within STEMscopes that will provide teacher background and assist with effective planning for learning
Training Type: Prerecorded or facilitated

STEMscopes 3-Hour Implementation Training
When a school or district adopts a new instructional program, implementation support is paramount in ensuring the program is used to its full advantage. STEMscopes offers implementation training so that teachers receive the maximum opportunity to instruct using quality resources in a stress-free, productive, and engaging format. Through hands-on, inquiry-based strategies, teachers develop an understanding of how STEMscopes is set up, where resources are found, and how to seamlessly plan lessons.
Objectives:
1. Understand the value of the 5E + IA model, constructivism, and hands-on inquiry
2. Navigate the digital teacher edition to find instructional materials with ease
3. Plan a 5E lesson/scope from beginning to end using all essential elements
Training Type: Facilitated

STEMscopes 6-Hour Implementation Training
This 6-hour, curriculum-based professional training provides educators additional opportunities to practice using the different curriculum components, including resources that guide teachers in maximizing their use of STEMscopes. Extended learning with the support of a STEMscopes facilitator accelerates the pace and quality with which teachers use the curriculum.
Objectives:
1. Use embedded assessments to measure student learning and adjust instruction
2. Assign different elements to meet the needs of different student populations
3. Implement relevant, hands-on instruction in both on-site and virtual classrooms

4. Begin using STEMscopes curriculum with current students
Training Type: Facilitated

Outside the Scope: Follow-up/Advanced Implementation Training
Continuous improvement is the key to any successful program. This session dives deeper into the STEMscopes product with additional instructional strategies, teacher choice when meeting the standard, and troubleshooting based on teacher needs after initial implementation training.
Objectives:
1. Gain understanding and practice with various instructional strategies based on student needs
2. Practice deeper instructional strategies to meet diverse student needs
Training Type: Facilitated

8. WHAT HARDWARE/EQUIPMENT IS REQUIRED? List and describe the hardware/equipment needed to implement the submission in the classroom. REMEMBER: Florida law does not allow hardware/equipment to be included on the bid! However, schools and districts must be made aware of the hardware/equipment needed to fully implement this program.

Answer: STEMscopes is a browser-based curriculum and requires no additional hardware. Our software works with modern browsers with JavaScript support enabled. Our supported browsers include the latest versions of Google Chrome, Microsoft Edge, and Safari. All interactive content is in HTML5 and can be completed on touch screen devices. The curriculum is device neutral. We support Android phone and tablets, Apple phone and tablets, computers, and Chromebooks. We are happy to work with Florida school districts to deliver the most effective implementation and positive user experience available.

9. WHAT LICENSING POLICIES AND/OR AGREEMENTS APPLY? If software is being submitted, please attach a copy of the company's licensing policies and/or agreements.

Answer: Please visit the following link:
https://drive.google.com/file/d/1UhCIwiu3UKPe0pBxIaRpW-eaqBwmzweb/view?usp=sharing

10. WHAT STATES HAVE ADOPTED THE SUBMISSION? List some of the states in which this submission is currently adopted.

Answer: STEMscopes Science Florida is customized to the State of Florida and to Florida's State Academic Standards for Science. No other state has yet adopted STEMscopes Science Florida.

11. WHAT OPEN EDUCATIONAL RESOURCES RELATED TO THIS BID DO YOU MAKE AVAILABLE(S)? List and describe each of the components, including a format description. (Open Educational Resources (OER) are high-quality, openly licensed, online educational materials that offer an extraordinary opportunity for people everywhere to share, use, and reuse knowledge.)

Answer: STEMscopes Science Florida includes simulations with supporting lessons using PhETs developed by the University of Colorado. STEMscopes Science Florida also has embedded images found in 360º Cities allowing students to interact with many different places in a virtual fieldtrip manner.

Free Classroom Resources – This page offers a wealth of free teacher resources, including STEM activity packs that can be used in the classroom or to engage families at home, classroom STEM posters, white papers that discuss best practices, and infographics that give informative visuals of STEM theory and teaching practices. Visit https://www.acceleratelearning.com/science/fl/#resources to view all resources available, then select individual resources to view their descriptions and download the files.

12. Although not called for in the state adoption, do you have advanced placement (ap) or accelerated program instructional materials available for the course(s) bid for adoption?

Answer: Yes, STEMscopes Science offers advanced courses available for the following:
M/J Comprehensive 1
M/J Comprehensive 2
M/J Comprehensive 3
M/J Life Science
M/J Physical Science
M/J Earth and Space Science
Biology
Chemistry
Physics

13. What, if any, foreign language translations do you have available?

Answer: All materials will be translated into Spanish before the 2024-2025 school year as we incorporate an online tool. Additional languages are in development and will be ready for the 2024-2025 school year.

14. Do you provide access point scaffolding or an access point correlation upon request?

Answer: Yes, we have outlined the Access Points in scopes and can provide a correlation document if requested.

15. ESSA LEVELS OF EVIDENCE: To be considered an evidence-based program (or practice), it is required to have evidence to show that the program is in fact effective at producing results and improving outcomes in reading when implemented. Identification of evidence level alignment, Levels 1-4 (as outlined in the specifications), for the entirety of the program, part of the program, or individual practices within the program is required. Please explain how your product meets these requirements.

Answer: ESSA (Every Student Succeeds Act) has identified four tiers of evidence that districts can use to evaluate the strength of the evidence-based on the research that has been conducted. The tiers range from Tier 1 (strong evidence where a randomized control trial has demonstrated effects on student achievement) to Tier 4 (demonstrates a rationale where there is a well-designed logic model but no research evidence). Since its inception at Rice University, STEMscopes has conducted research to inform product development and to evaluate the effectiveness of STEMscopes on teachers and students. Based on this research conducted over several years, the evidence of STEMscopes effectiveness is solidly in Tier 2 (moderate evidence). In other words, evidence of STEMscopes' effectiveness is based on high-quality quasi-experimental studies. These studies were carried out by Accelerate Learning Inc. (ALI), which employs a full-time Ph.D.-level research manager who has experience designing, implementing, and analyzing studies focused on student achievement gains. Because ALI, STEMscopes' parent company, devotes resources specifically to examining the effectiveness of STEMscopes, results are fully distinguishable from the effects of other organizations and processes. All of STEMscopes' large-scale effectiveness studies test effectiveness by comparing student achievement on publicly available data from state standardized assessments between a treatment group (that is, districts that utilized the STEMscopes curriculum across multiple sites) and a control group (that is, districts that did not utilize STEMscopes). These groups are not randomly assigned; thus the experiment is considered quasi-experimental. In addition to groups (STEMscopes versus control), we consider evidence across multiple states in standardized assessments and benchmarks, and we control for important student background demographics such as economic disadvantage, English language learner status, and minority status that often affect student achievement. Utilizing statistical methods to control for the effects of background demographics and testing effects across multiple states and assessments is part of a rigorous methodology that ensures that effective findings are due to the STEMscopes curriculum and that these findings can be expected across the general student population (i.e., they are not an artifact of a particular state or assessment, or only found for a specific economic, language or ethnicity group).

Attachments

File Name	Description	Type
K-12.Nature of Science Correlation Florida.pdf	K-12 Nature of Science Correlation	.pdf
Phy_IM12_ UDL Questionnaire _FL Sci 2024.pdf	IM12 - UDL Questionnaire (Online - part of bid detail submission)	.pdf
PHY_IM7_BID766.pdf	IM7 - Standards Alignment (Online - part of bid detail submission)	.pdf

Review Form

All ratings and comments on this form are public records and subject to disclosure per Florida Sunshine Laws.

Standards

Social Studies Standards

Answer each item below and select the "Save" button to save your responses. You must select the "Save" button before going to another section or leaving this page to save the answers you have provided. If you are unable to complete the section, you may save your answers and come back to complete at a later time. All items must be answered for a section to be considered complete.

To answer each item, select the appropriate rating from the following scale:

5 - VERY GOOD ALIGNMENT

4 - GOOD ALIGNMENT
3 - FAIR ALIGNMENT
2 - POOR ALIGNMENT
1 - VERY POOR/NO ALIGNMENT

Upon completion of all Areas of Review, the Recommendation link will become available with a record of how you scored each section of the evaluation.

Reviewers are instructed that submissions should be consistently rated as 5 or 4 to be recommended for adoption. Materials that are consistently rated 2 or 1 are not expected to be recommended for adoption.
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When looking at standards alignment reviewers should consider not only the robustness of the standard coverage but also the content complexity (depth of knowledge level) if appropriate. More information on content complexity as it relates to Florida standards can be found at:

https://cpalmsmediaprod.blob.core.windows.net/uploads/docs/cpalms/initiatives/contentcomplexity/cpalms_ccdefinitions_140711.pdf

For example, if the standard is marked as a level 3 (strategic reasoning and complex thinking) then the materials coverage should reflect this. If the materials coverage is only sufficient to allow for recall (level 1) then this should be reflected in the points assigned.

Note from Publisher
Direct link(s) to standard coverage
Rating
Justification

SC.912.E.5.2

The standard is covered throughout the scope(s) titled Patterns of Matter in the Universe.

1

4 - Good Alignment
A very brief introduction to cosmology - but that is all that should be done in Honors or non-Honors Physics

---

SC.912.E.5.6

The standard is covered throughout the scope(s) titled Universal Gravitation.

1

4 - Good Alignment
This very brief introduction to the Universal Law of Gravitation is appropriate for either Honors or non-Honors Physics course.

SC.912.N.1.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Newton's Three Laws, Universal Gravitation, Electric Circuits (Engineering Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

4 - Good Alignment

There are opportunities for elementary measurements and observations throughout the materials.

SC.912.N.1.2

This standard is covered in many scopes. Some examples are found in the following scope(s): Newton's Three Laws (Explore: Inertia Investigations), Graphing Motion (Explore: That's How We Move), Work and Power (Explore). Navigate to the element(s) listed in parentheses if indicated.

1 2 3

4 - Good Alignment
There is a focus on Nature of Science issues throughout the materials.

SC.912.N.1.5

This standard is covered in many scopes. Some examples are found in the following scope(s): Electromagnetic Spectrum, Electric Circuits (Science Today). Navigate to the element(s) listed in parentheses if indicated.

1 2

4 - Good Alignment
This material is there a bit.

SC.912.N.1.6

This standard is covered in many scopes. Some examples are found in the following scope(s): Electric Circuits (Explore), Impulse and Momentum (Explore: Egg Drop). Navigate to the element(s) listed in parentheses if indicated.

1 2

4 - Good Alignment
Yes, students have opportunities to draw scientific inferences at a low level.

SC.912.N.1.7

This standard is covered in many scopes. Some examples are found in the following scope(s): Graphing Motion, Electromagnetic Spectrum (Engineering Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2

2 - Poor Alignment
I can't identify an occurrence of this in the scopes highlighted here.

SC.912.N.2.2

This standard is covered in many scopes. Some examples are found in the following scope(s): Patterns of Matter in the Universe, Behavior of Waves (Science Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2

2 - Poor Alignment
I did not see where this was addressed in the scopes highlighted by the publisher.

SC.912.N.2.4

This standard is covered in many scopes. Some examples are found in the following scope(s): Newton's Three Laws, Universal Gravitation (Pedia). Navigate to the element(s) listed in parentheses if indicated.

1 2

2 - Poor Alignment
There are wonderful opportunities to directly address this standard - for example the existence of dark matter in the universe with gravitation. None of those opportunities have been taken.

SC.912.N.2.5

This standard is covered in many scopes. Some examples are found in the following scope(s): Patterns of Matter in the Universe, Speed of Light, The Four States of Matter (STEM Choice Board - Diversity in Science). Navigate to the element(s) listed in parentheses if indicated.

1 2 3

4 - Good Alignment
This standard is addressed adequately.

SC.912.N.3.2

This standard is covered in many scopes. Some examples are found in the following scope(s): Newton's Three Laws, Universal Gravitation (Pedia). Navigate to the element(s) listed in parentheses if indicated.

1 2

4 - Good Alignment
For example, the Universal Law of Gravitation pedia describes Newton's interactions with Kepler's work.

SC.912.N.3.3

This standard is covered in many scopes. Some examples are found in the following scope(s): Newton's Three Laws, Universal Gravitation, Coulomb's Law (Pedia). Navigate to the element(s) listed in parentheses if indicated.

1 2 3

4 - Good Alignment
Laws of physics are presented as empirically based.

SC.912.N.3.4

This standard is covered in many scopes. Some examples are found in the following scope(s): Newton's Three Laws, Universal Gravitation, Coulomb's Law (Pedia). Navigate to the element(s) listed in parentheses if indicated.

1 2 3

4 - Good Alignment
Theories and laws are properly labeled here.

SC.912.N.3.5

This standard is covered in many scopes. Some examples are found in the following scope(s): Universal Gravitation, Coulomb's Law, Impulse and Momentum (Engineering Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2 3

4 - Good Alignment
The discussion of the development of atomic theories gives a good illustration of this.

SC.912.N.4.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Impulse and Momentum, Behavior of Waves (Science Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2

4 - Good Alignment
The STEM Choice boards do this.

SC.912.P.8.1

The standard is covered throughout the scope(s) titled The Four States of Matter.

1

4 - Good Alignment
Addressed directly

SC.912.P.8.3

The standard is covered throughout the scope(s) titled The Four States of Matter.

1

4 - Good Alignment
Addressed directly

SC.912.P.10.1

The standard is covered throughout the scope(s) titled Energy in Systems.

1

3 - Fair Alignment
The definition of gravitational potential energy in Energy in Systems is not really correct. It doesn't deal with the issue of the choice of setting zero height (and thus zero gravitational potential energy)

SC.912.P.10.2

The standard is covered throughout the scope(s) titled Energy in Systems.

1

3 - Fair Alignment
There is a lost opportunity here to describe "chemical energy" and "nuclear energy" as forms of potential energy, which is what they are.

SC.912.P.10.3

The standard is covered throughout the scope(s) titled Work and Power.

1

3 - Fair Alignment
The definition of work used here ignores the dependence of the work done on the angle between the force and displacement vectors. Students in an Honors Physics class should be able to handle the application of the cosine to this concept.

SC.912.P.10.4

The standard is covered throughout the scope(s) titled Conservation of Energy.

1

2 - Poor Alignment
The errors in the text are the most distressing aspect of this tool. In this case, "Thermal energy is the internal energy of a system, which includes both kinetic and potential energy" is an example of a statement that is just wrong. Thermal energy is kinetic energy. It is not potential energy. There are more errors in this section as well. For example, "A child pulls back a slingshot with a rock in it, using kinetic energy, and then releases the rubber band’s stored potential energy when the slingshot is let go to shoot the rock." Argh!

SC.912.P.10.5

The standard is covered throughout the scope(s) titled The Four States of Matter.

1

4 - Good Alignment
It's not done quantitatively, but only as a description - which is probably fine for non-AP physics.

SC.912.P.10.10

The standard is covered throughout the scope(s) titled Four Fundamental Forces.

1

4 - Good Alignment
Yes, this is described.

SC.912.P.10.13

The standard is covered throughout the scope(s) titled Coulomb's Law.

1

4 - Good Alignment
This is a very tough standard for Honors and (even more) non-Honors Physics. Electrostatics is very abstract and therefore marginal for this population. I use the PhET used here in my calculus-based introductory college physics course.

SC.912.P.10.14

The standard is covered throughout the scope(s) titled Electric Circuits.

1

4 - Good Alignment
Sufficient

SC.912.P.10.15

The standard is covered throughout the scope(s) titled Electric Circuits.

1

4 - Good Alignment
The treatment is fine for a high school physics class.

SC.912.P.10.18

The standard is covered throughout the scope(s) titled Electromagnetic Spectrum.

1

4 - Good Alignment
The treatment of this standard is adequate.

SC.912.P.10.20

The standard is covered throughout the scope(s) titled Characteristics of Waves.

1

3 - Fair Alignment
I can't find anything about refraction in the scope until the assessment. The discussion is in Behavior of Waves.

SC.912.P.10.21

The standard is covered throughout the scope(s) titled Behavior of Waves.

1

4 - Good Alignment
The Behavior of Waves scope is too much, too fast for students to learn anything. But Doppler shifts are in there.

SC.912.P.10.22

The standard is covered throughout the scope(s) titled Image Formation.

1

4 - Good Alignment
This scope is accurate.

SC.912.P.12.1

The standard is covered throughout the scope(s) titled Graphing Motion.

1

4 - Good Alignment
Well enough.

SC.912.P.12.2

The standard is covered throughout the scope(s) titled Graphing Motion.

1

4 - Good Alignment
Use of motion sensors is good.

SC.912.P.12.3

The standard is covered throughout the scope(s) titled Newton's Three Laws.

1

2 - Poor Alignment
This scope seems quite inadequate to the task of overcoming misconceptions that almost all students bring to the study of Newton's Laws. Furthermore, there are errors and gaps. At one point, the STEMscopedia says "a soccer ball that weighs 450 g." Of course, the soccer ball doesn't "weigh" 450 g. It has a mass of 450 g. Weight is the force of gravity on the ball. In that regard - there is a question on the assessment that requires a student to know that the force of gravity (at least near the surface of the Earth) is mg. Yet, I cannot find that fact anywhere in the scope. These concepts are among the most important covered in a high school physics course, yet the tool just blows over the top of them.

SC.912.P.12.4

The standard is covered throughout the scope(s) titled Universal Gravitation.

1

4 - Good Alignment
This standard is covered adequately.

SC.912.P.12.5

The standard is covered throughout the scope(s) titled Impulse and Momentum.

1

3 - Fair Alignment
The treatment of impulse here does a poor job of emphasizing the role of time in setting the impulse. A video of a bat hitting a baseball, or a hockey stick hitting a hockey puck, or even a ball bouncing off a wall would provide students an opportunity to build some intuition on this. I'll note that problem 10 on the assessment is something similar to what I use in my calculus-based introductory college physics class, but it doesn't seem as if the materials in the scope prepare students for this.

SC.912.P.12.7

The standard is covered throughout the scope(s) titled Speed of Light.

1

3 - Fair Alignment
Why does Explore 1 say that gamma-rays "carry tremendous amounts of energy across shorter distances"? This is not correct. Gamma-rays can travel cosmological distances.

SC.912.P.12.9

The standard is covered throughout the scope(s) titled Speed of Light.

1

4 - Good Alignment
This standard is insane. But that is not the publisher's fault. You can blame me - I was on the standards committee in 2007-2008.

MA.K12.MTR.1.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Graphing Motion (Explore: That's How We Move), Work and Power (Explore), Impulse and Momentum (Explore: Conservation of Momentum). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

3 - Fair Alignment
STEMscopes does not appear to foster students working in groups - at least not very well. That is a shame.

MA.K12.MTR.2.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Graphing Motion, Work and Power, Speed of Light (Math Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

2 - Poor Alignment
Most of the activities here seem to assume a pre-algebra level of mathematical competence. There are a few exceptions (parallel resistors in electrical circuits), but mostly the activities are so low-level that students don't get any useful experience with mathematical modeling.

MA.K12.MTR.3.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Electric Circuits, Impulse and Momentum, Coulomb's Law (Math Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

2 - Poor Alignment
The mathematical level of these materials might be appropriate for a non-Honors Physics class, but it is definitely not appropriate for an Honors Physics class, which should prepare students for success in college physics courses. No mathematically fluency is assumed or required in STEMscopes.

MA.K12.MTR.4.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Electromagnetic Spectrum, Work and Power, Impulse and Momentum (Math Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

2 - Poor Alignment
STEMscopes is not good at fostering collaborative learning among students.

MA.K12.MTR.5.1

This standard is covered in many scopes. Some examples are found in the following scope(s): The Four States of Matter, Four Fundamental Forces, Behavior of Waves (Math Connections). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

2 - Poor Alignment
The mathematical sophistication required in this tool is so low-level that it doesn't reinforce student math skills.

MA.K12.MTR.6.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Image Formation, Behavior of Waves, Newton's Three Laws (Engineering Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

2 - Poor Alignment
I didn't see any sustained evidence of instruction to assess the reasonableness of solutions. This is something that should be taught in every topic.

MA.K12.MTR.7.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Newton's Three Laws, Work and Power, Image Formation (Math Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

2 - Poor Alignment
There was little math used here at all. Students cannot strengthen their skills in applying math in STEMscopes.

ELA.K12.EE.1.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Universal Gravitation, Conservation of Energy, Electromagnetic Spectrum (CER). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

3 - Fair Alignment
Students have the opportunity to recite the arguments of others, but unless the teacher is very aggressive about inserting additional experimental investigations that are not included here students will have little experience building their own explanations.

ELA.K12.EE.2.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Graphing Motion, Electric Circuits, Conservation of Energy (Pedia). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

4 - Good Alignment

The STEMscopedias provide some reading material that might be at grade level.

ELA.K12.EE.3.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Impulse and Momentum, Speed of Light, Patterns of Matter in the Universe (Reading Science). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

2 - Poor Alignment
Gaining experience in making inferences requires sustained engagement with a few topics, rather than the race through way too many topics required here. So STEMscopes does not really meet this standard, but that has more to do with the way-too-long list of topics than anything the publisher did.

ELA.K12.EE.4.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Work and Power, Image Formation, Impulse and Momentum (Science Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

2 - Poor Alignment
STEMscopes doesn't foster collaborative learning at any significant level.

ELA.K12.EE.5.1

This standard is covered in many scopes. Some examples are found in the following scope(s): The Four States of Matter, Newton's Three Laws, Conservation of Energy (Writing Science). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

4 - Good Alignment
There is more emphasis on writing than on learning physics with understanding

---

ELA.K12.EE.6.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Energy in Systems, Characteristics of Waves, Speed of Light (Writing Science). Navigate to the element(s) listed in parentheses if indicated.

1 2 3

4 - Good Alignment
Focus on scientific language

ELD.K12.ELL.SC.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Four Fundamental Forces, Characteristics of Waves, Speed of Light (Picture Vocabulary). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

4 - Good Alignment
ELL students can access this material

ELD.K12.ELL.SI.1

This standard is covered in many scopes. Some examples are found in the following scope(s): Universal Gravitation, Conservation of Energy, Characteristics of Waves (Science Connection). Navigate to the element(s) listed in parentheses if indicated.

1 2 3 4

4 - Good Alignment
ELL students can access this material

Content

In addition to the alignment of benchmarks/standards, features of Content looks at aspects of content coverage including currentness of materials, authenticity and multicultural representation.

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5 - VERY GOOD ALIGNMENT
4 - GOOD ALIGNMENT
3 - FAIR ALIGNMENT
2 - POOR ALIGNMENT
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Rating
Justification

1. A. Alignment with curriculum: The content aligns with the state's standards and benchmarks for subject, grade level and learning outcomes.

3 - Fair Alignment
While this tool may be adequate for non-Honors Physics, it does not do justice to the core concepts of motion, forces and energy that Honors Physics students must master to be well prepared for college STEM majors.

2. A. Alignment with curriculum: The content is written to the correct skill level of the standards and benchmarks in the course.

2 - Poor Alignment
This tool may be fine for non-Honors Physics, but it is certainly too low a level for Honors Physics.

3. A. Alignment with curriculum: The materials are adaptable and useful for classroom instruction.

3 - Fair Alignment

This tool may be useful in non-Honors Physics or as a supplement in Honors Physics, but it cannot be the core resource for an Honors Physics class.

---

4. B. Level of Treatment: The materials provide sufficient details for students to understand the significance of topics and events.

4 - Good Alignment
The materials do tell stories pretty well.

---

5. B. Level of Treatment: The level (complexity or difficulty) of the treatment of content matches the standards.

3 - Fair Alignment
Fine for non-Honors Physics. Way too low for Honors Physics, particularly in the core topics of motion, forces and energy.

---

6. B. Level of Treatment: The level (complexity or difficulty) of the treatment of content matches the student abilities and grade level.

3 - Fair Alignment
Only about 20% of Florida public high school students take physics. Therefore, we should assume that this tool should be geared to the top 20% of students. It is not.

---

7. B. Level of Treatment: The level (complexity or difficulty) of the treatment of content matches the time period allowed for teaching.

4 - Good Alignment
The list of standards stuffed into the non-Honors and Honors Physics courses is way too long, and the publisher is required to include everything - and as a result neglects the core topics of motion, forces and energy.

---

8. C. Expertise for Content Development: The primary and secondary sources cited in the materials reflect expert information for the subject.

3 - Fair Alignment
The authors seem to only have a passing familiarity with recent results in the field of physics education research. I'm not impressed.

---

9. C. Expertise for Content Development: The primary and secondary sources contribute to the quality of the content in the materials.

3 - Fair Alignment
I am confident that a scholar in physics education research (which I am not) would be unhappy with these materials.

---

10. D. Accuracy of Content: The content is presented accurately. (Material should be devoid of typographical or visual errors).

3 - Fair Alignment
There are factual errors. For example, the statement that thermal energy is a mixture of kinetic and potential energy (it's just kinetic).

---

11. D. Accuracy of Content: The content of the material is presented objectively. (Material should be free of bias and contradictions and is noninflammatory in nature).

4 - Good Alignment
There is no bias.

---

12. D. Accuracy of Content: The content of the material is representative of the discipline. (Material should include prevailing theories, concepts, standards, and models used with the subject area).

3 - Fair Alignment

There are errors, like the statement that thermal energy is a mixture of kinetic and potential energy. And the failure to identify chemical and nuclear energy as potential energy is very poor.

13. D. Accuracy of Content: The content of the material is factual accurate. (Materials should be free of mistakes and inconsistencies).

3 - Fair Alignment
There are errors, like the statement that thermal energy is a mixture of kinetic and potential energy. And the failure to identify chemical and nuclear energy as potential energy is very poor.

14. E. Currency of Content: The content is up-to-date according to current research and standards of practice.

3 - Fair Alignment
There is no evidence that the authors have any interest in the mountains of physics education research built up over the last forty years.

15. E. Currency of Content: The content is presented to the curriculum, standards, and benchmarks in an appropriate and relevant context.

4 - Good Alignment
The relationship between standards and material is transparent.

16. E. Currency of Content: The content is presented in an appropriate and relevant context for the intended learners.

3 - Fair Alignment
The material may be fine for non-Honors Physics students. It is not appropriate for Honors Physics students.

17. F. Authenticity of Content: The content includes connections to life in a context that is meaningful to students.

3 - Fair Alignment
The authors try desperately to "engage" students with their everyday experiences. But mostly there is a discontinuity between these attempts at engagement and the discussions in the STEMscopedias.

18. F. Authenticity of Content: The material includes interdisciplinary connections which are intended to make the content meaningful to students.

4 - Good Alignment
There is an interdisciplinary focus

19. G. Multicultural Representation: The portrayal of gender, ethnicity, age, work situations, cultural, religious, physical, and various social groups are fair and unbiased. (Please explain any unfair or biased portrayals in the comments section).

3 - Fair Alignment
The authors attempt to include women in the discussion, but there seems to be less of an effort to include physicists of color.

20. H. Humanity and Compassion: The materials portray people and animals with compassion, sympathy, and consideration of their needs and values and exclude hard-core pornography and inhumane treatment. (An exception may be necessary for units covering animal welfare).

4 - Good Alignment
There is no cruelty in this material.

21. In general, is the content of the benchmarks and standards for this course covered in the material?

4 - Good Alignment
Yes, it's covered. Just at too low a level for Honors Physics students.

Presentation

Features of Presentation affect the practical usefulness of materials and the ease of finding and understanding content.

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Rating
Justification

---

1. A. Comprehensiveness of Student and Teacher Resources: the comprehensiveness of the student resources address the targeted learning outcomes without requiring the teacher to prepare additional teaching materials for the course.

3 - Fair Alignment
There may be enough here for non-Honors Physics. However, a teacher of Honors Physics will mostly have to start from scratch to provide adequate experimental and problem-solving opportunities at a level appropriate for future college STEM majors.

---

2. B. Alignment of Instructional Components: all components of the major tool align with the curriculum and each other.

4 - Good Alignment
Alignment is a focus here.

---

3. C. Organization of Instructional Materials: the materials are consistent and logical organization of the content for the subject area.

4 - Good Alignment
The instructional model here is a rapid run through a large number of standards.

---

4. D. Readability of Instructional Materials: Narrative and visuals engage students in reading or listening as well as in understanding of the content at a level appropriate to the students' abilities.

4 - Good Alignment
The text is written more as narrative than as scientific text

---

5. E. Pacing of Content:The amount of content presented at one time or the pace at which it is presented must be of a size or rate that allows students to perceive and understand it.

3 - Fair Alignment
The publisher and authors have sacrificed developing a depth of understanding in core topics like motion, forces and energy to enable the coverage of all of the standards without pressing.

---

6. Accessibility: The material contains presentation, navigation, study tool and assistive supports that aid students, including those with disabilities, to access and interact with the material. (For assistance refer to the answers on the UDL questionnaire).

4 - Good Alignment
I am no expert on this, but it appears to be the case.

---

7. In general, how well does the submission satisfy PRESENTATION requirements? (The comments should support your responses to the questions in the Presentation section).

4 - Good Alignment
Well enough.

Learning

Features of this section have been found to promote learning and learning outcomes.

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Rating
Justification

---

1. A. Motivational Strategies: Instructional materials include features to maintain learner motivation.

3 - Fair Alignment
The publisher and authors have not emphasized hands-on investigations of sufficient sophistication to engage motivated students. The virtual exercises are OK as supplementary material, but these virtual exercises should not be the core of the scopes as they too often are.

---

2. B. Teaching a Few "Big Ideas": Instructional materials thoroughly teach a few important ideas, concepts, or themes.

2 - Poor Alignment
STEMscopes is a mile wide and an inch deep.

---

3. C. Explicit Instruction: the materials contain clear statements of information and outcomes.

4 - Good Alignment
Yes, but...the intended outcomes reveal that the subject as presented by this tool is a mile wide and an inch deep.

---

4. D. Guidance and Support: the materials provide guidance and support to help students safely and successfully become more independent learners and thinkers.

2 - Poor Alignment
There is no challenge in this material. It will not significantly develop the abilities of students to learn physical sciences at the college level.

---

5. D. Guidance and Support: Guidance and support must be adaptable to developmental differences and various learning styles.

4 - Good Alignment
Physics is presented as a subject that does not make great cognitive demands.

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6. E. Active Participation of Students: the materials engage the physical and mental activity of students during the learning process.

2 - Poor Alignment
With its relative neglect of sophisticated hands-on activities, this tool neglects the engagement of the physical activity - and the mental activity as well.

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7. E. Active Participation of Students: Rate how well the materials include organized activities that are logical extensions of content, goals, and objectives.

3 - Fair Alignment
The activities certainly focus on the topics - just at a low cognitive level.

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8. F. Targeted Instructional Strategies: Instructional materials include the strategies known to be successful for teaching the learning outcomes targeted in the curriculum requirements.

2 - Poor Alignment
I see little evidence that the publisher and authors are aware of the results of physics education research accumulated over the last several decades.

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9. F. Targeted Instructional Strategies: the instructional strategies incorporated in the materials are effective in teaching the targeted outcomes.

3 - Fair Alignment
I'm having trouble with this item, because the publisher and authors have aimed at a low cognitive challenge level and they have hit their mark.

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10. G. Targeted Assessment Strategies: the materials correlate assessment strategies to the desired learning outcomes.

4 - Good Alignment
The targeted performance levels are low, and the assessments correspond to that.

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11. G. Targeted Assessment Strategies: the assessment strategies incorporated in the materials are effective in assessing the learners' performance with regard to the targeted outcomes.

3 - Fair Alignment
There is no attempt to develop or assess students who perform at high cognitive levels.

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12. Universal Design for Learning: this submission incorporates strategies, materials, activities, etc., that consider the needs of all students.

4 - Good Alignment
Yes.

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13. B.E.S.T. Standards Application: Do you observe the appropriate application of ELA Expectations and/or Mathematical Thinking and Reasoning Standards as applicable?

2 - Poor Alignment
No. The math expectations in this tool are far below what they should be for college-bound 11th graders.

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14. In general, does the submission satisfy LEARNING requirements? (The comments should support your responses to the questions in the Learning section.)

2 - Poor Alignment
No. The tool just aims at too low a level for the Honors Physics audience.

Florida Statutes and State Board of Education Rule

Answer each item below and select the "Save" button to save your responses. You must select the "Save" button before going to another section or leaving this page to save the answers you have provided. If you are unable to complete the section, you may save your answers and come back to complete at a later time. All items must be answered for a section to be considered complete.

To answer each item, select the appropriate rating from the following scale:

5 - VERY GOOD ALIGNMENT – *No evidence of topic coverage*
4 - GOOD ALIGNMENT – *Very little evidence of topic coverage*
3 - FAIR ALIGNMENT – *Some evidence of topic coverage*
2 - POOR ALIGNMENT – *Considerable evidence of topic coverage*
1 - VERY POOR/NO ALIGNMENT – *Inflammatory evidence of topic coverage*

Upon completion of all Areas of Review, the Recommendation link will become available with a record of how you scored each section of the evaluation.

Reviewers are instructed that submissions should be consistently rated as 5 or 4 to be recommended for adoption. Materials that are consistently rated 2 or 1 are not expected to be recommended for adoption.
Justification and Comments are strongly encouraged for each rating. Please use the Justification/Comments section to list any strengths, weaknesses, concerns, issues, and/or to provide examples supporting the rating. Your comments may be used by publishers to help them improve their products.

Rating
Justification

Do materials align to Rule 6A-1.094124, F.A.C., which prohibits Critical Race Theory (CRT), in instructional materials?

4 - Good Alignment
I saw no statement or implied statement that racism is imbedded in the functioning of American society.

Do instructional materials omit Culturally Responsive Teaching as it relates to CRT?

4 - Good Alignment
The tool does not attempt to draw students into a discussion about whether racism is embedded in American society.

Do instructional materials omit Social Justice as it relates to CRT?

4 - Good Alignment
I saw no appeal to a political or religious agenda that advocates for the marginalized.

Do instructional materials NOT solicit Social Emotional Learning (SEL), as these are considered extraneous and unsolicited strategies outside the scope of subject-area standards?

4 - Good Alignment
I did not see any overt SEL strategies deployed.

Do instructional materials align to s. 1003.42(3), F.S.(Principles of Individual Freedom), by acknowledging that all people are equal before the law and have inalienable rights and materials are consistent with the following principles: (a) No person is inherently racist, sexist, or oppressive, whether consciously or unconsciously, solely by virtue of his or her race or sex (b) No race is inherently superior to another race. (c) No person should be discriminated against or receive adverse treatment solely or partly on the bases of race, color, national origin, religion, disability, or sex. (d) Meritocracy or trains such as hard work ethic are not racist but fundamental to the right to pursue happiness and be rewarded for industry. (e) A person, by virtue of his or her race or sex, does not bear responsibility for actions committed in the past by other members of the same race or sex. (f) A person should not be instructed that he or she must feel guilt, anguish, or other forms of psychological distress for actions, in which he or she played no part, committed in the past by other members of the same race or sex.

3 - Fair Alignment
The materials did not address any of this at all.

Do instructional materials align to s. 1001.42(8)(c)3., F.S., in grades K-8 to EXCLUDE any instruction regarding sexual orientation or gender identity except as provided by ss. 1003.42(2)(o)3., and 1003.46, F.S.? If such instruction is provided in grades 9 through 12, is the instruction age-appropriate or developmentally appropriate for students in accordance with state standards?

4 - Good Alignment
I did not see any discussions of gender issues at all.

Do instructional materials classify a person as either female or male based on the organization of the body of such person for a specific reproductive role as it aligns to s. 1000.21(9), F.S.?

4 - Good Alignment
There was no discussion of biological differences between men and women at all.

Do instructional materials teach reproductive roles as binary, stable and unchangeable as it aligns to s. 1003.46, F.S.?

4 - Good Alignment
There was no discussion of reproduction at all. And there shouldn't be.

Final Recommendation

Florida expects that instructional materials recommended for adoption will have overall ratings of Excellent or Good. Instructional Materials with the overall rating of Fair, Poor, or Very Poor are not expected to be recommended for adoption.

Scores

Review Category	*Review Score/Total Possible*
Content	69/105
Presentation	26/35
Learning	40/70
Florida Statutes and State Board of Education Rule	31/40

Standards	132/185
Overall Score	**298/435**

Rating

Based on your evaluation scores and the material's alignment to standards, do you recommend this instructional material for adoption?

No

How would you rate the overall usability of the instructional material?
3 - Fair Alignment

Please provide comments regarding this material that would be beneficial in determining whether it should be adopted for state use, including both strengths and weaknesses and overall effectiveness as a teaching/learning tool.

The publisher and authors attempt to do everything with this material except help students learn physics with deep understanding. Perhaps this tool would be useful for use in non-Honors Physics. However, Honors Physics should be a course in which students develop a new and deep understanding of the core topics of motion, forces and energy. That is not possible with this tool. A strong physics teacher who was required to use this tool in an Honors Physics class would be forced to develop hands-on laboratory exercises at a sophisticated level that are not included here. Furthermore, this teacher would need to collect from other sources or develop in-class problem-solving exercises and homework assignments. A less strong physics teacher would likely fall back on what is available in this tool and as a result the students in that Honors Physics class would come out of the class having not developed an understanding of what deep learning of physics is. Any student from that class who went on to major in engineering or chemistry in college would quickly find that she or he is far behind the better prepared students on the first day of the semester. In my own college introductory calculus-based physics classes, I ask students which high school physics classes they took and then I pretest them with well-validated assessment instruments developed by physics education researchers. After this review, I understand better why Honors Physics alums often have disappointing pre-test scores in my classroom.

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