

**2023 Instructional Material Summer Review Institute**

**Review Team Appraisal of Title  
Grades K-12 Computer 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](#)

<b>Text Title</b>	Fundamentals of Computer Science -- Student Edition with six (6) eText student access code cards	<b>Publisher</b>	Savvas Learning Company LLC
<b>SE ISBN</b>	9780138046606	<b>TE ISBN</b>	9780138045067
<b>SW ISBN</b>		<b>Grade Level/Content</b>	6-9 Computer Science

**Core Instructional Material Designation** *(Core instructional material (CIM) is the comprehensive print and/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

55%

**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 85% or above on the CLR portion of the review are recognized as culturally and linguistically relevant.*

**CLR Recognized**

Average Score

6%

**FOCUS AREA 3 CULTURAL AND LINGUISTIC PERSPECTIVES AND RESPONSIVENESS:**

**Instructional materials represent a variety of cultural and linguistic perspectives and highlight diversity in culture and language through multiple perspectives.**

*Statements of appraisal and supporting evidence:*

No evidence is found of materials addressing multiple ethnic descriptions, interpretations, or perspectives of events and experiences. No evidence is found for students to reflect a respect for the languages of the people represented, especially the languages of the students themselves. There is no evidence of materials engaging students in critical reflection about cultures past and present in New Mexico. There is no evidence of materials including images, stories, or information about the various groups of people who live or have lived in New Mexico.

**Computer Science Standards Review** - Materials are reviewed for alignment with the state adopted content standards, benchmarks and performance standards.

Average Score

66%

#### OVERALL ALIGNMENT

**Materials align with the computer science standards overall.**

*Statements of appraisal and supporting evidence:*

Overall, materials partially align with the computer science standards. Materials use the "In the Spotlight" case studies to provide a detailed, step-by-step analysis of problems. Materials provide the opportunity for students to test their knowledge and skills by solving the problem independently or with a partner before viewing the solution provided in the text. While students are assessed through multiple choice and some project activities, there is no evidence of digital assessments. Additionally, there is little evidence of activities for students to practice programming digitally. Students are provided a textbook and a list of suggested apps for programming opportunities. Some of the listed resources are not free and require downloading. There is no evidence of standards, learning objectives, or pacing guides being displayed in the lessons or textbook. There is no evidence of cultures, diversity in language, culture, or views being affirmed and/or shared.

#### COMPUTING SYSTEMS

**Materials align to the computing systems standards for computer science.**

*Statements of appraisal and supporting evidence:*

Materials partially align to the computing system standards for computer science. Students are given opportunities to identify and fix pre-determined problems with computing devices. Materials provide exercises for students to identify and fix pseudocode in a program, but there is no evidence of plugged activities for debugging online. There is no evidence of the materials containing any discussion or instructions for students to make recommendations on improving a device.

#### NETWORKS AND THE INTERNET

**Materials align to the networks and internet standards for computer science.**

*Statements of appraisal and supporting evidence:*

Materials partially align to the networks and internet standards for computer science. Students demonstrate how physical and digital security measures can protect electronic information. Students review the list of cyber safety and security measures and then complete an unplugged activity (making a poster). However, there is no evidence of activities that model the role of protocols in transmitting data. No evidence is found in the materials with regard to methods of encryption to model the secure transmission of information. No evidence is found for a discussion topic that relates to improvements to the design of computing devices based on an analysis of how users interact with the device.

#### DATA AND ANALYSIS

**Materials align to the data and analysis standards for computer science.**

*Statements of appraisal and supporting evidence:*

Materials partially align to the data and analysis standards for computer science. Materials allow students to use multiple methods to represent data, such as converting binary methods to decimal equivalent and vice versa. Students program an Inventory Shrinkage modular program by collecting data and using a provided formula, in text, to transform the data to calculate Inventory Shrinkage for a business. However, there is little evidence of students analyzing data using a computing device.

#### ALGORITHMS AND PROGRAMMING

**Materials align to the algorithms and programming standards for computer science.**

*Statements of appraisal and supporting evidence:*

Materials partially align to the algorithms and programming standards for computer science. The materials provide activities that allow students to brainstorm, design a sequential algorithm, and write a program. Students exchange work with other teams to analyze the code and identify and solve the problem. Students are introduced to input, output, and processing standards such as Displaying Screen Out in Python and Python Variables. However, no evidence is found of students creating variables. No evidence is found of incorporating existing code, media, and libraries into original programs, or giving attribution.

#### IMPACTS OF COMPUTING

**Materials align to the impacts of computing standards for computer science.**

*Statements of appraisal and supporting evidence:*

Materials partially align to the impacts of computing standards for computer science. For example, materials provide students with the opportunity to conduct surveys and collaborate with other teams to design a new interface of an app. Materials provide opportunities for students to reflect on how technology affects people's everyday activities but do not provide evidence of comparing tradeoffs associated with computing and career options. Materials provide information that describes legal and ethical responsibilities in computer science, but no evidence is found of discussion of bias and accessibility. Students write a summary explaining what they have learned about online privacy and information sharing, citing sources. No evidence is found of specifically describing tradeoffs between allowing information to be private or public.

**Computer 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

40%

#### **FOCUS AREA 1 COMPUTATIONAL CONCEPTS**

**Instructional materials provide strategies to develop students' skills that are crucial to understanding computational concepts, including sequencing, looping, parallelism, events, conditionals, operators, and data.**

*Statements of appraisal and supporting evidence:*

Materials provide some strategies to develop students' skills that are crucial to understanding computational concepts. For example, materials provide a plugged activity for students to brainstorm and create an animation using algorithms, flowcharts, and pseudocode. Students design an Essay class that determines the grade a student receives and write a pseudocode containing loops. The program prompts the user to enter the essay's number of points earned from grammar, spelling, length, and content. However, the materials do not provide activities in block programming to direct on-screen agents in the virtual world that sense and respond to the physical world.

#### **FOCUS AREA 2 COMPUTATIONAL PRACTICES**

**Instructional materials provide strategies to develop students' skills that are crucial to understanding computational practices, including experimenting and iterating; testing and debugging; and reusing and remixing.**

*Statements of appraisal and supporting evidence:*

Materials give students the opportunity to debug a set program on paper. However, there is no evidence of frequent opportunities for students to overcome problems.

#### **FOCUS AREA 3 COMPUTATIONAL PERSPECTIVES**

**Instructional materials provide strategies to develop students' skills that are crucial to understanding computational perspectives, including expressing, connecting, and questioning.**

*Statements of appraisal and supporting evidence:*

Materials provide opportunities for students to work with a partner or in small groups to create an algorithm for "Making Change" on paper, and then students test their code. After students share their solutions with the class, they make changes to their program based on peer feedback. No evidence is found for users to enjoy its programmed capabilities. No evidence is found for materials providing opportunities for students to experience their own creations through app or game design options. Also, no evidence is found of extensive opportunities to encounter and comprehend grade-level and complex concepts with scaffolding opportunities for remediation, rubrics, differentiation strategies, or extended projects.

#### **FOCUS AREA 4 ACCESSIBILITY AND EQUITY**

*Statements of appraisal and supporting evidence:*

Materials provide information on Digital Etiquette and allow students to discuss it in a checkpoint question. However, there is no evidence found for students developing an understanding of digital citizenship. Also, there is no evidence found of extensive opportunities for EL, special needs, or gifted students to encounter and comprehend grade-level and complex concepts with scaffolding opportunities for remediation, rubrics, differentiation strategies, or extended projects.

#### **FOCUS AREA 5 TEACHER SUPPORT**

*Statements of appraisal and supporting evidence:*

There is no evidence of a detailed list that includes required software, hardware and tools and accessible libraries.

**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, pacing, assessment, individual learners, and cultural and linguistic relevance and responsiveness.

CLR Recognition Average Score	Average Score
6%	8%

**FOCUS AREA 1 RESOURCES AND SUPPORTS FOR TEACHERS AND STUDENTS**

**Instructional materials provide teacher resources to support planning and supports for all students.**

*Statements of appraisal and supporting evidence:*

Materials provide examples of flow charts and accessible glossaries, but no evidence is found of any footnotes, examples of student work, or use of accessible formats that aid students and teachers in making meaning of the text. Materials provide customized instructions for less advanced learners and English Learners. However, no evidence is found of any specific activities for accommodations and modifications for other special populations to support participation in learning content. There is no evidence found of clear documentation that aligns to the standards for lessons, chapters, or units. No evidence is found of estimated instructional time for lessons, chapters or units such as charts, or notations and references to alignment. No evidence of materials providing instructional materials for digital learning that incorporate both static and interactive digital components or digital assessments.

**FOCUS AREA 2 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 offer a variety of assessments. However, no evidence is found of the standards relating to the assessments or clearly defining which standards are being assessed through content and language objectives. Additionally, no evidence is found of materials providing appropriate assessment alternatives for ELs, Culturally and Linguistically Diverse students, advanced, or special needs students.

**FOCUS AREA 3 CULTURAL AND LINGUISTIC PERSPECTIVES AND RESPONSIVENESS**

**Instructional materials represent a variety of cultural and linguistic perspectives and highlight diversity in culture and language through multiple perspectives.**

*Statements of appraisal and supporting evidence:*

No evidence is found of materials addressing multiple ethnic descriptions, interpretations, or perspectives of events and experiences. No evidence is found for students to reflect a respect for the languages of the people represented, especially the languages of the students themselves. There is no evidence of materials engaging students in critical reflection about cultures past and present in New Mexico. There is no evidence of materials including images, stories, or information about the various groups of people who live or have lived in New Mexico.

**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 #: 76

*Background and experience:*

I am a Level II teacher with four years of teaching middle school math, STEAM, and computer science. I was a member of the Community of Practice cohort for Computer Science Integration and of the Computer Science Steering team at my school.

*Professional summary of material:*

I do not recommend Fundamentals of Computer Science by Savvas for New Mexico teachers and students. While the materials offer some opportunities for students to engage in the content via group work, program development, and debugging programs, there is no evidence of opportunities for students to enjoy CS through activities such as designing apps, games, or personal websites. The majority of the material relies on students learning by reading the text. There is no evidence found for materials supporting or providing appropriate assessment alternatives for students who read below grade level, special needs students, gifted students, or ELs. There is also no evidence of clearly defined standards or objectives in the textbook, lessons, or assessments. Teacher support is minimal, as there is no evidence of a list of software, libraries, hardware, or tools to use during instruction.

Reviewer #: 77

*Background and experience:*

I have 23 years of teaching experience, 21 of them in NM. I hold a Master's Degree in Educational Technology and have been teaching Computer Science for the past 3 years in a K-8 school. I am a Level III teacher.

*Professional summary of material:*

Overall, the material partially aligns with the computer science standards. However, I do not recommend Fundamentals of Computer Science by Savvas for 6-9th grade students or teachers in NM. It could at times be used as a source of reference material. The teacher edition does not have a pacing guide, standards that relate to each lesson, time frames, or objectives for each lesson. The assessments offered relate to the material being addressed, but they do not offer adaptation for students with special needs in the way of choice or rubrics to gauge their own level of understanding. The text offers many flowcharts and a few photos to illustrate a better understanding of the material but does not offer additional support like alternate assignments for students with special needs. The text is not engaging. There is little opportunity for practicing skills digitally. The material has no evidence of real-life practice, a focus on personalized activities, or activities of choice. It does not allow for creativity or an expression of culture, NM culture, various opinions, or languages. This material is a textbook with a lot of unplugged pseudocode opportunities with assignments that are teacher-directed.

Reviewer #: 78

*Background and experience:*

The reviewer is a Level II teacher with 6 years of experience in teaching. I have taught 7th-grade computer science for 2 years and Science for 4 years.

*Professional summary of material:*

The materials focus on giving information for teachers' discussion and reading materials for students. There are activities that allow students to work independently and with a team, creating flowcharts, writing pseudocodes, and designing their programs. Materials provide assessments in the form of chapter reviews, exercises, checkpoints, and case studies that provide detailed, step-by-step analyses of problems. However, there is no evidence of materials offering activities with accommodations and modifications for English Learners, Culturally and Linguistically Diverse Students, Advanced students, and students with special needs. There is no evidence of a detailed list of materials for teaching such as a pacing guide, lesson plans with a given time of completion, displayed standards, and learning objectives.