

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](#)

Text Title	Programming 2a/2b one year student license	Publisher	eDynamic Holdings LP
SE ISBN	9781737161585	TE ISBN	
SW ISBN		Grade Level/Content	11-12 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

57%

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

12%

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:

There is no evidence found in the materials of addressing outside cultures, beliefs, and influences, aside from a few questions regarding the preferred method of protecting data, the use of different programming languages, and personal preference.

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

Average Score

61%

OVERALL ALIGNMENT

Materials align with the computer science standards overall.

Statements of appraisal and supporting evidence:

The material partially aligns with standards throughout the text. The material covers areas such as programming and the use of algorithms to solve problems, interactive tools, and a thorough comparison and contrast of data structures. The areas where evidence of standards' alignment is not found in the materials include categorizing operating software, software protection and management, data analysis and collection techniques, and processing data.

COMPUTING SYSTEMS

Materials align to the computing systems standards for computer science.

Statements of appraisal and supporting evidence:

The materials discuss the fundamentals of OS software, interfacing hardware (including inputs and outputs), as well as in-depth explanation and examination of various storage mediums. However, there is no evidence of categorizing the roles of OS software.

NETWORKS AND THE INTERNET

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

Statements of appraisal and supporting evidence:

Networks and the internet allows students to describe the impacts of network functionality including bandwidth and load, but there is no evidence or reference to topology. Students also analyze and compare the methods that are used by developers to protect devices and programs.

DATA AND ANALYSIS

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

Statements of appraisal and supporting evidence:

Data and analysis covers how data is processed and stored but does not cover or utilize the tools of data analysis. There is information about reliability and correctness testing, but there is no evidence of evaluation of correctness models.

ALGORITHMS AND PROGRAMMING

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

Statements of appraisal and supporting evidence:

The use of algorithms and programming is covered through the use, analysis, and adaptation of algorithms; the integration with AI functionality and the use of the "BigO" to analyze efficiency; the use of modular design; and student-created components in a variety of formats, while also creating a recursive program utilizing a Fibonacci sequence. Some resources provided are strictly informational, i.e., discussing different programming languages, utilizing testing to ensure a program runs according to specifications, or developing a program with multi-platform functionality.

IMPACTS OF COMPUTING

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

Statements of appraisal and supporting evidence:

Materials discuss the use of blockchain in cryptocurrencies, but there is no evidence of the the rules and regulations of these new technologies. There is evidence of discussion of privacy in software by the use of certificates, but there is no evidence for discussion about the computational innovations and their effect on society. There is evidence for discussion of access concerning cryptocurrencies and banking, but no evidence for a discussion of equity or influence.

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

57%

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:

Students are asked to design an iterative program without the requirement of conditional execution. Materials ask students to explain an algorithm from their daily life, but they do not discuss nested conditionals or nested loops. Students are also asked to construct truth tables, but they are not required to recognize similarities and differences between mathematical and computational algorithms.

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:

Students are tasked with creating a to-do list algorithm, but not in the context of solving a computational problem. Students are also asked to create a physics formula algorithm to test for efficiency, correctness, and clarity. Although prior student knowledge is used in many of the assignments, personal interest on the student's part is missing.

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 allow students to analyze, examine, and interact with computational problems and software from a developmental, assessment, design, and personal standpoint. The use of cumulative activities to tie large portions of material together is present, although there is no evidence of student interaction in the "read only" portion of testing and verifying, as well as increasing the efficiency of programs.

FOCUS AREA 4 ACCESSIBILITY AND EQUITY

Statements of appraisal and supporting evidence:

Materials provide integrated vocabulary lists and various informational and interactive activities, although there is no evidence of providing accessibility or support for ELs, enrichment for gifted students, or accommodations for other groups as required.

FOCUS AREA 5 TEACHER SUPPORT

Statements of appraisal and supporting evidence:

Teacher support is provided through pacing guides, instructional models, and differentiation. Suggested instructional approaches are covered through a variety of activities, resources, supplemental readings, and a list of required resources.

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
12%	36%

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:

Instructional times for units, chapters, and some lessons are provided. A list of lessons is also given in the Teacher Edition. However, throughout the curriculum, there is no evidence found of cross-referencing the computer science standards. Materials are almost exclusively in a digital format, but there is not evidence found of accommodations and modification made for ELs, culturally and linguistically diverse students, and other special populations. Vocabulary lists and knowledge checks are incorporated throughout the text to help with making meaning from the text.

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:

Instructional materials offer a variety of digital formative and summative assessments. However, not all strands and standards are assessed. There is no evidence standards are clearly defined in lessons. There is no evidence of alternate appropriate assessments for ELs, Culturally and Linguistically Diverse students, advanced students, 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:

There is no evidence found in the materials of addressing outside cultures, beliefs, and influences, aside from a few questions regarding the preferred method of protecting data, the use of different programming languages, and personal preference.

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 #: 82

Background and experience:

Reviewer #82 is a Level II teacher with 11 years experience in education. Reviewer is licensed to teach computer science and has 10 years experience as a computer technician for the federal government.

Professional summary of material:

The material covered in this review is written in a clear, concise, and consistent manner, and in a functional format. As an informational text, the text provides valuable information, although at times the absence of hands-on interaction and practice limits the accessibility of information. The material made no reference to applicable resources and is also missing accommodations in testing formats, assignments, and readings to support different learners. Information and activities provided for programming allow students the opportunity to work with and modify different platforms for different functionality, or to add additional features.

Reviewer #: 83

Background and experience:

Review 83 is a Level II teacher with 15 years experience in secondary education with endorsements in TESOL and mathematics. I have taught AP Computer Science for two years.

Professional summary of material:

The instructional material is easily accessible and provides teacher support such as pacing guides, lists of vocabulary terms, and suggested differentiation strategies. There is evidence of programming and the use of algorithms to solve problems, interactive tools and comparisons, and contrast of data structures. There is evidence provided on information of the fundamentals of OS software, interfacing hardware, and various storage mediums. Students describe the impacts of network functionality including bandwidth and load. Students use modular design and student-created components. There is no evidence about computation innovations and their effect on society. There is no evidence of discussion of equity or influence. There is no evidence of integrating different cultural perspectives, languages, or cultures. There is no evidence of alternative assessments for ELs, Culturally and Linguistically Diverse students, advanced students, or special needs students.

Reviewer #: 84

Background and experience:

Reviewer 84 has been teaching in New Mexico for 15 years. He is a Level III teacher and is endorsed in the Sciences and TESOL. He has been teaching computer science courses since 2015, including CCNA, Python, and AP CSP.

Professional summary of material:

The material provides a comprehensive explanation of computing systems and networking, but is missing chances for students to interact and reflect on what is being taught. Data structures and analysis are presented in the materials, but there is no evidence that students discuss or evaluate these concepts. Programming concepts such as recursion and iteration are compared with changes for students to try on their own, but students aren't able to examine phenomena such as security issues. Critical accessibility and equity criteria are unmet with little to no resources for students and teachers to use to access the material, especially for those from culturally and linguistically diverse backgrounds.