

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	Advanced Networking 1a/1b one year student license	Publisher	eDynamic Holdings LP
SE ISBN	9781959433118	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

41%

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

21%

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 of culturally and linguistically responsive pedagogy. There are no tools or resources that relate the content area in regards to culturally and linguistically diverse populations, nor do they demonstrate multiple perspectives. Reflection questions provide the only opportunity for students to reflect on the activity from their own personal preference but not from a CLR or New Mexico based background.

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

Average Score

43%

OVERALL ALIGNMENT

Materials align with the computer science standards overall.

Statements of appraisal and supporting evidence:

No evidence is found in the materials for several foundational concepts related to computer science standards, including: operating system software, addressing, logic input, integration of A.I., and output. Inconsistent evidence is present in the instance of topology. Materials provide extensive reading and reflection regarding physical and digital security and data structures.

COMPUTING SYSTEMS

Materials align to the computing systems standards for computer science.

Statements of appraisal and supporting evidence:

Course materials cover computing systems and components, describing the differences and advantages of different operating systems and encapsulation via the internet and data encryption. There is no evidence of an explanation of computing system components in relation to the hardware and how it processes input and outputs.

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 are covered in the materials on the basis of troubleshooting and analyzing performance. Materials discuss troubleshooting connection issues that can interrupt or slow down a network, but there is no evidence that students will describe concepts such as bandwidth or load. There is no evidence of the opportunity for students to describe the issues that impact network functionality.

DATA AND ANALYSIS

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

Statements of appraisal and supporting evidence:

Data abstraction and collection is discussed and analyzed in the materials through a cumulative project where students study the abstraction and storage of data, traffic, and attempted data breach logs. Material presents a passage on the use and importance of network logs. There is no evidence of models and simulations discussed, especially in relation to testing and refining a hypothesis. Material discusses common errors found in networks, but there is no evidence of data analysis tools and techniques for identifying patterns in the data.

ALGORITHMS AND PROGRAMMING

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

Statements of appraisal and supporting evidence:

Materials discuss some modern and emerging uses of AI to complete administrative tasks, but there is no evidence describing it in terms of physical process or driving data. Materials also cover the use and analysis of algorithms to streamline data flow, but there isn't evidence that students have an opportunity to employ the lesson. There is also guided reading for utilizing coding to improve usability of an app or program, but no evidence of guided or independent practice is provided.

IMPACTS OF COMPUTING

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

Statements of appraisal and supporting evidence:

Materials require students to evaluate auditing logs from their own devices, the legality of VPNs, looking at the growth of future internet speeds, and the impact on data usage. There is no discussion or debate with regard to laws and regulation governing the use and development of tools and programs.

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

33%

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:

Vocabulary lists and supplemental materials provide an analysis of applicable terms and the differences and uses of different numbering systems in computer science. There is no evidence for looping, conditional operations, or student-designed computational models used in data collection.

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 have the opportunity to analyze and troubleshoot network speeds and capacity, the use of security agents, and the use of subnetting and addressing. There is no evidence of opportunities for creating a prototype or utilizing a series of progressive tests to diagnose faults.

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 an opportunity to remotely configure a router, a description of wireless and emerging technologies, and the use of ethernet to power and transfer data. There is no evidence of a hands-on activity for these sections or opportunity for a computational artifact.

FOCUS AREA 4 ACCESSIBILITY AND EQUITY

Statements of appraisal and supporting evidence:

There is no evidence of Special Education or EL accommodations or alternatively-formatted assessments or assignments.

FOCUS AREA 5 TEACHER SUPPORT

Statements of appraisal and supporting evidence:

Teacher support is provided in terms of pacing guides, materials lists, vocabulary terms, and required software.

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
21%	37%

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:

There is evidence of pacing and teaching guides in the teacher resources. The materials also include bibliographies and vocabulary. There is no evidence of supplemental materials, and no cross-reference to the standards. There are digital formative and summative assessments, but there are few interactive digital learning components.

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:

There are interactive, digital learning components and assessments as well as limited differentiation suggestions. There is no evidence of alternative, accessible assessments for ELs, advanced, CLD, or students performing below grade level. There is no evidence of standards being clearly defined.

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 of culturally and linguistically responsive pedagogy. There are no tools or resources that relate the content area in regards to culturally and linguistically diverse populations, nor do they demonstrate multiple perspectives. Reflection questions provide the only opportunity for students to reflect on the activity from their own personal preference but not from a CLR or New Mexico based background.

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 a Master's degree and eleven years teaching experience at the high school level. Reviewer is licensed in numerous content areas, including computer science and business. Reviewer also has ten years working for the military as a computer technician.

Professional summary of material:

Materials are well-written and clearly presented, although it is in a manner that is not accessible to learners with exceptionalities or ELs. The use of interactive and multi step projects is an interactive and beneficial model for utilizing prior learning and experience to enhance learning. There is no evidence of the integration of translation software, differentiated tools and activities, or multiple cultural and global perspectives.

Reviewer #: 83

Background and experience:

Reviewer 83 is a Level II teacher with fifteen years teaching experience in secondary education and is currently pursuing an Educational Leadership Master's degree. I have taught AP Computer Science for two years. I have endorsements in TESOL and Mathematics.

Professional summary of material:

The instructional materials are easily accessible in digital format and provide digital formative and summative assessments on concepts, but do not address all standards. The materials provide information on the impacts of computing, algorithms and programming, computing systems, network functionality, and security concerns with some activities. There is evidence for students to use data collection tools to pitch a network design and evaluate models and simulations testing. However, there are no activities provided to design algorithms, work with the fundamentals of networking, or using data analysis tools. There are no resources for differentiating or working with culturally diverse or special needs populations other than suggested differentiation suggestions.

Reviewer #: 84

Background and experience:

Reviewer 84 is a Level III teacher with fifteen years teaching experience in secondary education. Reviewer holds an M.Ed. and has taught Computer Science for seven years, including AP CSP, Cisco CCNA, and Python. I hold endorsements in Sciences and TESOL.

Professional summary of material:

Some of the Advanced Networking materials include discussions of operating systems, troubleshooting connections issues, and making proposals for networks under budgetary and data constraints. However, several fundamental aspects of networking are missing, including discussion of data analysis tools, implementation of artificial intelligence algorithms, and evaluating algorithms for their efficiency and efficacy. Computer content covers activities involving subnetting a network office or testing office security systems, but are missing content related to algorithm design and instructional supports for diverse populations.