Review Team Appraisal of Title

Grades 7-12 Career and Technical Education

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	Computer Maintenance 1a/1b	Publisher	eDynamic Holdings LP
SE ISBN	9798986044330	TE ISBN	
SW ISBN		Grade Level/Content	9-10 CTE

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
	70%

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
		62%

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:

Content asks students to create their own computers and networks. This allows the students to include their own values and identity in the course, though this is not explicitly stated in the content. Computer maintenance speaks a universal language with binary code and uses universal hardware (networks, computers, etc). The material does not specifically address the culture, value, or language of NM, but touches on equity access to the internet.

CTE Standards Review - *Materials are reviewed for alignment with the state adopted content standards, benchmarks and performance standards.*	
	Average Score
	56%

<table>
<tr><td colspan="2">OVERALL ALIGNMENT
Materials align with the CTE standards overall, including strands 1-10: Academic Foundations; Communications; Problem Solving and Critical Thinking; Information Technology Applications; Systems; Safety, Health, and Environmental Management; Leadership and Teamwork; Ethics and Legal Responsibilities; Employability and Career Development; and Technical Skills.
Statements of appraisal and supporting evidence:</td></tr>
<tr><td colspan="2">Computer Maintenance 1a and 1b is a full year material broken up into 2 semesters. Students are introduced to lessons with hands-on activities and discussions in regard to computer maintenance. The content provides students with reading about networks, cybersecurity, data management, troubleshooting, coding, etc. Despite this, it is missing practical applications of these skills. Most of the lessons have students reading about the content, but there is no action or activity done on the students' part. Students work primarily on their own and there are few opportunities to work on or with as a team. The lessons, activities, and assessments do not have corresponding standards listed within the teacher materials to check for mastery of the standard. Once the course is completed, the students are able to take the certification exams CompTIA A+ and NOCTI Computer Repair Technology.</td></tr>
<tr><td colspan="2">STRAND ALIGNMENT
Materials align with specific CTE content strands. (Optional)</td></tr>
<tr><td>Strand:</td><td>Statements of appraisal and supporting evidence:</td></tr>
<tr><td>Leadership and Teamwork</td><td>The materials discuss leadership and teamwork skills with collaboration; however, there are not any activities in which the students work within teams.</td></tr>
<tr><td>Employability and Career Development</td><td>The materials provide reinforcement of skills by building positive working relationships, relating technical career education to academics, and providing students with information on career certifications in technical career fields. However, students do not have to demonstrate the use of positive work behaviors.</td></tr>
<tr><td>Academic Foundations</td><td>Content is comprehensive when discussing the foundational and technical knowledge about computer maintenance, but it lacks opportunities to put the knowledge into action for the students. The material contains lessons in which students are reading information rather than explaining, evaluating, demonstrating, or developing.</td></tr>
<tr><td>Choose CTE Content Strand (optional)</td><td></td></tr>
<tr><td>Choose CTE Content Strand (optional)</td><td></td></tr>
</table>

Computer Science Standards Review - *Materials are reviewed for alignment with the state adopted Computer Science standards.*	
	Average Score
	64%

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

The material provides students with reading about networks, cybersecurity, data management, troubleshooting, coding, etc. The material is missing practical applications of these skills. The material contains lessons in which students are reading about the content, but are not doing any type of evaluating, explaining, comparing, translating, creating, etc. Students work primarily on their own and there are few opportunities to work in teams.

COMPUTING SYSTEMS
Materials align to the computing systems standards for computer science.
Statements of appraisal and supporting evidence:

The material provides students with activities, discussions, and critical thinking questions in comparing different types of software and hardware and networks. The material provides students with troubleshooting support to identify and fix common technical errors when dealing with peripherals of input and output devices to increase productivity. The content provides reading, but students are not evaluating, recommending, or giving examples to meet the intent of the computer science standards.

NETWORKS AND THE INTERNET
Materials align to the networks and internet standards for computer science.
Statements of appraisal and supporting evidence:

The materials provide an overview of common networks and the relationships between these networks and switches, servers, and routers. The material provides information on common malware and other cyber attacks along with different types of cybersecurity recommendations. Students apply their knowledge in creating recommendations for different types of security measures to address these different types of cyber attacks.

DATA AND ANALYSIS
Materials align to the data and analysis standards for computer science.
Statements of appraisal and supporting evidence:

The material reviews data and analysis but does not cover students using models to interpret and give value to the data collected. The material reviews data and cloud storage and also asks students to evaluate the advantages and disadvantages.

ALGORITHMS AND PROGRAMMING
Materials align to the algorithms and programming standards for computer science.
Statements of appraisal and supporting evidence:

The instructional materials have the students creating and evaluating various systematic designs for networking within hardware, data integration, and printing. There is a lack of incorporating feedback from users in these designs.

IMPACTS OF COMPUTING
Materials align to the impacts of computing standards for computer science.
Statements of appraisal and supporting evidence:

The material provides an overview of cybersecurity, privacy, intellectual property definitions, and equity, but does lack comprehensive information about the laws and ethics applicable to computing. The material is also missing across discipline applications, working collaboratively, and the effects of intellectual property.

CTE Content Review - *Materials are reviewed against relevant criteria pertaining to the support for teachers and students in the specific content area reviewed.*

Average Score
94%

FOCUS AREA 1 SEQUENCING AND ARTICULATION
Instructional materials show sequencing and articulation within and across grade bands and/or pathways.
Statements of appraisal and supporting evidence:

The material is set up in order from foundational to more complex topics as outlined in the teacher resources. The same pattern is followed with troubleshooting from more simple problems like cords to more complex issues with networks and malware. These topics are developed across multiple pathways and grade bands.

FOCUS AREA 2 ENGAGING INSTRUCTION
Instructional materials are engaging for students.
Statements of appraisal and supporting evidence:

The material provides options, such as blended learning, project-based and inquiry-based learning, to promote student engagement. The material also provides activities, discussions, critical thinking questions, and differentiation options to meet the needs of all students. The material provides opportunities for students to research and support future computer-based careers.

FOCUS AREA 3 CAREER DEVELOPMENT
Instructional materials provide career development information for students.
Statements of appraisal and supporting evidence:

The material provides students with support in obtaining certifications CompTIA A+ and NOCTI Computer Repair Technology with the completion of the 2-semester course.

FOCUS AREA 4 TECHNOLOGY
Instructional materials incorporate opportunities to use industry appropriate technology.
Statements of appraisal and supporting evidence:

The instructional materials fully incorporate opportunities for the students to use industry-appropriate technology. The students have two activities for each unit that require the implementation of technology in various forms. Some are used for creating networks, troubleshooting and working with printers, etc.

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
62%	67%

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:

Computer Maintenance 1A and 1B Teacher Resources Pacing Guide lists all units, lessons, and contents to guide the teacher while instructing the course. Each guide includes differentiation strategies for below/above learners and ELs. Authentic assignments include creating brochures, presentations, and troubleshooting guides for both hard/software. There are also podcasts available for all units for auditory learners.

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:

The materials include formative (DQs, critical thinking questions) and summative (exams, activities) assessments and projects that address the strands in the standards, though the connection to the standards is not documented in the curriculum. Many activities build skills from Activity 1 to Activity 2 to reflect the learning of the content. The content is missing the explicit labels of the standards in the material as well as differentiated assessments for above/below and ELs.

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:

Content asks students to create their own computers and networks. This allows the students to include their own values and identity in the course, though this is not explicitly stated in the content. Computer maintenance speaks a universal language with binary code and uses universal hardware (networks, computers, etc). The material does not specifically address the culture, value, or language of NM, but touches on equity access to the internet.

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 #:	58

Background and experience:

Reviewer #58 has a BS in Interdisciplinary Studies and Reading and an MA in Education with a Learning Technologies Emphasis. Reviewer #58 holds an NM Level II K-8 teaching license with certifications in Technology Education, Information Technology Coordinator, Reading, Language Arts, and Social Studies. The reviewer has 21 years of teaching experience in New Mexico, with 7 years within elementary schools from grades 3rd to 5th, and the most recent 14 years as a middle school technology teacher focusing on Information Technology, Computer Graphics, Web Design, and Computer Science.

Professional summary of material:

Computer Maintenance 1a & 1b is a two-semester curriculum course. It has the ability to be used extensively online or within a blended classroom. Students study topics in the first semester of Software Applications; Operating Systems; Printers; Operational Procedures for Optimal Network Performance; Power & Peripherals; Cables, Connectors, and Tools; Motherboards, CPUs, and RAM; and Storage Devices and Custom Builds. The second semester then focuses on Mobile Devices and Laptops; Network Fundamentals; All About Servers; Network Hardware Devices; Cloud Computing; Wired Networks; Wireless Networks; and Advanced Security Concerns. Students do research and then work on a variety of projects ranging from creating their own networks, designing a Smart Home, and even building a computer. The standards are not covered or included within the materials. There is a lack of students working collaboratively within the projects and lessons. While there are scaffolding suggestions for the above, below, and ELs, there are not modifications for various types of assessments.

Reviewer #:	59

Background and experience:

Reviewer #59 has a level III New Mexico teaching license with an MA in Curriculum and Instruction and endorsements in the areas of Language Arts, TESOL, Reading and Social Studies. Reviewer #59 has taught in the state of New Mexico for 17 years with experience in 5 different grade levels and 2 different support positions. Currently, Reviewer #59 is an Instructional Support Specialist supporting teachers in all subject areas within the school. Reviewer #59 has previous experience with the review process. Reviewer #59 has experience developing and implementing the New Mexico Instructional Scope in Language Arts and Social Studies as well as the development of the Culturally and Linguistically Responsive Scorecard.

Professional summary of material:

The Computer Maintenance 1A and 1B course provides the students opportunities to demonstrate their knowledge through lesson knowledge checks, unit quizzes, activities, critical thinking questions and the midterm and final exams. The material provides individualized opportunities to show their knowledge, but does not provide students with opportunities to work collaboratively and through group work. The students also have the flexibility to complete assignments through project-based and inquiry-based learning. The materials provide teachers with supports such as a pacing guide, teacher's guides, and differentiation suggestions for English Learners, students with special needs and advanced students. Students study and research a variety of topics from Software Applications, Hardware, Networks, Printers, troubleshooting security threats, and other specific IT topics. The Computer Maintenance course does not provide many opportunities for group work; most of the work is done independently. There are some learning objectives in the project-based and inquiry-based learning guides, but in the semester 1A and semester 1B units there are no learning objectives tied to the lessons, assignments or assessments. The learning objectives that are present are not tied to any standards. Standards are not mentioned within the curriculum.

Reviewer #:	60

Background and experience:

Reviewer #60 holds a BA and MA in secondary education and is a NM Level III teacher. Reviewer has 17 years experience in public education across three states from grades 7- post secondary education. The reviewer has participated in several NM and AZ assessment committees.

Professional summary of material:

The Computer Maintenance 1A and 1B course presents authentic assessments with creating brochures, presentations, and troubleshooting guides for both hard/software. This material provides a foundation for the IT field with the readings and activities about the home and professional network. There is flexibility with the suggested modifications to help ensure all learners are successful. The lack of cited standards in the course revealed standards not covered or not included. The material does not specifically address the culture, value, or language of NM, but touched on equity access to the internet.