Teaching Tomorrow's Technology.
CompuScholar

Mississippi 2024 Instructional Materials Review

CompuScholar Features and Benefits

Thank you for choosing CompuScholar's online Computer Science and Digital Literacy courses for your schools! This **Features and Benefits Guide** describes the advantages of using CompuScholar's instructional materials in your schools.

This guide applies to **all available CompuScholar courses**,
including the two submitted for the 2024 Instructional Materials Review.

Table of Contents

CompuScholar Contact

We welcome all questions! Please reach out to CompuScholar for a fast response.

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Summary of Submitted Documents

The following documents have been submitted as part of the 2024 Instructional Materials review. All are provided in DOCX format per review requirements, and a ZIP of PDF versions is provided for convenience.

Document Name	Description
CompuScholar_Features.docx	(*This document*) Features and Benefits
CompuScholar_Digital_Samples_DemoAccess.docx	Digital samples intended for districts and the virtual caravan.
CompuScholar_Digital_Samples_FullAccess.docx	Digital samples intended for the state DOE and review panel
CompuScholar_Digital_Samples_LimitedAccess.docx	Digital samples intended for the Institute of Higher Learning
CompuScholar_Implementation_Guide.docx	Getting started guidance, deployment options, teacher PD and support, and HW/SW requirements
CompuScholar_Free_with_Order.docx	A summary of the free services and options that accompany every purchase
CompuScholar_Bond_Letter.docx	A letter stating that CompuScholar can obtain the required bond
Textbook-Bid-Packet.docx	The completed Textbook Bid Packet
WebProgrammingConcepts.docx	Scope and Sequence crosswalk between "902147 - Web and Programming Concepts" standards and CompuScholar's **Web Design** course.
PythonI.docx	Scope and Sequence crosswalk between "902110 - Programming in Python" standards and CompuScholar's **Computer Science Foundations** course.
CompuScholar_PDF_Bundle.zip	A ZIP file containing PDF versions of all submitted documents

Please see "Appendix A – HQIM Rubrics" in this document for CompuScholar's guidance on how our online system and courses meet each of the HQIM Rubric requirements for CTE / Computer Science.

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Course Alignments

CompuScholar offers a variety of **Computer Science** and **Digital Literacy** courses designed to support well-rounded CTE / IT and Technology Apps programs in middle and high schools. Our courses map to both Mississippi standards as follows:

Mississippi Standard	CompuScholar Title
902147 - Web and Programming Concepts	Web Design
902110 - Programming in Python	Computer Science Foundations
AP Computer Science Principles*	Computer Science Foundations
AP Computer Science A*	Java Programming
Exploring Computer Science	Digital Savvy and other courses
Cyber Foundations I	Digital Savvy and Web Design
Introduction to Information Technology	Digital Savvy
Web Design I & Web Design II	Web Design

** CompuScholar's courses have been **endorsed by the College Board** for **AP Computer Science Principles** and **AP Computer Science A**.*

For this adoption, we have submitted our **Web Design** and **Computer Science Foundations** titles for the yellow-highlighted courses in the **Software Development** category.

In most states, our courses serve as a **primary** or **comprehensive** instructional resource. We have marked them as "**complementary**" in this adoption as our **90%+ alignment** to Mississippi standards does not qualify as "comprehensive" per DOE regulations. However, **we anticipate schools will use them as a primary resource**.

Please visit our **Mississippi Alignments page** for more alignment details.

https://www.compuscholar.com/mississippi

For a **complete list of titles**, including middle school technology applications, video game design, and more, please visit our **Course Overview** page:

https://www.compuscholar.com/schools/courses/overview

Individual teachers or district staff members can always request **free review access to all courses** from our **Getting Started** page:

https://www.compuscholar.com/schools/getting-started

Modern, Online Delivery

All course material is **delivered online** through a Learning Management System (LMS); there are **no physical or printed components**.

Instructional Components

Every course contains a similar pattern of high-quality instructional modules and supporting teacher's material.

Every Lesson Contains	Every Chapter Contains
Instructional video	Automatically graded chapter test
Full-color, interactive lesson text	Hands-on projects
In-lesson practice exercises	Test answer key (teachers only)
Automatically graded lesson quiz	Activity solution guide (teachers only)
Teachers' guide (teachers only)	Fully coded solution files (teachers only)
Quiz answer key (teachers only)	Auto-grading of coded projects (some courses)

Key Technical Features

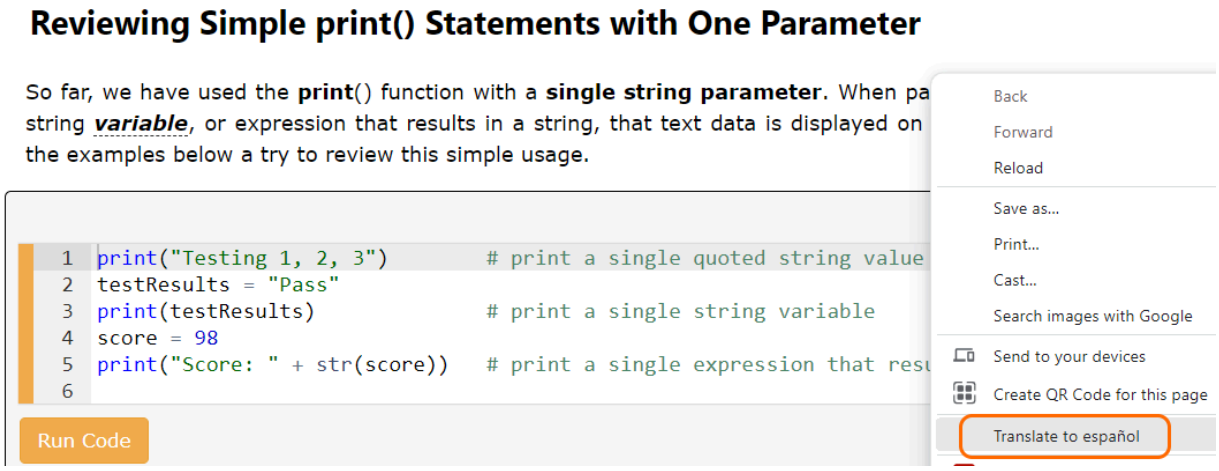
- Online course material is accessible on any desktop, laptop, Chromebook, tablet, or smart-phone with an HTML5 web browser
- Online IDEs with browser-based coding; no local software installation (most courses)
- Free real-time dashboards and comprehensive reporting
- Free integration with Clever and ClassLink auto-rostering and SSO systems
- Free integration with 1EdTech (IMS-Global) systems like Canvas and Schoology

Clever ClassLink CANVAS schoology A PowerSchool Unified Classroom™ Product

Getting started is quick and easy! Please see our Implementation Guide for more details on deployment options, minimum HW and SW requirements, and the onboarding process.

Support for Multiple Languages

CompuScholar's partner districts have students who speak dozens of different native languages. We seamlessly support all ESL students by leveraging the automatic translation tools that are available in all modern web browsers. With simple configuration, students can right-click on any text page and instantly translate that content to any preferred language.



This approach provides multiple benefits:

- Students can dynamically switch back and forth between English and their preferred language, learning the content natively and learning English from the translations.
- Schools do not have to purchase special editions or pigeonhole a student into speaking a specific language.

For more details and a video walk-through of the translation features, please see our November 2023 webinar, "**CompuScholar in Spanish and Other Languages**":

https://www.compuscholar.com/schools/outreach/webinars

Online Coding and Auto-Grading

All CompuScholar courses support an **online coding engine**, where possible, so students can write and run code directly in the web browser and see instant results. **No local software installation** is required in most cases!

Many courses also feature **auto-grading of student projects** that are submitted online. In cases where students are working outside our system, **detailed rubrics are provided** for teacher grading.

Comprehensive Teacher Support

CompuScholar's comprehensive teacher support begins with free professional development and technical support. Our online system also includes complete teacher materials and features for a turnkey teaching experience!

Professional Development and Technical Support

Free, comprehensive teacher training and support is a cornerstone of CompuScholar's solution. Every teacher is enrolled in our "**Teacher Success**" program, which features:

- **A dedicated CompuScholar CSR** for each teacher, who will work with that teacher throughout the year to ensure successful setup, answer questions, provide enrichment opportunities, etc.
- **Free Professional Development** is provided for every teacher in a variety of forms to ensure success in the classroom.
- **Free Technical Support** is included for the lifetime of your adoption.

All parts of our Teacher Success program are **free and included** with the standard student licensing costs.

Please see our Implementation Guide
for more details on teacher Professional Development and support.

Teacher Lesson Guides

Each lesson has a corresponding **Teacher's Guide** with objectives, suggested classroom discussion questions, and solutions to any in-lesson exercises.

Teaching

Class Discussion

In a class discussion, make sure your students understand the basic points of the lesson. They should be able to answer the following questions:

1. In the format string, what set of symbols is used to identify a location where a value is inserted?
2. How do placeholder numbers allow you to control where values appear in the output?
3. How do you set the minimum width of an input value?
4. How to you set the maximum width of an input value?
5. How do you set the alignment of an input value?
6. What options do you have for formatting numeric values? How does each work?

Work with Me Exercise

In this exercise, students will practice using the str.format() function to produce neat columns for a table of high scores. The name field will be centered, and the numeric scores should use a thousands separator. Click on the "Solution" button on the code panel to see our solution code.

Assessment

Today's lesson includes an online quiz that should be completed by your students. Please see your Professional Development links for instructions on giving quizzes.

Syllabus and Pacing Guide

Each course comes with a **Syllabus and Pacing Guide** with chapter-by-chapter guidance.

Days	CompuScholar Chapter and Lab	Notes
5	**Chapter 1: Computing Concepts** * Evolution of Computers * Computer Hardware * Computer Software **LAB: Using Peripherals**	Online, teacher-graded
6	**Chapter 2: Networking** * Network Hardware * How the Internet Works * Internet Scalability & Fault Tolerance * Parallel and Distributed Computing **LAB: Network Analysis**	Online, auto-graded

Activity Solution Guides and Rubrics

Every hands-on project includes a full solution guide and fully coded, runnable solution files.

Activity Solution Code

The following example solution code demonstrates how to meet the activity requirements. You can run the sample code immediately in our live web tester to observe the results.

Try It Now

```
# Student Name

# initial data
numItems = 4
costPerItem = 10.00
taxRate = 0.08

# calculations
subTotal = numItems * costPerItem
taxAmount = subTotal * taxRate
totalPrice = subTotal + taxAmount

# display results
print("SALES RECEIPT")
print("Number of items : " + str(numItems))
print("Cost per item   : $" + str(costPerItem))
print("Tax rate        : " + str(taxRate))
print("Tax amount      : $" + str(taxAmount))
print("TOTAL SALE PRICE: $" + str(totalPrice))
```

Run Code

```
Console Output...
```

In cases where projects are auto-graded, chapter activities contain full rubrics to communicate the automated test case expectations.

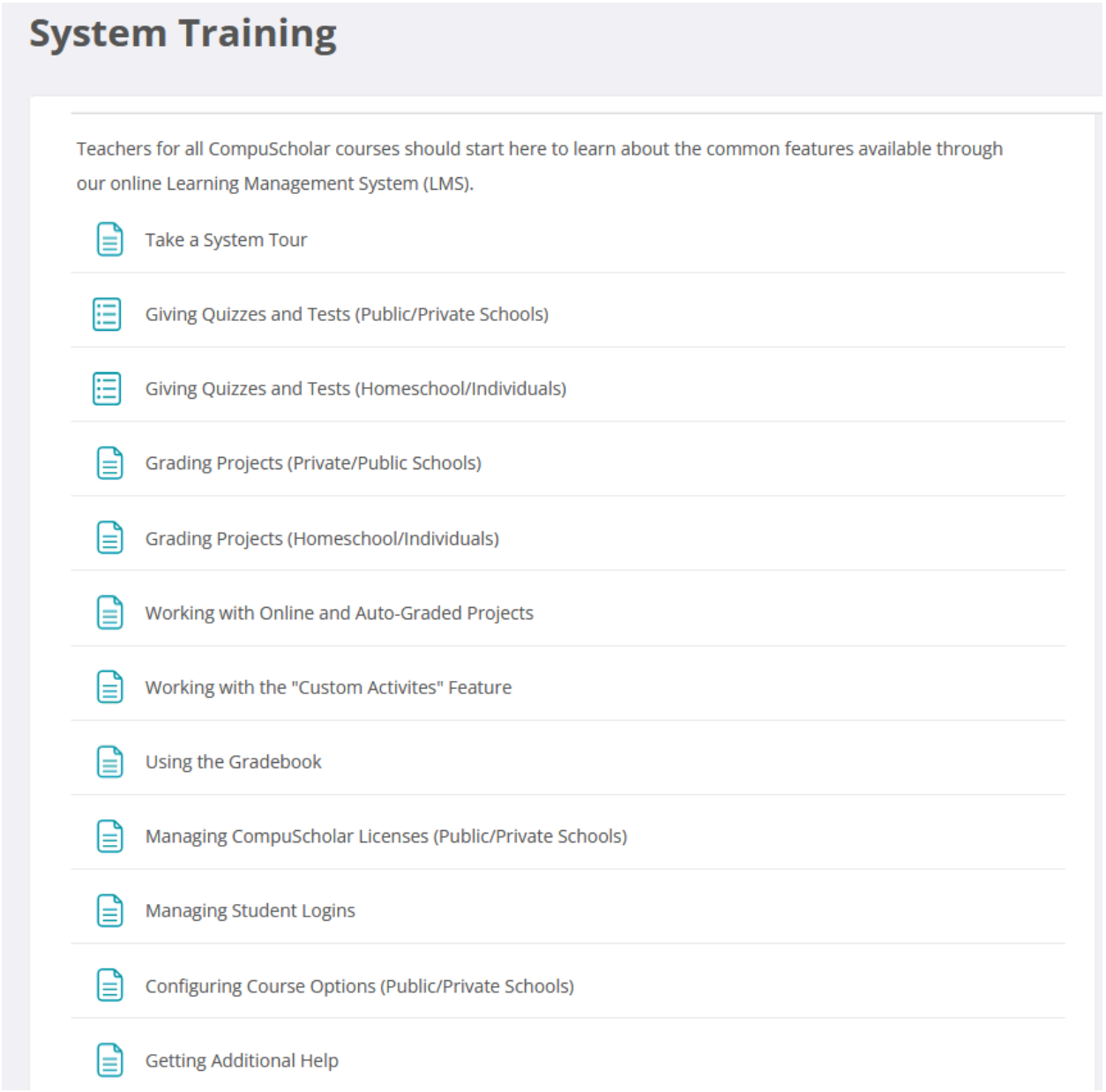
Activity Rubric

If your project is being automatically graded by our system, your grade will be calculated from 0 to 100 as follows:

Points	Description
10	Add comment with name as first line of code
10	Declare and use **numItems** variable
10	Declare and use **costPerItem** variable
10	Declare and use **taxRate** variable
10	Declare and use **subTotal** variable

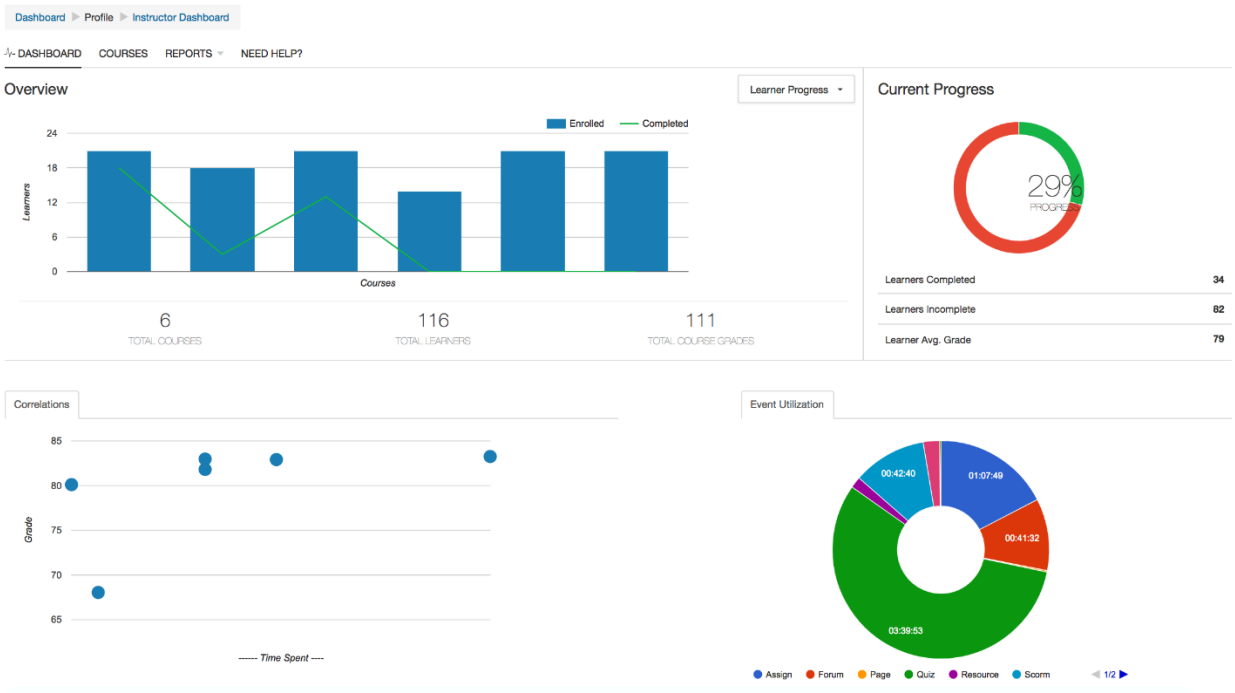
Built-in Training Videos

Teachers can access a series of training videos from their Teacher's Menu, 24 x 7 x 365.



Instructor Dashboard with Comprehensive Reporting

Teachers have access to comprehensive reporting features to better understand student engagement, progress, and results.



Affordable Licenses

CompuScholar offers a variety of licenses that will cost-effectively support large and small deployments. Districts can choose to **license individual students** or get **unlimited access per campus**. Licenses are available in 1, 2, 3, 4, or 5-year lengths to match your budget cycle.

No hidden costs - never any up-charge!

- Free teacher PD, accounts, teacher material
- Free technical support and mentoring
- Free Clever and ClassLink integrations
- Free Canvas and Schoology integrations
- Free material updates

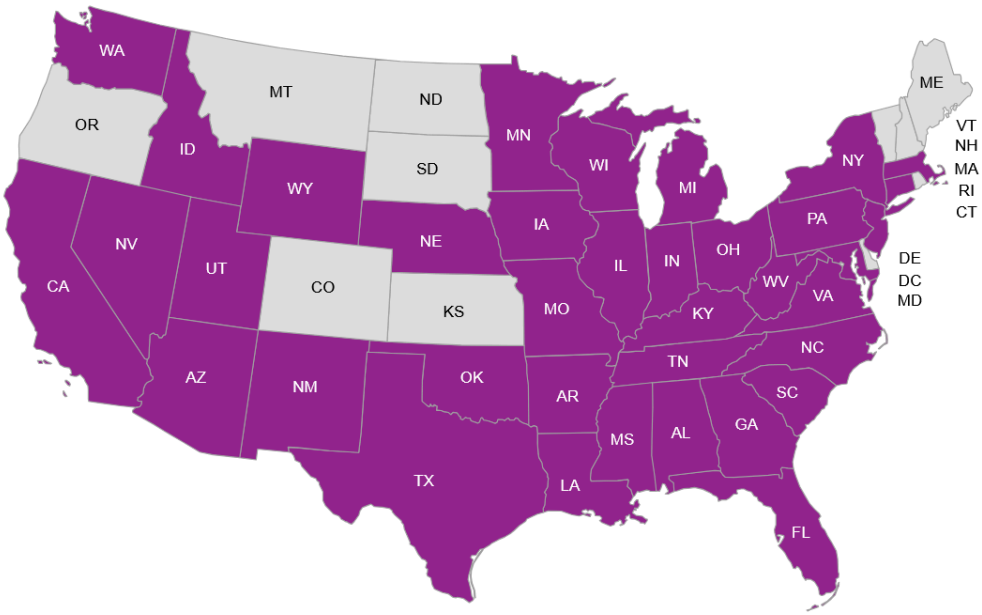
Licenses grant access to all available CompuScholar titles! Purchasing an unlimited campus license for **Web Design** or **Computer Science Foundations**, for example, will allow teachers and students to use **any available course**, not just the one named on the license!

Please contact our team to describe your planned deployment and we'll help identify the most cost-effective mixture of licenses for your district.

team@CompuScholar.com
www.CompuScholar.com
866-604-2357 (office)

CompuScholar – an Experienced Partner

CompuScholar is a national publisher of Computer Science and Digital Literacy courses. We have a 10-year history of supporting large and small districts. CompuScholar has successfully completed state-wide reviews and adoptions in many states, including Texas, Florida, Nevada, Idaho, Utah, South Carolina, Tennessee, Alabama, Indiana, and more!



CompuScholar was founded by experienced software engineers with a passion for computer science. We have decades of experience in the software industry and in delivering high-quality technical courses to schools.

We are excited to work with Mississippi teachers and students! Let us help support your middle and high school course tracks with the CompuScholar lineup.

Appendix A - HQIM Rubrics

We know evaluating curriculum can be challenging without a detailed knowledge of course content and system features. We are pleased to provide the following guidance on how CompuScholar meets each of the HQIM rubric requirements for CTE / Computer Science.

Gateway 1

Criterion 1.1: ALIGNMENT AND ACCURACY	
COMPLEMENTARY CURRICULUM ONLY: **1a.** Materials align with at least 50 percent of the **Computer Science: Software Development** standards listed in the Research and Curriculum Unit.	CompuScholar's submitted courses each align with 90%+ of the relevant standards.
1b. Materials align to research-based instructional practices associated with **Computer Science: Software Development**.	Each course was developed according to best practices in instructional design and delivery for technical subjects.
1c. Materials connect content to real-world application in meaningful ways throughout the year.	Each course provides a wide variety of real-world examples and coding challenges.
1d. Materials include of a mixture of instructional strategies (e.g., discussions, modeling, student activities, projects, etc.).	Each course contains a mixture of instructional videos, interactive lesson text, and hands-on coding activities.

Criterion 1.2: LEARNING PROGRESSIONS and COHERENCE	
1e. Materials provide a coherent sequence or collection of activities and texts that build content knowledge, vocabulary, and skills.	Each course begins assuming no prior knowledge and carefully builds all knowledge, skills, and vocabulary in an ordered sequence.
1f. Materials make connections to technology or career implementation skills covered in past lessons, allowing students to connect new learning with past knowledge.	Each course includes chapters or lessons on career skills and teamwork. Later chapters reinforce and rely on previously learned skills.

1g. Materials provide scaffolding or opportunities for decreased educator	Scaffolded exercises include interactive coding opportunities within each lesson,

support over time to promote student proficiency and independence with targeted technology or career skills.	"Work-with-Me" exercises under detailed guidance, and larger Chapter activities with less guidance. New skills are carefully explained early on and then used more casually in later chapters.
1h. Content is appropriate to the grade-level and considers students' prior knowledge to incorporate this knowledge into the lesson and/or cover material not previously covered.	Each course has grade-appropriate content and reading levels and will incorporate prerequisite knowledge, where relevant, into lessons and discussions.

Gateway 2

Criterion 2.1: STUDENT LEARNING	
2a. Materials provide appropriate level and type of scaffolding, differentiation, intervention, and support for a broad range of learners.	Instructional videos are designed to reinforce the main lesson concepts, providing audio-visual interpretation and alternate examples to the required reading in the lesson text. Hands-on exercises are scaffolded in increasing difficulty as described above. Courses contain supplemental lessons with enrichment topics for advanced students. Individual exercises may also challenge advanced students with additional, optional goals.
2b. Materials within each lesson provide multiple representations by adapting for a variety of different types of learners using alternatives to reading, writing, listening, and speaking such as translations, pictures, or graphic organizers.	Lesson concepts are presented both in written lesson text (with relevant imagery) and with instructional videos. The videos provide an alternate, audio-visual summary of the main lesson concepts.

2c. Assessment methods are varied, making them accessible to all students and do not penalize or reward students due to exceptionalities.	All course material, assessments, and hands-on projects are delivered with an online system that is WCAG 2.1 and Section 508-compliant for accessibility to all students.

Criterion 2.2 INSTRUCTIONAL DESIGN	
2d. Materials include a mixture of instructional strategies (i.e., discussions, modeling, student activities, projects).	The online delivery system supports traditional, face-to-face, virtual, flipped, and hybrid instructional approaches. Teachers can guide students through multimedia content for each lesson in any order (video, text). Optional discussion questions in lesson Teacher Guides are available to help guide the conversation. Each chapter and lesson has many coding opportunities.
2e. Students are provided with opportunities to work collaboratively.	Each course has one or more team projects for collaborative work.
2f. Students are provided with opportunities to explore and provide solutions to open-ended prompts, connect content with real-world applications, and reflect on their learning.	Each course contains one or more team projects that ask students to explore creative topics of interest that they select. The projects are managed through a careful lifecycle of design, implementation, and testing/feedback.
2g. Students are provided with exposure to career opportunities and pathways related to **Computer Science: Software Development.**	Each course contains relevant lessons or chapters on career exploration.

Gateway 3

Criterion 3.1: TEACHER SUPPORTS	
3a. Materials provide teacher guidance with useful annotations and suggestions for how to enact the student materials and ancillary materials, with specific attention to engaging students to guide their computer science development.	Each course comes with a syllabus and pacing guide pinned to the top of the main table of contents. Each lesson has a teacher's guide, and within the teacher's guide is an introductory paragraph, a bulleted list of lesson objectives, and suggested classroom discussion questions.
3b. Materials include standards correlation information that explains the role of the standards in the context of the overall series.	Alignments to Mississippi standards are posted at https://www.compuscholar.com/mississippi**.** The alignments document link next to each course maps individual requirements to course chapters and lessons.
3c. Materials provide strategies for informing all stakeholders, including students, parents, or caregivers about the program and suggestions for how they can help support student progress and achievement.	The syllabus and pacing guide pinned to the top of each course (and on the public course description pages at www.compuscholar.com) provides guidance on how materials should be used and progress guidance. A publicly accessible **Getting Started Guide** is also available from the top Help menu at https://learning.compuscholar.com.
3d. Materials provide a comprehensive list of supplies needed to support instructional activities.	The minimum HW and SW requirements for each course are publicly posted from the Help Menu at https://learning.compuscholar.com. No other materials are needed.

Criterion 3.2: ASSESSMENTS	
3e. Assessment information is included in the materials to indicate which standards are assessed.	Alignments to Mississippi standards for each course are posted at https://www.compuscholar.com/mississippi. The alignment documents describe how each requirement is addressed by a specific chapter or lesson, and assessments belonging to those chapters or lessons naturally support the cited standards.
3f. Assessment system provides multiple opportunities throughout the grade, course, and/or series to determine students' learning and sufficient guidance to teachers for interpreting student performance and suggestions for follow-up.	Each course contains frequent assessments (lesson quizzes, chapter tests, and hands-on activities) to help monitor and evaluate student progress. Electronic grade books and report dashboards provide a variety of insights on student engagement and progress.
3g. Assessments include opportunities for students to demonstrate the full intent of grade-level/course-level standards and practices across the series.	Quizzes, tests, and hands-on projects within each lesson and chapter each align with the cited standards for those modules found at https://www.compuscholar.com/mississippi.
3h. Assessments offer accommodations that allow students to demonstrate their knowledge and skills without changing the content of the assessment.	All CompuScholar material, including quizzes and tests, is delivered through an accessible system that is WCAG 2.1 and Section 508 compliant. Schools can apply any preferred accessibility enhancement (e.g. read-loud / JAWS) to web-based content.

Criterion 3.3: STUDENT SUPPORTS	
3i. Materials provide strategies and supports for students in special populations to support their regular and active participation in **Computer Science: Software Development**	All CompuScholar material is delivered through an accessible system that is WCAG 2.1 and Section 508 compliant. Schools can apply any preferred accessibility enhancement (e.g. read-loud / JAWS) to web-based content. All text can be auto-translated to any language using tools available to all major web browsers. Please see a more detailed description earlier in this document and "CompuScholar in Spanish and Other Languages" at https://www.compuscholar.com/schools/outreach/webinars for details.
3j. Materials provide extensions and/or opportunities for students to engage with **Computer Science: Software Development** at higher levels of complexity.	Each course contains a series of increasingly complex chapter activities that cumulate in significant mid-term and final projects. Courses also contain a variety of supplemental chapters and lessons at the end with enrichment opportunities in additional areas.
3k. Materials provide varied approaches to learning tasks over time and variety in how students are expected to demonstrate their learning with opportunities for students to monitor their learning.	Lesson concepts are presented both in written lesson text (with relevant imagery) and with instructional videos. Students will complete a wide variety of "Work-with Me" exercises, chapter activities, quizzes, tests, and (in some courses) homework assignments. Students receive instant feedback from the system for all quizzes, tests, and (where relevant) auto-graded coding assignments. Students have access to an electronic grade book and report dashboard to monitor their progress.
3l. Materials provide opportunities for teachers to use a variety of grouping strategies.	Each course contains one or more significant group projects for collaboration opportunities. Individual lessons and "Work with Me" exercises may also contain opportunities to work in small groups under a teacher's direction.
3m. Materials provide strategies and supports for students who read, write, and/or speak in a language other than English to regularly participate in learning.	All text can be auto-translated to any language using tools available to all major web browsers. Please see a more detailed description earlier in this document and "CompuScholar in Spanish and Other Languages" at https://www.compuscholar.com/schools/outreach/webinars for details.

3n. Materials provide a balance of images or information about people, representing various demographic and physical characteristics.	CompuScholar courses generally avoid representations of people in specific demographic groups in favor of completely neutral subjects like robots or animals. When present, images of people have appropriate differentiation.
3o. Materials provide guidance to encourage teachers to draw upon student home language to facilitate learning.	Each course uses familiar, real-life examples designed to resonate with today's students, allowing them to understand topics with easily understood applications.
3p. Materials provide guidance to encourage teachers to draw upon student cultural and social backgrounds to facilitate learning.	Each course uses familiar, real-life examples designed to resonate with today's students, allowing them to understand topics with easily understood applications.
3q. Materials provide supports for different reading levels to ensure accessibility for students.	Many CompuScholar courses have built-in vocabulary words with tool-tip pop-ups and summary definitions at the bottom of each lesson.

Criterion 3.4: INTENTIONAL DESIGN	
3r. Materials integrate technology such as interactive tools, virtual manipulatives / objects, and/ or dynamic software in ways that engage students in the grade-level/series standards, when applicable.	Each course makes use of integrated, interactive tools to let students write and run code in the web browser. Lesson text pages contain "live" examples that can be dynamically explored during the lesson.
3s. Materials include or reference digital technology that provides opportunities for teachers and/or students to collaborate with each other, when applicable.	Each course contains guidance for collaboration and teamwork, where relevant.
3t. The visual design (whether in print or digital) supports students in engaging thoughtfully with the subject and is neither distracting nor chaotic.	CompuScholar's online delivery system is clean, appealing, and easy to use.
3u. Materials provide teacher guidance for the use of embedded technology to support and enhance student learning, when applicable.	Complete teacher support for use of the online system is provided in the built-in Teacher Guides, Activity Solution Guides, Professional Development modules, help documentation and other teacher training provided as part of every deployment.