Teaching Tomorrow's Technology.
CompuScholar

Oklahoma 2024 Instructional Materials Review
HQIM Rubric Guidance

Computer Science

To help reviewers understand how CompuScholar courses support Oklahoma's HQIM rubric for Computer Science, we offer the following guidance on each Key Question.

Gateway 1: Academic Standards-Alignment, Coherence, and Assessment		
Criterion 1.1 Alignment and Accuracy	Materials are aligned closely to the Oklahoma Academic Standards for Computer Science.	
Indicators	**Guiding/Key Questions**	**CompuScholar Guidance**
***1a. The instructional materials are aligned to the Oklahoma Academic Standards for Computer Science at grade-level.**	Are all of the Oklahoma Academic Standards for Computer Science covered in the curriculum for each grade-level?	Alignments to the OAS for Computer Science for each course are posted at https://www.compuscholar.com/oklahoma The alignment documents describe how each OAS CS requirement is addressed by a specific chapter or lesson.
1b. The instructional materials provide opportunities to interact with real-world computer science tools and their purposes.	Do materials provide opportunities for students to engage directly with authentic computer science tools?	Each programming course contains either a built-in IDE for web-based programming or instructs students how to use a 3rd party, locally installed IDE. Each course also includes lessons on the use of a debugger, flowcharts, pseudocode, and other traditional CS tools.
1c. The majority of time anticipated for the coverage of the instructional materials corresponds to standards for computer science.	Does the majority of instructional time address the expected grade level learning outcomes?	Students will spend the majority of time in each course focused on programming and computer science topics.

Criterion 1.2 Coherence	The instructional materials attend to the learning progressions emphasized in the standards, so that the curriculum is coherent both within a grade and across grade bands and are coherent and consistent with the progressions in the Oklahoma Academic Standards for Computer Science.	
Indicators	**Guiding/Key Questions**	**CompuScholar Guidance**
1d. The instructional materials are consistent with the progression of skills found in the Oklahoma Academic Standards for Computer Science **The instructional materials provide a coherent sequence or collection of activities and texts that build content knowledge, vocabulary, and skills.**	Do the materials provide a coherent sequence of lessons that follow the progression of grade-level standards? Do the materials provide a coherent sequence of collection of activities and texts that build content knowledge, vocabulary, and skills?	Chapters and lessons are carefully sequenced to start with foundational skills and build increasingly detailed concepts. Increasingly complex, hands-on exercises in each lesson and chapter allow students to practice skills and demonstrate mastery.
1e. Materials make connections to computer science topics covered in past lessons so students connect new learning with background knowledge.	Are past grade-level topics and lessons referenced as new concepts are added?	Skills taught in earlier lessons are referenced as needed and re-used as part of increasingly complex activities later in the course.
1f. Materials provide scaffolding or fading of support over time to promote student proficiency and independence with targeted computer science skills.	Is scaffolding present to promote understanding and independence in learners?	Scaffolding of material and exercises is present in order of increasing difficulty as follows: • Instructional Videos • Lesson Text • Work-with-Me Exercises (in lessons) • Homework Exercises (where present) • Chapter Activities

1g. 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.	Is content grade-level appropriate? Does content incorporate student prior knowledge?	Content is written with appropriate vocabulary, style, and grammar for the target grade levels. Examples and exercises are designed to appeal to today's students. Skills taught in earlier lessons are referenced as needed and re-used as part of increasingly complex activities later in the course.

Criterion 1.3 Assessment	The materials provide tools, guidance, and support for teachers to collect, interpret, and act on data about student progress toward the Oklahoma Academic Standards.	
Indicators	**Guiding/Key Questions**	**CompuScholar Guidance**
1h. Materials provide strategies for gathering information on students' prior knowledge across grade levels.	Do materials provide strategies to gather information on students' prior knowledge?	Each lesson has an associated quiz, and each chapter has an associated test. Hands-on chapter activities provide additional assessment of student capabilities. Comprehensive reporting is available through the electronic grade book and Report Dashboard from the Teacher Menu.
1i. Assessments clearly denote which standards are targeted.	Do materials denote what cluster/standard is being assessed by each item?	Alignments to the OAS for Computer Science for each course are posted at https://www.compuscholar.com/oklahoma The alignment documents describe how each OAS CS requirement is addressed by a specific chapter or lesson, and assessments belonging to those chapters or lessons naturally support the cited standards.

1j. Assessments include aligned rubrics that provide sufficient guidance to teachers for interpreting student performance and suggestions for follow-up.	Do materials include scoring guidance (rubrics, anchors, etc.) Does the guidance include support for teachers to interpret student performance and suggestions for follow-up?	Each lesson has an associated quiz, and each chapter has an associated test. Hands-on chapter activities provide additional assessment of student capabilities. Examples of typical student solutions are given for hands-on projects.
1k. Assessment methods are varied, making them accessible to all students and do not penalize or reward students due to exceptionalities.	Are assessment methods varied to all accessibility for all types of students?	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.

Gateway 2: Instructional Support and Technology Accessibility		
Criterion 2.1 Student Learning	The materials identify ways in which materials are designed for each child's regular and active participation in grade-level/grade band/series content.	
Indicators	**Guiding/Key Questions**	**CompuScholar Guidance**
***2a. Materials provide appropriate level and type of scaffolding, differentiation, intervention and support for a broad range of learners.**	Provides extra support for students working below grade level. Provides extensions for students with high interest or working above grade level. Provides instructional supports to accommodate English Learners (EL).	Instructional videos are optional and designed to reinforce the main lesson concepts, providing audio-visual interpretation and alternate examples to the required reading in the lesson text. Courses may contain supplemental lessons with enrichment topics for advanced students. Individual exercises may also challenge advanced students with additional, optional goals. All electronic text material can be automatically translated into Spanish and other languages using the translation tools available in all modern web browsers. Students can switch back and forth between their native language and English dynamically to consume content and help them learn English. Please see our Nov/Dec 2023 webinar, "CompuScholar in Spanish and other Languages" for details: https://www.compuscholar.com/schools/outreach/webinars
2b. Materials within each lesson provide multiple representations for a variety of different types of learners using alternatives to reading, writing, listening, and speaking such as translations, pictures, or graphic organizers.	Do materials provide multiple representations for different types of learners?	Lesson concepts are presented both in written lesson text and with instructional videos. The videos provide an alternate, audio-visual summary of the main lesson concepts.

2c. Materials connect learning to students' homes, neighborhoods, and communities.	Do materials provide or allow for possible connections from content to student homes, neighborhoods, and communities?	Lessons use real-world examples, where relevant, that appeal to today's students, using familiar, everyday topics and concepts.
2d. Materials provide guidance and strategies that encourage and support students to draw upon their own cultural, linguistic, and social backgrounds to facilitate learning.	Do the materials include content and questions that encourage students to draw upon their own background and experiences?	The teacher's guide for each lesson contains suggested classroom discussion questions. Individual lessons may also include open-ended questions or class discussions.

Criterion 2.2 Teacher Supports and Supplemental Materials	The materials allow teachers to effectively plan and implement content with integrity and to further develop their professional learning.	
Indicators	**Guiding/Key Questions**	**CompuScholar Guidance**
2e. Materials are educative and accessible for teachers with differing computer science content knowledge (e.g., computer science definitions and examples of computer science concepts are offered to support teacher learning).	Do the materials include features (glossaries, footnotes, recordings, pictures, etc.) that aid teachers in using them effectively?	All parts of the online system provide relevant help in a variety of formats, including: • Help documents from the top menu • Tutorial area from the Student and Teacher Menu • Pop-up tooltips where needed to describe vocabulary in lessons or controls in the surrounding online system. • Narrative text available for instructional videos

2f. Materials provide teachers with common misconceptions and challenges that students have regarding computer science concepts and potential explanations or solutions associated with computer science.	Are common misconceptions and challenges provided? Are possible explanations or solutions shared to help students overcome these?	Where relevant, lessons point out common misconceptions or problems and provide troubleshooting guidance to help students overcome common challenges. Programming courses contain dedicated chapters on debugging.
2g. Materials contain teacher' support materials with ample and useful annotations, and suggestions on how to present the content in the student edition and in the ancillary materials.	Are there overview sections and/or annotations that contain narrative information about the computer application content and/or ancillary documents that will assist the teacher in presenting the student material?	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 and a bulleted list of lesson objectives.
2h. Materials provide an estimated instructional time for each lesson, chapter and unit (i.e., pacing guide).	Do the materials incorporate estimated instructional time for individual lessons, chapters, and units, as reflected in a clear and comprehensive pacing guide?	Alignments to OAS standards for each CS course are posted at https://www.compuscholar.com/oklahoma. The alignment documents link individual requirements to specific chapters and lessons within the course. The course syllabus and pacing guide pinned to the top of each course provides detailed pacing guidance on each chapter.

Criterion 2.3 Instructional Design	The instructional materials align with student-centered practices and allow opportunities for students to explore content.	
Indicators	**Guiding/Key Questions**	**CompuScholar Guidance**
2i. Materials include a mixture of instructional strategies (i.e., discussions, modeling, student activities, projects).	Do materials allow for a variety of instructional strategies within the lessons and across the curriculum?	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.
2j. Students are provided with opportunities to work collaboratively.	Do the materials include activities that allow students to work collaboratively?	Each course contains one or more team projects and associated guidance to facilitate collaboration and group work.
2k. 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.	Are students provided with opportunities to explore open-ended prompts and reflect on their own 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.
2l. Students are provided with opportunities to explore computer science career pathways.	Do the materials showcase career options and pathways related to computer science?	Each course contains relevant lessons or chapters on career exploration.

Gateway 3: Access and Technology		
Criterion 3.1 Access	Materials meet technical requirements and design standards to ensure accessibility, compatibility, and ease of use.	
Indicators	**Guiding/Key Questions**	**CompuScholar Guidance**
3a. Digital materials (either included as part of the core materials or as part of a digital curriculum) are web-based and compatible with multiple internet browsers (e.g., Internet Explorer, Firefox, Google Chrome).	Are materials accessible on a variety of web browsers?	All course material can be accessed through any modern, HTML5-compliant web browser on any desktop, laptop, or tablet computer.
3b. Digital materials are "platform neutral" (i.e., are compatible with multiple operating systems such as Windows and Apple and are not proprietary to any single platform) and allow the use of tablets and mobile devices.	Are materials accessible on a variety of devices? Do materials require specific device requirements that may not be accessible on all device types?	All course material can be accessed through any modern, HTML5-compliant web browser on any desktop, laptop, or tablet computer. Specific courses may have additional device requirements (e.g. a Windows or Mac OS computer) if they teach students how to use 3rd party software packages that require those operating systems.
3c. Digital materials are well-designed, easy to use, and encourage learner use.	Are the materials well-designed and easy to use? Do the materials encourage learner use?	The courses are designed as a turn-key system that has everything students and teachers need to be successful.
3d. Digital materials are accessible from within a Learning Management System (LMS).	Can materials be easily shared within a Learning Management System?	Courses can be integrated into a district LMS like Canvas or Schoology using 1EdTech (IMS Global) standards. For details, please see our Integrations page: https://www.compuscholar.com/schools/standards/integrations

3e. Non-digital versions of materials are available for students who do not have off-campus access to digital materials.	Are there non-digital versions of all materials that students can use when off-campus and away from internet access?	All course material is online and designed with interactive features to be delivered via a web browser. Individual lesson text pages may be printed if desired using the CTRL+P print functions built into all web browsers, but offline use is not recommended.

Criterion 3.2 Technology	Materials integrate digital technology and interactive tools, when appropriate, in ways that support student engagement.	
Indicators	**Guiding/Key Questions**	**CompuScholar Guidance**
3f. Digital materials are responsive to student input in a way that creates an individualized learning experience.	Do the materials adapt to user actions? Do the materials allow the user some flexibility or individual control during the learning experience?	Students are encouraged to create unique work, where relevant, on a lesson-by-lesson basis. Additional creative projects are present for group work. The scope of that unique work can be modified by the teacher as desired to meet individual student needs and capabilities.
3g. Interactive material is purposeful and directly related to learning.	Does the interactive material support the learning objectives of the lesson(s)?	The system has many interactive features (vocabulary pop-ups, in-lesson coding exercises, embedded typing engines, etc.) that all directly support the subjects being taught.
3h. Digital materials meet all district privacy and data security requirements.	Do materials meet privacy and data security requirements for districts?	CompuScholar complies with all relevant privacy and data security protocols and regulations. We are a certified 1EdTEch TrustEd App and a signatory to the Student Privacy Pledge. For details, please see our posted Privacy Notice: https://www.compuscholar.com/about-us/privacy-notice

Gateway 4: Statutory and Regulatory Fidelity

Criterion 4.1
Statutory and Regulatory Fidelity

Indicators	CompuScholar Guidance
4a. Do the instructional materials teach or promote the idea that one race or sex is inherently superior to another race or sex?	No CompuScholar material addresses these topics in any form.
4b. Do the instructional materials teach or promote the idea that an individual, by virtue of his or her race or sex, is inherently racist, sexist or oppressive, whether consciously or unconsciously?	No CompuScholar material addresses these topics in any form.
4c. Do the instructional materials teach or promote the idea that an individual should be discriminated against or receive adverse treatment solely or partly because of his or her race or sex?	No CompuScholar material addresses these topics in any form.
4d. Do the instructional materials teach or promote the idea that members of one race or sex cannot and should not attempt to treat others without respect to race or sex?	No CompuScholar material addresses these topics in any form.
4e. Do the instructional materials teach or promote the idea that an individual's moral character is necessarily determined by his or her race or sex?	No CompuScholar material addresses these topics in any form.
4f. Do the instructional materials teach or promote the idea that an individual, by virtue of his or her race or sex, bears responsibility for actions committed in the past by other members of the same race or sex?	No CompuScholar material addresses these topics in any form.
4g. Do the instructional materials teach or promote the idea that any individual should feel discomfort, guilt, anguish or any other form of psychological distress on account of his or her race or sex?	No CompuScholar material addresses these topics in any form.
4h. Do the instructional materials teach or promote the idea that meritocracy or traits such as a hard work ethic are racist or sexist or were created by members of a particular race to oppress members of another race?	No CompuScholar material addresses these topics in any form.

Criterion 4.2 Statutory and Regulatory Fidelity	
Indicator	**CompuScholar Guidance**
4i. Are the instructional materials subjective in content and partial in interpretations?	CompuScholar materials focus on clearly explained technical subjects.
4j. Do the instructional materials encourage or condone civil disorder, social strife, or disregard for the law?	No CompuScholar material addresses these topics in any form.
4k. Do the instructional materials degrade or avoid teaching, where appropriate, high moral standards, including: **● Honesty?** **● Respect for parents, teachers, and those properly in authority?** **● The importance of the work ethic in achieving personal goals?** **● The existence of absolute values of right and wrong?**	CompuScholar courses, when discussing topics like digital citizenship or professionalism in the workforce, encourage high ethical standards, including honesty, respect, adherence to the law, and working to achieve goals.
4l. Do the instructional materials de-emphasize or play down the importance of the family as the core of American society, and do they degrade traditional roles of men and women, boys and girls?	No CompuScholar material addresses these topics in any form.
4m. Do the instructional materials exclude or undermine the principles of the free enterprise system and the effectiveness of the free enterprise system?	No CompuScholar material addresses these topics in any form.
4n. Do the instructional materials include extraneous material unrelated to the subject of the textbook, negatively impacting the intellectual development of the child's instruction in reading, writing and arithmetic?	CompuScholar materials focus on clearly explained technical subjects.
4o. Are the instructional materials designed to neglect or suppress an awareness of the religious and classical culture of the western world and its significance to the preservation of the liberties of the American people?	CompuScholar materials focus on clearly explained technical subjects.

4p. Do the instructional materials present imbalanced and nonfactual treatments to controversial, political, and social movements with biased editorial judgments?	No CompuScholar material addresses these topics in any form.
4q. Do the instructional materials promote: • **Illegal lifestyles?** • **Illegal sexual behavior?** • **Sadistic behavior?** • **Degrading behavior?**	No CompuScholar material addresses these topics in any form.
4r. Do the instructional materials include blatantly offensive language or illustrations?	CompuScholar materials focus on clearly explained technical subjects without offensive language or illustrations.
4s. Do the instructional materials include violence for reasons of excitement, sensationalism or as an excuse for relevance? • **If violence does appear in the instructional materials, do the instructional materials treat the violence without context of cause or consequence?**	CompuScholar materials focus on clearly explained technical subjects.
4t. Do the instructional materials treat the subject of historical origins of humankind in a subjective and biased manner?	No CompuScholar material addresses these topics in any form.
4u. Do the instructional materials invade the privacy of the pupils or the pupils' parents?	No CompuScholar course invades the privacy of student or their families. No data is collected outside of clearly defined student work, grades, system usage, and the minimal profile information needed to maintain accounts.