

**TENNESSEE CAREER AND TECHNICAL EDUCATION TEXTBOOK SCREENING INSTRUMENT**  
**Sections I & III Reviews**

Book:	Refrigeration & Air Conditioning Technology	Publisher:	Cengage Learning Inc.
ISBN:	9781305899391	Year:	2016
Levels/Course:	Basal	Category:	6077

**BEFORE YOU BEGIN**

ALIGNMENT TO THE TENNESSEE CAREER AND TECHNICAL EDUCATION STANDARDS:

Tennessee's Career and Technical Education Standards (hereafter, "the standards") represent a significant shift in the definition of student proficiency within career and technical education environments. Evaluators of materials should understand that the standards replace the proficiency frameworks of years past in three major respects:

- 1) A shift to clear, specific, and measurable expectations for student learning. The standards articulate deep knowledge and skill attainment, departing from the competency-based structure of years past.
- 2) Increased focus on rigor in literacy and mathematics within technical contexts. The new standards align to all Tennessee State Standards for English Language Arts and Literacy in Technical Subjects and, where appropriate, select Tennessee State Standards in Mathematics.
- 3) Sequential progression of knowledge and skills within and across courses. The new standards build on each other both within course content and across course levels, arranged within programs of study that culminate in capstone and/or work-based learning experiences for students.

Evaluators of materials must be well versed in the standards for the course(s) aligned to the materials in question, how the content fits into the progressions in the content standards, and the expectations of the standards with respect to conceptual understanding, fluency, and technical application. Aligned courses in the Architecture & Construction Career Cluster:

**ORGANIZATION OF THIS DOCUMENT**

**SECTION II: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY**

Section II includes additional criteria for alignment to the standards as well as indicators of quality.

**SECTION III: FOCUS AREA (optional)**

Section III allows reviewers to capture qualitative observations on an additional area of focus, if presented in the materials.

\*For the purposes of this document, Tennessee CTE students are considered to be enrolled in course "levels" (i.e., Level 1, Level 2, Level 3, and Level 4) due to variation in the *grade* level at which students may take a course. For example, a tenth-grade student may be enrolled in a Level 1 course. For this reason, reviewers are asked to evaluate materials on the basis of their alignment to particular *course levels*, not *grade levels* or *grade bands*.

\*\*This percentage is a guide. Reviewers should not attempt to compute percentages based on counting pages or counting lessons. Reviewers will use their professional judgment to determine how students are meant to spend their time to determine focus and provide evidence for their decision.

Section II(1). ADDITIONAL ALIGNMENT CRITERIA	SCORE	JUSTIFICATION/NOTES
<p>A. Materials are aligned to relevant <b>national and/or industry standards</b> where appropriate. For example, <i>Mechatronics I</i> materials routinely make reference to and reinforce connections with national industry certification standards from companies like Siemens.</p>	2	Materials make many references and explanations to national industries and certifications. For example NATE North American Technician Excellence.
<p>B. Materials are aligned to discipline-specific <b>content or pedagogical frameworks</b> frequently used by professionals in associated industries. For example, <i>Differentiating Instruction</i> materials routinely make reference to and reinforce connections with instructional strategies that meet the educational needs of the student, as specified in the standards.</p>	2	The materials align with content that is used by professionals in associations within the HVAC industry.
<p>C. Connections are made to discipline-specific <b>professional societies and organizations</b>, and their value is clearly communicated in the materials. For example, <i>School Counseling</i> materials routinely make reference to and reinforce connections with the American School Counselor Association (ASCA).</p>	2	Materials connect to discipline specific societies and organizations. Materials go into great depth to explain the role and importance of these societies and organizations.

**Additional Comment Section II(1):**

Section II(2). SEQUENCE AND PROGRESSION OF STANDARDS	SCORE	JUSTIFICATION/NOTES
<p>A. Connections are made within a course between knowledge and skills, where these connections are appropriate and natural, as set forth by the standards.</p>	2	Connections are made between knowledge and skills as outlined by the state standards.
<p>B. Materials are vertically coherent with previous courses and these connections are made clear in the materials. The connections are explicit to the other materials in the course.</p>	2	Materials are progressively aligned with previous courses.

C. For materials in a series, content progressions reflect the progressions as seen in the standards. These progression connections are clearly indicated in the materials. Any discrepancies in content progressions enhance the required learning in each course and are clearly aimed at helping students meet the standards as written.	2	Content progressions resemble and reflect the standard progressions.
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<b>Section II(3). TEACHER SUPPORTS</b>	<b>SCORE</b>	<b>JUSTIFICATION/NOTES</b>
A. Materials support teachers in ways such as the following: planning (including ideas for pacing), sample lessons, laboratory applications, projects, vocabulary, and instructional strategies.	2	Several instructional strategies are supported by the materials.
B. Materials include teacher-directed materials that explain the role of the practice activities in the classroom and in students' content development. Problems and activities present opportunities for students to make use of and exhibit the skills as they work on mastery of content.	2	Materials include 'Technician Service Call' feature that offers opportunities to exhibit these skills.
C. Opportunities and resources are provided for teachers to conduct independent study to enhance their own understanding and knowledge of course topics. Materials provide avenues to seek and identify quality professional development in a manner that will support student learning.	0	No information found to conduct independent study to enhance teacher knowledge.

Section II(4). USABILITY	SCORE	JUSTIFICATION/NOTES
A. Materials can be accessed in a variety of formats and media, including but not limited to printed textbooks, digital storage devices, online applications, and cloud-based forums.	2	Materials can be accessed through printed textbooks,online applications, and cloud-based forums.
B. Materials are clear and easy to read for students, teachers, and parents. The design and graphics do not distract from the course content and are appropriately placed.	2	Materials are clear and easy to understand for the advanced level three student.
C. Materials include supports for all learners, e.g., ELs, students who are below grade level, advanced students.	0	Supports were not found for ELS, or lower level learners.
D. Materials are culturally and politically sensitive to the full range of potential users, and do not advance unwarranted opinions that are not factually based. All materials strive to present content, not beliefs.	2	

**Please note any concerns with sensitivity below:**

Section II(5). ASSESSMENTS	SCORE	JUSTIFICATION/NOTES
A. Materials include aligned assessments at regular intervals throughout the text(s), or as supplements to the primary instructional materials. Aligned assessments may include end-of-chapter quizzes, unit test modules, and practice exams.	2	Materials include end of unit review questions. In these reviews a variety of question types are used.
B. Materials offer ideas and guidance on measuring student progress throughout the duration of the aligned course(s). Formative, interim, and summative assessment strategies are all presented to inform instructional strategy and improvement.	2	The materials offer a support named 'Mind Tap'.This support offers abilities to

		measure the student progress through formative, interim, and summative assessments.
C. Materials include assessment accommodations for diverse learners, including sample items that capture multiple measures of student proficiency.	1	Through the Mind Tap app teachers can create assessments for diverse learners.

**Please use the space below to leave any additional notes about Section II not previously captured:**

**SECTION III (optional): FOCUS AREA**

Use this section to capture qualitative observations on an additional area of focus, if presented in the materials. A sample focus area for the Health Informatics program of study is provided in the following. If applicable, fill in the blank table with observations and notes.

<b>III. EXAMPLE: FOCUS IN Health Information Systems</b>	<b>NOTES</b>
A. Materials include coverage of major parameters most frequently reported in health databases.	<i>[Insert reviewer evaluation here.]</i>
B. Materials draw clear connections between policy and procedures and the legal ramifications of health informatics.	<i>[Insert reviewer evaluation here.]</i>
<b>III. FOCUS AREA:</b>	<b>NOTES</b>

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Appendix A, Career and Technical Education: Programs of Study by Course