TENNESSEE CAREER AND TECHNICAL EDUCATION TEXTBOOK SCREENING INSTRUMENT
Section I Reviews

Reviewer: Evaluator_1

Book:	Engineering Drawing & Design	Publisher:	Cengage Learning Inc.
ISBN:	9781305899384	Year:	2017
Levels/Course:	Basal	Category:	6139

SECTION I: ADDITIONAL ALIGNMENT CRITERIA AND INDICATORS OF QUALITY

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.Choose an item.
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.

Section I (1): **FOCUS:** **Students and teachers using the materials as designed devote the majority of time in each level to the course standards.***	
METRICS:	**YES/NO**
A. In any single course level, materials are designed where there is 80%** alignment to the course standards (see Appendix A, 12).	Yes
B. All materials are appropriate for the designated course level, both in terms of content and in terms of language. For materials spanning multiple course levels and/or grade bands, content is presented at the appropriate grain size (i.e., level of detail) commensurate to expectations in the standard.	Yes
C. Materials focus equally on the *conceptual knowledge* as well as the *technical skill* outlined in the standards.	Yes
D. Topics do not deviate from the content outlined in the course standards. Topics may go "above and beyond" stated learning expectations, but not in a manner that distracts from the focus on specific knowledge and skills as determined by the standards.	Yes
To be aligned to the Tennessee Standards, materials for each level must attend to all four indicators of Focus. All four indicators must be marked Yes.	**Meet? Yes**
Justification/Notes: The materials align with many, but not all course standards. Engineering career exploration is certainly not a focus, and the engineering design process is minimally addressed for 20 pages at the end of a 1,000-page textbook. Engineering drawing and computer-aided drafting are the very dominant focus of the text, and energy and electrical systems are only addressed as they relate to drawing and drafting. Mechanisms and gears are the focus of one chapter, but again, only as they relate to the art of drafting and CAD.	

*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.

TN Department of Education

Section I (2): RIGOR **Each level's instructional materials reflect high expectations for all students. They follow faithfully the level of rigor intended in the standards and support student learning through high-quality presentation of content and challenging application.**	
METRICS:	**YES/NO**
A. Materials effectively meet the level of rigor intended in the standards.	Yes
B. High-quality problems and questions designed to invite exploration and support conceptual understanding are included throughout. A variety of problems, both conceptual and technical, enable students to connect course content and transfer understandings to new situations.	Yes
C. All materials reinforce literacy and mathematics instruction in career and technical education environments. Texts are of an appropriately challenging Lexile level; mathematics problems push students to apply quantitative reasoning to specific technical situations.	Yes
D. Materials support the development of fluency, including regular opportunities to practice knowledge and skills, appropriately apply tools, and use technology.	Yes
E. Domain-specific vocabulary and industry terminology are frequently used to explain topics, or to make connections to key workplace activities.	Yes
To be aligned to the standards, all five indicators of Rigor must be marked Yes.	**Meet? Yes**

Justification/Notes:

The materials meet and, in many respects, exceed the level of rigor intended in the state standards. At the end of each chapter, students are offered the opportunity to access a student companion website to download chapter tests and a variety of related problems. The Lexile level of the text is extremely challenging and activities address many specific technical situations related to computer-aided drafting. Engineering vocabulary and industry-specific terminology are frequently used and, in some respects, are tied to career opportunities.

TN Department of Education

Section I (3): POSTSECONDARY AND CAREER READINESS: **Materials promote multiple pathways to student success beyond high school, highlighting a range of career opportunities aligned with entry and exit points to and from appropriate postsecondary programs. Aligned pathways are presented in a fair and balanced fashion that underscores the need for advanced training beyond high school, but does not privilege one set of credentials over another and is consistent with occupational requirements.**	
METRICS:	**YES/NO**
A. Technical skills are promoted within the context of applicable industries and work environments. They are *not* presented in isolation or without meaningful connections to aligned careers.	Yes
B. Materials showcase a diversity of career and postsecondary opportunities for students upon completion of high school, including all applicable levels of postsecondary training (i.e., technical schools, community colleges, four-year universities, etc.).	Yes
C. Connections to relevant certifications and other credentials are clearly explained, and their value in industry is communicated where appropriate.	Yes
D. Materials provide opportunities for students to practice and reflect upon 21st century (or "soft") skills.	Yes
To be aligned to the standards, all four indicators of Postsecondary and Career Readiness must be marked Yes.	**Meet? Yes**
Justification/Notes: Technical skills are promoted in a way that ties to real-world industries and work environments, but those skills are almost exclusively limited to technical sketching and computer-aided drafting as the text's title would suggest. Career and post-secondary opportunities are covered, but are certainly not "showcased" in the text or related materials. Relevant certifications are clearly explained, and the materials offer an extensive explanation of their value in real-world work environments. Students are able to practice soft skills through chapter-related PowerPoint reviews and some discussions of workplace etiquette.	

Were all three non-negotiables in section I met? **(Was each component marked "yes"?)**	**Yes**