

**TENNESSEE CAREER AND TECHNICAL EDUCATION TEXTBOOK SCREENING INSTRUMENT  
HORTICULTURE SCIENCE PROGRAM OF STUDY  
AGRICULTURE, FOOD, & NATURAL RESOURCES CAREER CLUSTER**

**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 Agriculture, Food, & Natural Resources Career Cluster :

**AGRISCIENCE (5957)**

**PRINCIPLES OF PLANT SCIENCE AND HYDROCULTURE (6119)**

**GREENHOUSE MANAGEMENT (5954)**

**LANDSCAPING AND TURF SCIENCE (5951)**

**+SUPERVISED AGRICULTURAL EXPERIENCE (5964)**

**\*INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS (GIS) (6142)**

*+ Indicates a structured experiential learning opportunity that takes place in a setting outside of regular school hours*

*\*Indicates courses available for elective credit*

**STATEMENT OF STUDENT PROFICIENCY**

The Agriculture, Food, & Natural Resources (AFNR) career cluster is designed to prepare students for successful careers in the global agriculture, food, fiber, and natural resources systems with a desire to focus on the production, processing, marketing, distribution, financing, and development of agricultural commodities and resources. Students enrolled in the AFNR career cluster will become veterinarians, bio-systems engineers, loan officers, financial advisors, food scientist, landscaper, greenhouse manager, turf manager, production manager, environmental officer or other occupations in the agriculture, food and natural resources industry. In this program of study, proficient students will develop skills in plant health, growth, reproduction, biotechnology, hydroponics, aquaponics, greenhouse structures, growing media, site analysis, planning, design, plant selection and care. Upon completion of this POS, students will be prepared to pursue further study in the horticulture sciences at the postsecondary level. Note to reviewers: *All materials reviewed as part of this application must align to the statement of student proficiency provided above.*

**ORGANIZATION OF THIS DOCUMENT**

## SECTION I: NON-NEGOTIABLE ALIGNMENT CRITERIA

All submissions must meet all of the non-negotiable criteria for each course before passing on to Section II.

## 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.

**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:**

A. In any single course level, materials are designed where there is 80%** alignment to the course standards (see Appendix A, 12).	Yes <u>x</u>	No ____
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 <u>x</u>	No ____
C. Materials focus equally on the <i>conceptual knowledge</i> as well as the <i>technical skill</i> outlined in the standards.	Yes <u>x</u>	No ____
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 <u>x</u>	No ____

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 x No \_\_\_\_

**Justification/Notes:**

**First, this is not text it is video and power point presentations, but the Standard alignment is excellent. All material span a multitude of course levels. Conceptual knowledge covered very well with excellent references to technical skill. And, topics can be covered as thoroughly as the teacher feels appropriate for the readers. You can search the site and find a multitude of lessons to go beyond basic knowledge.**

\*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 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:**

A. Materials effectively meet the level of rigor intended in the standards.	Yes <input checked="" type="checkbox"/> <b>x</b>	No <input type="checkbox"/>
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 <input type="checkbox"/> <b>x</b> <input type="checkbox"/>	No <input type="checkbox"/>
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 <input type="checkbox"/> <b>x</b> <input type="checkbox"/>	No <input type="checkbox"/>
D. Materials support the development of fluency, including regular opportunities to practice knowledge and skills, appropriately apply tools, and use technology.	Yes <input type="checkbox"/> <b>x</b> <input type="checkbox"/>	No <input type="checkbox"/>
E. Domain-specific vocabulary and industry terminology are frequently used to explain topics, or to make connections to key workplace activities.	Yes <input type="checkbox"/> <b>x</b> <input type="checkbox"/>	No <input type="checkbox"/>
<b>To be aligned to the standards, all five indicators of Rigor must be marked Yes.</b>	<b>Meet?</b> Yes <input type="checkbox"/> <b>x</b> <input type="checkbox"/> No <input type="checkbox"/>	

**Justification/Notes:**

The materials do support literacy if the teacher suggests reading the power points and adding “student Notes” and “vocabulary” to the lesson. To increase the rigor activities provided support research. Supplemental reading should be provided which can come from “lesson Links” under the lesson plans but the teacher will have to look for resources. Math is best viewed in their own units rather than throughout the text. Math can be pulled out of these units and studied within various applications of the text. Activities from lesson plans and under the lesson itself are a great source of practice knowledge and skills.

**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:**

A. Technical skills are promoted within the context of applicable industries and work environments. They are <i>not</i> presented in isolation or without meaningful connections to aligned careers.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>
C. Connections to relevant certifications and other credentials are clearly explained, and their value in industry is communicated where appropriate.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
D. Materials provide opportunities for students to practice and reflect upon 21st century (or “soft”) skills.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

<b>To be aligned to the standards, all four indicators of Postsecondary and Career Readiness must be marked Yes.</b>	<b>Meet?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Justification/Notes:</b> Text has in ever lesson plan "lesson links", "career and technical student organizations" and "career connections" which refer to certifications, industry and work environments. The text also offers many activities using "Soft Skills" as well as information under "speaking and Listening" standards in the lesson plan. Students can integrate information from what they learned from the power points and video to their own experiences	

<b>Were all three non-negotiables in section I met?</b> <b>(Was each component marked "yes"?)</b>	<b>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></b>
--	--