



Knowledge and Skills: How to Unpack a Standard

Overview

Why unpack a standard into knowledge and skills?

The first step in translating CTE course standards into relevant, engaging and student outcome-focused lessons involves a careful reading of the standards to ensure an understanding of how the individual competencies fit together to form a deep conceptual comprehension of a topic.

Unpacking a standard into knowledge and skills allows for a sequenced approach to instruction that is grounded in real world application. Once teachers have broken down the knowledge and skills inherent in their standards, they can start to group standards with like content to deepen student understanding.

Unpacking Process

Step 1:

The first step of unpacking a standard into knowledge and skills is to identify the knowledge (what a student should know) and the skills (what a student should be able to do). You can start this process by simply underlining or highlighting the **nouns** and circling the **verbs** within the standard. The **nouns** are the “what” and typically correspond to concepts a student should grasp and the **verbs** are the “how” and typically correspond to skills the student should be able to complete to demonstrate proficiency. Let’s take a look at an example.

Example: Fundamentals of Construction

Standard 16

Distinguish between the various types of **fasteners** commonly used in construction, such as **nails, screws**, and **bolts**, by **creating** a visual display **outlining** the **properties** and **uses** of each type. **Demonstrate** the ability to accurately **select** and **install** the **appropriate fastener** in a variety of **situations**. (TN Reading 2, 3, 4, 7; TN Writing 2)

Once basic knowledge and skills have been identified, you should think critically about what each individual topic would look like in a classroom. Some concepts may need to be expanded to capture all of the details students would need to know to fully grasp the concept. A knowledge and skills chart, like the example below, can assist in detailing out the distinct pieces of information that will need to be addressed to ensure all of your students reach proficiency on the standard. Depending on the complexity of the standard, all knowledge and skills may not be able to be covered in one lesson. Breaking down the distinct concepts will assist you in planning how long the standard will take to cover completely.



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Fundamentals of Construction Standard 16		
Standard	Knowledge	Skills
Distinguish between the various types of fasteners commonly used in construction, such as nails, screws, and bolts, by creating a visual display outlining the properties and uses of each type. Demonstrate the ability to accurately select and install the appropriate fastener in a variety of situations. (TN Reading 2, 3, 4, 7; TN Writing 2)	<p>Fasteners</p> <ul style="list-style-type: none"> Nails <ul style="list-style-type: none"> Common nails, box nails, finishing nails, roofing nails, casing nails, duplex nails Staples, brads Screws <ul style="list-style-type: none"> Wood screws, drywall screws, sheet metal screws, lag screws Bolts <ul style="list-style-type: none"> Cap screws, stove bolts, carriage bolts Washers Anchors <p>Properties</p> <ul style="list-style-type: none"> Nails <ul style="list-style-type: none"> Type, size, installation method Screws <ul style="list-style-type: none"> Head shape, slot type, length, thread pitch, gauge Bolts <ul style="list-style-type: none"> Type, diameter, length, thread pitch, material <p>Uses, Situations</p> <ul style="list-style-type: none"> Wood light-frame, steel, concrete, masonry, exterior finishes, interior finishes, roofing, mechanical systems 	<p>Distinguish</p> <p>Create</p> <p>Outline</p> <p>Demonstrate</p> <p>Select</p> <p>Install</p>



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Step 2:

Once you have identified the knowledge and skills within the standard, reference the aligned Tennessee State Standards in Technical Subjects and relevant general education standards (if applicable) listed at the end of the standard. You can find additional information on these referenced standards by scrolling to the bottom of the [course description document](#) to the *Standards Alignment Notes* section (see blue example box below).

Example: Fundamentals of Construction

Standard 16

Distinguish between the various types of fasteners commonly used in construction, such as nails, screws, and bolts, by creating a visual display outlining the properties and uses of each type. Demonstrate the ability to accurately select and install the appropriate fastener in a variety of situations. **(TN Reading 2, 3, 4, 7; TN Writing 2)**

Standards Alignment Notes

*References to other standards include:

- TN Reading: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Reading Standards for Literacy in Science and Technical Subjects 6-12; Grades 9-10 Students (page 62).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standard 10 at the conclusion of the course.
- TN Writing: [Tennessee State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects](#); Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6-12; Grades 9-10 Students (pages 64-66).
 - Note: While not directly aligned to one specific standard, students who are engaging in activities outlined above should be able to also demonstrate fluency in Standards 3 and 10 at the conclusion of the course.

TN Reading 2: Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

TN Reading 3: Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or expectations defined in the text.

TN Reading 4: Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in specific scientific or technical context relevant to grades 9 – 10 texts and topics.

TN Reading 7: Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

TN Writing 2: Write informative/ explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.



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These referenced standards will assist you in creating strong objectives, understanding how to present information to students and what additional types of information should be used to support conceptual understanding of the knowledge and skills identified in the CTE standard. For example, looking at the Tennessee State Standards for Reading 2, 3, 4, and 7 will assist this teacher in understanding how to teach the skills of “determining central ideas,” following a “multistep procedure,” “determining the meaning of key terms,” and translating words “into visual form” identified on the knowledge and skills chart. The Tennessee State Standard for Writing 2 will assist the teacher in teaching about “writing informative texts.”

Fundamentals of Construction Standard 16		
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Bridge to Practice

It's your turn!

Questions about this process or need assistance? Please contact CTE.Questions@tn.gov.

Follow the two-step process outlined above with a course of your choosing using the green templates in the following pages.

- **Step 1:** Write down each standard for the course in the *Standard* column of the worksheet. Looking at the standard carefully, underline the nouns ("what"/knowledge) and verbs ("how"/skills) embedded in each standard in your course. Capture these concepts in the *Knowledge* and *Skills* columns of the worksheet.
- **Step 2:** Reference the aligned standards (Tennessee State Standards for Technical Subjects, general education, national industry, etc.) referenced at the end of each standard (if applicable) and add additional clarifying statements or details to your *Knowledge* and *Skills* columns as necessary. If you are having trouble finding the standards, follow the links at the end of the Course Description Document.

Standard	Knowledge	Skills



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Standard	Knowledge	Skills



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Standard	Knowledge	Skills



Knowledge and Skills: How to Unpack a Standard

Standard	Knowledge	Skills

You're done!

The unpacking is complete! This detailed chart will be useful when you move on to creating strong objectives and student outcome-focused lessons.