
Using Interactive Word Walls in the CTE Classroom and Shop

Technical Assistance Packet

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A Powerful Tool for Teaching and Learning Technical Vocabulary: Using Interactive Word Walls in the CTE Classroom and Shop

Technical Assistance Packet

Purpose of this Packet: This technical assistance guide to Interactive Word Walls is designed to help CTE teachers implement this powerful easy-to-use instructional strategy.

The Challenge: Every CTE program area has extensive technical vocabulary that students must learn and remember in order to “talk the talk” in the field, understand the technical materials they are reading in manuals or online, pass CTE certification tests (both written and performance based), and complete work summaries, logs, and descriptions of services proposed or performed. Each program area has a unique “language” with hundreds of terms either specific to that field or more general terms that have specialized meaning when used in that field. Learning this vocabulary well enough to use it and understand it requires multiple ongoing encounters and interactions with the words in context.

How to Address the Challenge: One of the powerful ways to create a word-rich environment that emphasizes and encourages familiarity with technical terms is to have an interactive Word Wall that features the words applicable to the current unit of study. That is, if studying brakes or the nervous system or baking breads or troubleshooting networking problems, the words on the Interactive Word Wall should reinforce the technical terms needed to successfully talk about and perform activities related to that topic.

The materials in this packet were developed by PCG-CRM. Explanations and examples of all of the literacy support strategies mentioned can be found in the CTE Literacy Strategies Manual at every Maine CTE center or online in the Content Literacy Guide at http://www.ccsso.org/projects/secondary_school_redesign/Adolescent_Literacy_Toolkit/.

In this Technical Assistance Packet you will find:

- Interactive Word Walls in the CTE Classroom and Shop
- Ideas for Increasing Student Interaction with Word Walls
- Examples of Word Walls in Maine CTE Classrooms and Shops

Interactive Word Walls in the CTE Classroom and Shop

Description

A Word Wall is a systematically organized collection of publicly displayed technical terms related to the current unit of study. Both students and teachers can suggest additions to Word Walls. Students are asked to interact with words on the Word Wall on an ongoing basis. In this way, the words become an integral part of students' reading, writing, and speaking vocabulary.

Purpose

Use *before*, *during*, and *after* reading/learning to:

- Build vocabulary related to a particular instructional focus that students can use while working in the shop/lab, presenting to others, researching and writing and discussing a topic in class or in the field
- Improve reading comprehension of technical manuals, textbooks, journal articles, and online materials
- Support students to use appropriate technical terms in their work summaries, logs, quick writes, and other writing
- Provide a visual reference tool to help students remember important words related to a specific topic or focus

Directions

1. Create a list for a word wall that will help students deepen their vocabulary and enhance reading comprehension when discussing and working on an upcoming unit.

Selection criteria:

Dos: Pick words that are critical to students' success with the material in the current unit of study. These should be words that they will need to know when reading, writing, or talking about this topic. They should be words that students need to remember "beyond the test." Select words that 1) are specific to the topic at hand or 2) have multiple meanings but have a particular meaning in this context. Change the words on the Word Wall with every unit of study.

Don'ts: Do *not* select the "words in BOLD" without checking to see if these are words that students really need to know. Don't select more than 15–20 words. Don't select the extremely technical terms unless students really need to know them. Don't make Word Walls too complicated or elaborate. Don't leave the same list of words up for longer than 1–2 months.

Note: Examples of Word Wall lists for various CTE program areas can be found in this packet.

2. Refer to the Word Wall throughout the unit of study about the content concept it relates to, requiring students to actively interact with the words on a daily basis throughout the unit.

Examples of interactive activities:

- Sort the words into categories and label the categories (list-group-label or word sort)
- Use 3–5 words on the wall to write a summary sentence about a main concept
- Create a word game using the words on the wall—a crossword puzzle, word search, or paired compare/contrast

Note: More examples of interactive activities can be found in this packet.

Ideas for Increasing Student Interaction with Word Walls

Now that you've identified the important content area vocabulary words for your upcoming unit and you've decided how you'll display them in the room, what's next? How can you get your students to engage with the words on the Word Wall in ways that 1) don't take up all of your class time, 2) provide students with multiple exposures to the vocabulary, and 3) include approaches based on effective vocabulary instruction? The goal is to build a culture of using technical terms correctly (for the context), descriptively (to communicate), analytically (to diagnose and problem solve) and functionally (when they complete tasks). The following are some ideas to get you started — you can probably think of many more!

When students are reading textbooks, manuals, articles, etc...

- Provide points for finding/noticing Word Wall words in written material.
- Have students note where specific Word Wall words are found in print materials and add this information to the Word Wall. Students can compete in teams.
- Have students create definitions of Word Wall words as they read and then play matching games in the beginning of class for review or vote on the best definitions.
- Provide points if students suggest additional words for the Word Wall and can make a case for why the word(s) are important to the unit of study.
- Have students mark present and past Word Wall words (as well as unfamiliar terms they encounter) when reading by underlining, using post-it notes, highlighting, etc.

When students are writing work summaries, logs, descriptions of how to complete certain processes, or quick writes/checks for understanding...

- Require the use of Word Wall words (2–3) in work reports, summaries, etc.
- Require that all Word Wall terms be spelled correctly (since they are on the wall).
- Have students use Word Wall words in Quick Writes (for example, write down your two favorite words from the Word Wall and say why you like them; select two words from the Word Wall and describe how they are connected; write down everything you know about _____; compare and contrast two terms).

When students are talking/presenting about a topic or demonstrating how to do something in the lab/shop...

- Expect that Word Wall words be used in the lab/shop. Require that presentations use a certain number correctly.
- Have students “catch” other students using correct terminology.
- Post Word Walls in the lab/shop.
- Give points when students use Word Wall terms correctly when presenting/demonstrating.
- Make connections between Word Wall words and the topic at hand.
- Ask students to give synonyms, antonyms, examples, and non-examples when they use a word from the Word Wall.

Simple games that students can play to learn the technical terms on the Word Wall...

- Play games with the Word Wall words such as “slap” (provide a definition and the first one to slap the definition with a flyswatter wins).
- Play Jeopardy (What is...?), “I’m thinking of,” or Charades with Word Wall words.

When students are discussing a topic in class/first learning about a topic/reviewing the unit for a test...

- Have students complete a **Knowledge Rating Guide** with the words – ask the students to list the words under the appropriate heading: words they know and can explain, words they have heard of but are unsure what they mean, and words they have never heard of. Then discuss the words as a class.
- Ask students to list words from the Word Wall in a **Triple Entry Vocabulary Journal** (word in context = 1st column, definition in own words = 2nd column, picture or way to remember the meaning of the word= 3rd column).
- Develop quadrant cards or **Frayer Models** for key concepts where students write the word in the center and give the definition, an example, a non-example, and a picture of the word.
- Have students do **Word Sorts** in pairs where students work together to put Word Wall words into categories.
- Have students complete a **Concept Map** or **Semantic Feature Analysis** using the Word Wall words as they complete the unit.

Warning! Warning!

For most students...

Writing the word and the definition is NOT AN EFFECTIVE WAY to learn vocabulary.

Students tend to write down the first or shortest definition and to do this as a “compliance assignment,” not as a way to learn technical vocabulary. To learn technical terms, you need multiple repetitions in multiple contexts, and need to actively process the words (using a Knowledge Rating Guide, writing how two terms are connected, drawing a picture, giving examples and non-examples, playing games, etc.).

For many students...

Flashcards can be effective for review but not as a way to “learn” words. Have students interact with the Word Wall words many ways before using flashcards.

Note:

A Glossary List or Definitions Sheet is NOT a Word Wall. Word Walls are public displays of words designed to support all students’ reading, writing, and learning about a topic. Students can (and should!) make their own personal vocabulary lists, flashcard stacks, or Triple Entry Vocabulary Journal but that should be in ADDITION to the Word Wall.

Examples of Word Walls in Maine CTE Classrooms and Shops

How to Create an Effective Word Wall: When it comes to Word Walls, simple is best. Word Walls do NOT need to be fancy. In fact, the fancier they are, the less likely that they will be kept current. A plain list of words on a black or white board is fine. You can also project Word Walls on the wall using a computer and LCD projector or an overhead projector; put words on lists on the ceiling either by taping cards to ceiling tiles or hanging them down from coat hangers or clips on a cord; write words on cards and put on a bulletin board (makes it easy to sort them in various ways); or put words on a poster. Some teachers color code the words. Some teachers change the words weekly – others monthly – others with each new chapter or unit of study (preferred). A Word Wall tells students and visitors what your students are studying in your classroom/shop. Words should be written clearly, spelled correctly, and be readable from most parts of the room.

Examples of Word Walls observed in CTE classrooms and shops

Waldo County Technical Center: A visitor walking from classroom to workshop throughout the sprawling building one day last May would have encountered Word Walls in at least half of the programs. The words highlight the wide variety of specific technical terms that students need to learn in various programs: *endangered, threatened, extirpated, tree growth tax program, purchase development rights; pitch, overhang, bird's mouth, hp raptor, ridge pole, framing square*. In the small engine classroom, students had just completed a *Knowledge Rating Guide* with the words on the Word Wall: *plunger pump, pressure flow system, centrifugal force, radiator core, thermostat, radiator, vari volume pump*.

Lewiston Regional Vocational Center: The site visit took place at the end of the 2007–2008 school year. Students were busy finishing up capstone projects and portfolios. A Word Wall associated with the most recent junior class unit “Death and Dying” listed terms such as *palliative care, bereavement, embalm, decathexis, and autopsy*. The instructor explains that “students have a sense of pride that they have a whole new language” to talk about health. She expects them to learn the words in their junior year and use medical terms appropriately when discussing a topic or in their writing; she expects students to use medical and technical terms throughout their senior year both in their internships and in the classroom.

Capital Area Technical Center: Walking from workshop to workshop, there was evidence of Word Walls in most of the workshops or classrooms we visited, each providing a glimpse into the rich and varied technical vocabulary students are required to learn and use: *batter, coat, au gratin; moisture transport mechanism, capillary action, bulk moisture, vapor diffusion; base ignition timing, distributorless ignition, firing voltage; nucleotides, base pair, in vitro*. The machine tooling instructor says that she requires use of the week’s words in the work reports while another instructor adds five new words to the animated word list she projects on the wall at the beginning of each class.

