

SECTION I

VOCABULARY AND CONCEPT DEVELOPMENT

Scenario: A Look Inside a Middle School Classroom

The Vocabulary-Concept Journal (VCJ)

Students in Mr. Farr's sixth-grade Social Studies/Language Arts classroom are supplementing their textbook study of India by taking a virtual tour and visiting several related websites. He emphasizes significant terms as they are encountered and tells the class they will keep a Vocabulary-Concept Journal (VCJ) for some key terms just as they did in his Language Arts class. To make sure they don't overlook the most important terms he wants them to know, Mr. Farr identifies some key terms and models the first word, "caste system," with the entire class. He begins by asking them to re-read in pairs the sentences containing the word. Then he asks what they think the term means. He models how to go back to the sentences to find support for their guess. Next, Mr. Farr and the class formulate a definition and fill in the appropriate place on the VCJ form. From there, he shows them how to find examples of how the word is used in the context and he also asks them to apply the term to everyday life, thinking of, and describing, ways they think a caste system might be prevalent in our society. To further scaffold the learning, he tells the students to work in their pre-assigned small groups to fill in the VCJ form with the next two words he highlighted. Then, after circulating around the room and feeling comfortable that the students understand the assignment, he tells them to work individually by selecting three new words/concepts they want to learn. To reinforce and assess the new learning and to further "smuggle writing," Mr. Farr shows them a finished sample paragraph and tells the students to compose a few paragraphs using the new words in context. Next, he shows the class how to keep their vocabulary journals using the digital tool Popplet.

What the Research Tells Us About Vocabulary and Concept Development

As illustrated in Mr. Farr's classroom, vocabulary teaching and learning should not be a task isolated from other dimensions of instruction (Fisher, Blachowicz, & Watts-Taffe, 2011; Stahl & Fairbanks, 1986). In fact, it should be multidimensional, making the vocabulary/comprehension connection using all aspects of literacy: reading, writing, listening, speaking, viewing, and visually representing (Standards for the English Language Arts, 1996; Wood, Harmon, & Taylor, 2011). We recommend the following research-supported guidelines in order to incorporate comprehension-based vocabulary instruction across the curriculum (Beck, McKeown, & Kucan, 2002; Stahl & Fairbanks, 1986; Wood, Harmon, Kissel, & Hedrick, 2011; Wood, Harmon, & Taylor, 2011).

Self-Selection, Choice, and Voice: There is ample evidence that giving students a voice in learning is intrinsically motivating (Marinak & Gambrell, 2008), enhances learning (Cordova & Lepper, 1996; Harmon, Hedrick, & Wood, 2005), and increases enjoyment and pleasure with the learning task (Guthrie, 2007).

Providing Multiple Exposures to Key Terms: Presenting vocabulary words in context before the reading, emphasizing them during the reading, and then reviewing the words after the reading ensures that students have more than one encounter with key terms (Manzo, Manzo, & Thomas, 2006; McKeown, Beck, Omanson, & Pople, 1985; Nagy, 1988).

Using Contextual-Based Approaches: For true conceptual learning of new terms to take place, it is essential to introduce and reinforce key terms in a meaningful context, not in isolation (Chall & Snow, 1988; Graves, 1987). This context-based instruction can also involve additional support material such as pictures, streaming video, virtual tours, and so on that further illustrate a concept.

Connecting the New With the Known: Many times the best way to teach a new word or concept is to relate it to what the students may already know. This can involve the use of morphemic analysis such as known prefixes, suffixes, or roots (Milligan & Ruff, 1990; Vacca, Vacca, & Mraz, 2011). It can also involve getting students to share their prior knowledge about the concepts they are studying by brainstorming.

Striving for Deeper and Richer Understanding: Vocabulary instruction needs to move students beyond the surface level of understanding to deeper, conceptually loaded learning. Beck, McKeown, and Kucan (2002) use the term "rich instruction" to describe methods that avoid the "define, drill and practice" paradigm in favor of prompts and activities that require a deeper processing of text content.

Encouraging Discussion and Collaboration: Getting students to talk about new concepts and vocabulary is more active, engaging, and comprehension-based. Research supports the value of having students engage in discussions using content-related words as a means of engaging them in higher levels of cognitive processing (Carlisle, Fleming, & Gudbrandsen, 2000; Stahl & Vancil, 1986).

Incorporating Digital Tools for Reinforcing Concepts: The use of Web 2.0 technologies in literacy instruction can be readily used to support the teaching of vocabulary as is illustrated in each of the strategies in this section. Students in today's classrooms are savvy users and consumers of technology, and incorporating current digital tools can be a motivating means for promoting the learning of new vocabulary and concepts.

Understanding what we read is the end goal of all aspects of instruction, and we fervently advocate comprehension-based approaches to word study. All of the strategies in this section position vocabulary and concept development within a meaningful context, with opportunities for students to go back in the text source for support and justification for the words and concepts under study. Try some of these strategies and their digital applications in your classroom!

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STRATEGY 1 FRAYER MODEL PLUS

Objective

To enable students to learn new vocabulary terms by exploring the characteristics of words including examples (synonyms) and non-examples (antonyms).

Rationale

Traditions of learning new vocabularies related to academic subjects rely primarily on learning definitions. Research shows that this definitional approach that most often involves rote memorization of words and definitions does not engage students or lead to significant learning of the academic vocabulary. The Frayer Model helps students move beyond a narrow focus on definitions to include examples (synonyms) and non-examples (antonyms). In this version—the Frayer Model Plus—we add a writing extension to provide students an opportunity to extend their interaction with new terms. See the template provided in Figure 1.1.

Digital Applications

Computer software and digital tablet applications (apps) offer great options for mapping words. Here is a list of some popular software applications that work across computer platforms:

- **Inspiration:** There are two versions of the Inspiration software—Inspiration and Kidspiration. Both allow students to easily create concept or bubble maps that can be adapted for use as Frayer maps. The software is available for computers (many schools and districts provide this), but it also has apps for tablet computers.
- **SimpleMind+:** This is an application available for the iPad that allows students to create concept maps.
- **Popplet (www.popplet.com):** Another iPad app that allows users to create bubble maps and concept maps. See Figure 1.2 for an example of using Popplet with the Frayer Model Plus.

Procedures

Teacher Preparation Stage

- **Step One:** The teacher identifies key vocabulary terms from a text, topic, or unit of study. For example, in a social studies class in which students are studying the American Civil War, the teacher might select terms including *abolitionist*, *antebellum*, *blockade*, *cash crop*, *Confederacy*, *emancipation*, *Federal*, *Reconstruction*, and *secession*.

Optional: Selection of the vocabulary can be shared with students with some or all of the terms being self-selected by the students or the teacher and students suggesting terms.

- **Step Two:** The teacher decides the best method for sharing the Frayer Model Plus strategy—paper copies or a digital application such as Popplet or Inspiration. Obviously, this decision depends on availability of computers and digital tablets.

Prereading Stage

- **Step Three:** The teacher introduces the text, topic, or unit of study to students and discusses key vocabulary, or, if the students have identified terms, the teacher leads a brainstorming session and discussion with students to select a set of vocabulary terms.
- **Step Four:** The teacher displays a copy of the Frayer Model Plus and using one of the terms models its use by filling out any information about the term that students know before reading. This might include “it is related to” and “I think it means.”

Optional: If using one of the digital applications such as Inspiration, Popplet, or SimpleMind+, the teacher should model how to use this.

Reading Stage

- **Step Five:** Students work independently to read the textbook or other text related to the unit or topic. Students should read the text and make note of key vocabulary terms as they read.

Optional: Students can mark the location of key vocabulary terms using sticky notes in their text.

Postreading Stage

- **Step Six:** After students have had sufficient time to read, they can go back to the text and write down what they know about the key terms on the Frayer Model Plus form (paper or digital). The teacher can have students work in pairs or small groups to discuss their entries. This can be done as a whole class as well. It is important to confirm that the definitions, connections, and illustrations lead to a thorough and reasonable understanding of the terms.
- **Step Seven:** After students create a Frayer chart for a term, they can write out a plus statement that uses what they have learned to describe the term in their own language. The teacher can model this step and also share student examples of plus statements.
 - See Figure 1.3 for an example of a completed Frayer Model Plus chart.

- **Smuggling Writing:** The Plus part of this strategy is the written synthesis step that allows students to summarize and synthesize the content of the selection by referring back to the text sources and using the new vocabulary and concepts in a paragraph. Since this is a practice writing exercise, students can be encouraged to work in pairs to compose a single paragraph between them.

Adaptation

Creating Frayer Collections in wikis and shared folders: As with the Personal Vocabulary Journal, it is helpful to have individual students or groups of students create collections of words or groups of Frayer Model entries. Google Drive, Dropbox, Edmodo, and wikis offer tools for teachers and students to gather, store, and retrieve multiple Frayer Model Plus entries. These can be organized by topics, units, and texts with shared access by students or can be personal collections of terms for each student.

Standards-Based Connections

Examples of Common Core Anchor Standards

CCSS.ELA-Literacy.CCRA.R.4: Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.

CCSS.ELA-Literacy.CCRA.W.6: Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

CCSS.ELA-Literacy.CCRA.L.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

CCSS.ELA-Literacy.CCRA.L.5: Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

CCSS.ELA-Literacy.CCRA.L.6: Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

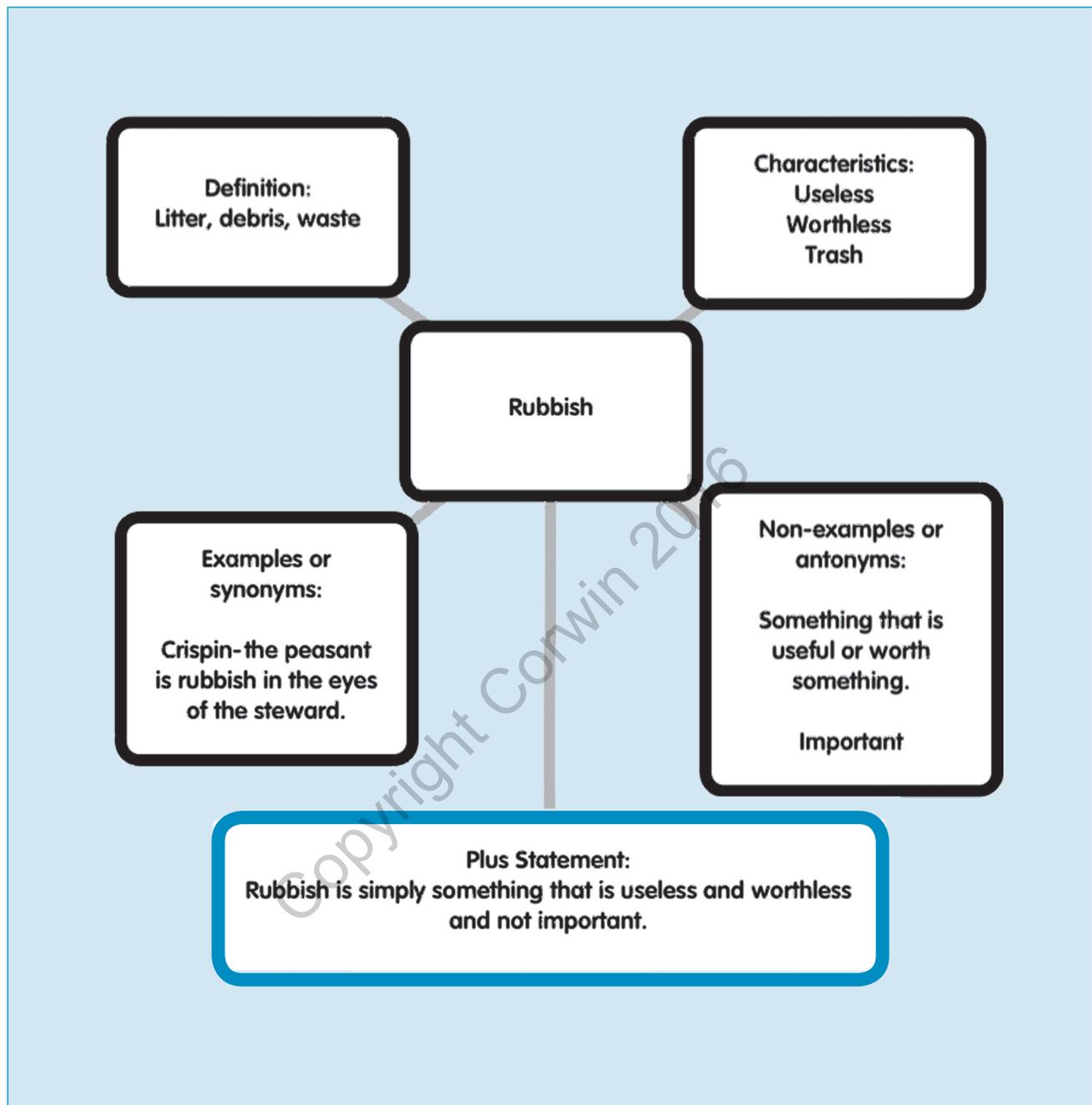
Reference

Frayer, D., Frederick, W. C., & Klausmeier, H. J. (1969). *A schema for testing the level of cognitive mastery*. Madison: Wisconsin Center for Education Research.

Figure 1.1 • Frayer Model Plus

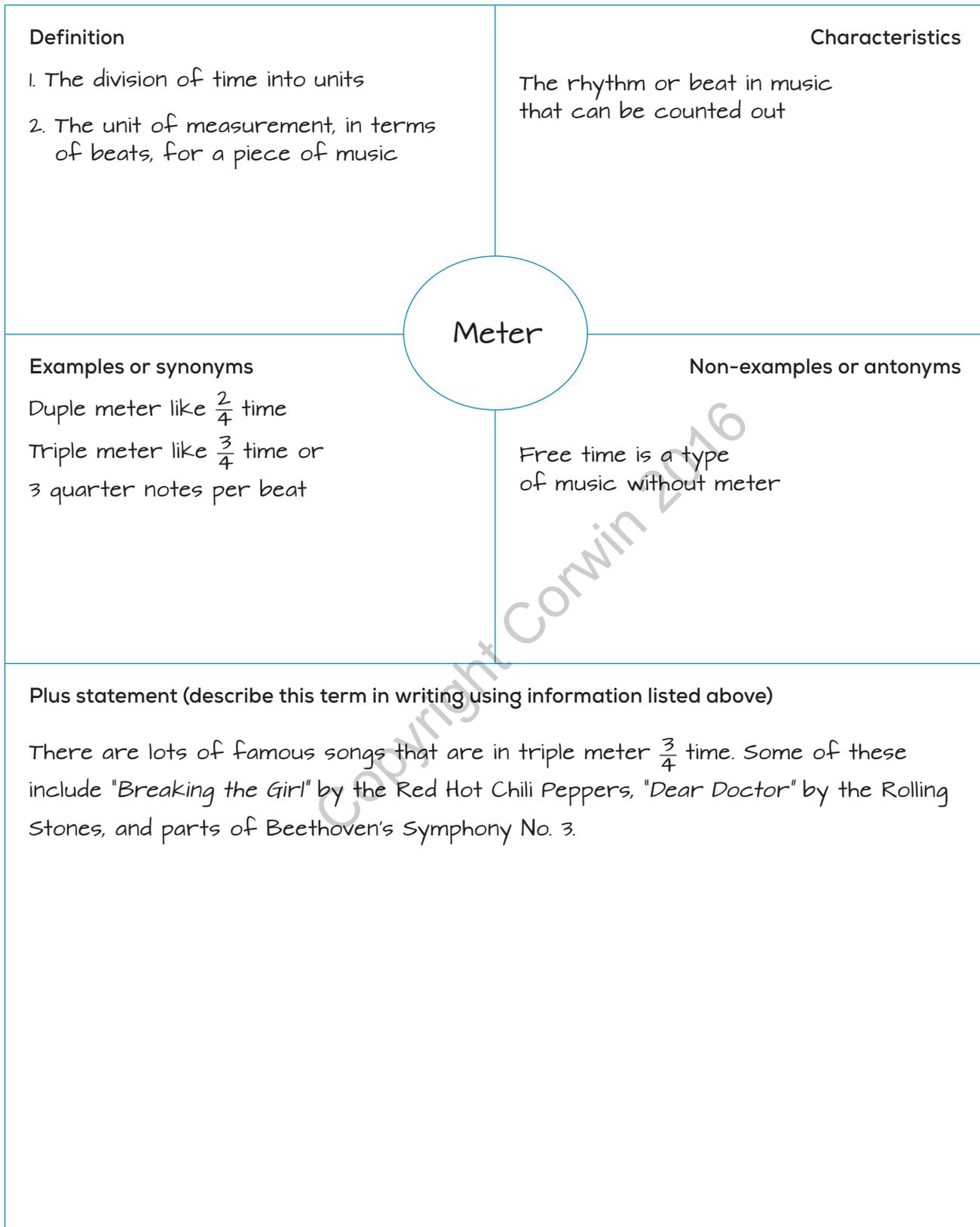
Definition	Characteristics
Examples or synonyms	Non-examples or antonyms
Plus statement (describe this term in writing using information listed above)	

Figure 1.2 • Using Frayer Model With Popplet for the Term “Rubbish”



Source: Content created by Rachael Rovenstine and Tiffany Fulton. Screenshots from Popplet.

Figure 1.3 • Using Frayer Model Plus With the Musical Term “Meter”



Meter

STRATEGY 2

SEMANTIC FEATURE ANALYSIS PLUS

Objective

To help fine-tune students' understanding of key vocabulary and concepts to enhance comprehension.

Rationale

This strategy uses a matrix to help students see the common elements and differences among key concepts under study. Questioning and writing can help further solidify their understanding of the key terms and overall comprehension of text. See the template provided in Figure 2.1.

Digital Applications

The semantic feature analysis chart can be created using various digital tools, which allow for much student-to-student and student-to-teacher interaction:

- **Google Drive (<https://www.google.com/drive>):** Teachers can create the chart ahead of time by adding characteristics or components of the concept being studied on one axis and examples or characters on the other axis. Another feature of using Google Drive is that it allows invited users to access the document anytime, from any computer or iPad, to update and automatically save the document. The teacher can also see revisions that have been made over time by the various users. Therefore, students can collaborate to create a semantic feature analysis chart in Google Drive at any given time. See Figure 2.2 for an example of using Google Drive with Semantic Feature Analysis Plus.
- **Interactive White Boards:** The semantic feature analysis chart can be displayed on an interactive white board, such as the Promethean Board or Smart Board to allow for touch-screen student interaction for whole-group discussion and modeling.

Procedures**Teacher Preparation Stage**

- ➔ **Step One:** Select a category based on a topic under study in which at least two items are similar. For example, choose animals, elements, planets, explorers, scientific classes, words with similar meanings, historical or literary characters, and so on.

- **Step Two:** Insert the features of the category chosen across the top of the matrix provided.
- **Step Three:** Insert the terms or concepts on the left-hand side of the matrix.

Prereading Stage

- **Step Four:** Display it on the Smart Board or Promethean Board. Explain to the students that examining the terms this way will help them further understand the concepts and their overall comprehension of text.

Postreading Stage

- **Step Five:** Model one or two examples as a class to explicate the process. Then, guide the students through the matrix as a whole class, in groups or pairs, or individually by having them indicate with a plus (+) if an item contains a feature or minus (-) if it does not.
- **Step Six:** Help the students make some generalizations about the concepts by guiding them with specific questions. For example, “How is _____ different from or similar to _____?” or “Which is the longest . . . hottest . . . smallest . . . etc.?”
- **Step Seven: PLUS:** Choose one concept, term, or character and a feature, characteristic or character trait to write about and justify with examples from the text that demonstrate why you feel this character represents this character trait or this concept includes this characteristic or feature.
 - See Figure 2.3 for an example of a completed Semantic Feature Analysis Plus matrix.
- **Smuggling Writing:** After filling in the matrix with the new content from the text sources, teacher-developed prompts can encourage students to use the new vocabulary and concepts in a paragraph or more to synthesize, analyze, and reflect on the new learning.

Adaptations

Grouping: The teacher can create various semantic feature analysis charts to assign different book clubs, literature circles, or guided reading groups. Using Google Drive, the teacher can determine who to invite to each document as a way to differentiate. For classrooms with iPads, QR codes can be created and placed in centers for students to scan, taking them to differentiated semantic feature analysis charts based on the vocabulary words they need additional practice with.

English Language Learners (ELLs): In addition to adding key terms in the horizontal and vertical axis, the teacher can supplement for ELLs by adding a column with images as well as the word in the students' native language for each term.

Standards-Based Connections

Examples of Common Core Anchor Standards

CCSS.ELA-Literacy.CCRA.R.1: Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

CCSS.ELA-Literacy.CCRA.R.2: Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.

CCSS.ELA-Literacy.CCRA.R.10: Read and comprehend complex literary and informational texts independently and proficiently.

CCSS.ELA-Literacy.CCRA.SL.1: Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-Literacy.CCRA.W.1: Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.

CCSS.ELA-Literacy.CCRA.W.6: Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

CCSS.ELA-Literacy.CCRA.W.10: Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

CCSS.ELA-LITERACY.CCRA.SL.1: Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-Literacy.CCRA.L.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials as appropriate.

References

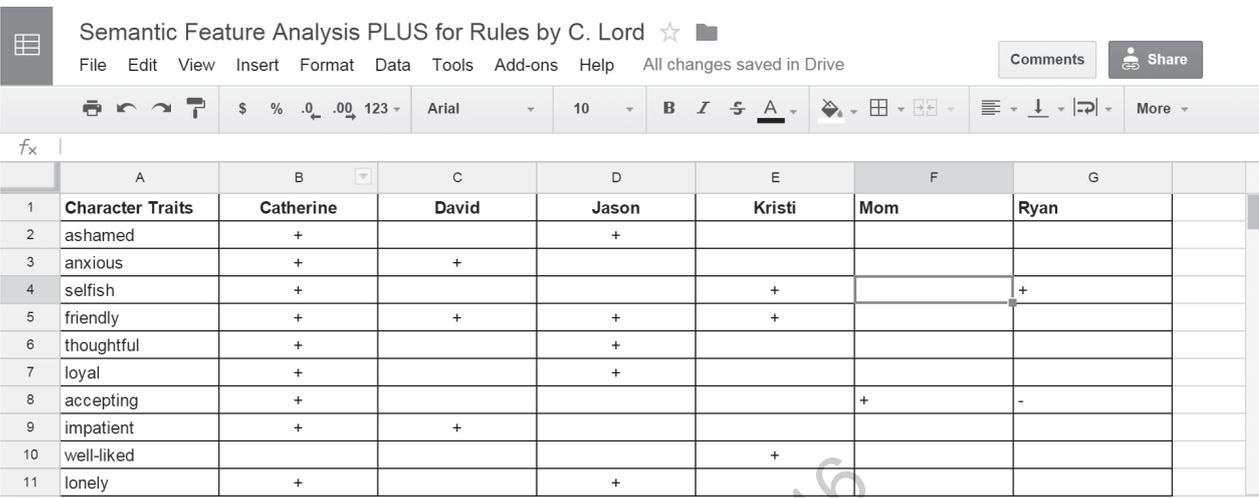
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Wood, K. D., & Taylor, D. B. (2006). *Literacy strategies across the subject areas*. Boston: Pearson Education.

Figure 2.1 • Semantic Feature Analysis Plus Template

<p>What conclusions can you draw by studying the information on the chart? Provide evidence from the text to support your response.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>				

Figure 2.2 • Sample Semantic Feature Analysis Plus Using Google Drive Character Analysis for *Rules* by Cynthia Lord



	A	B	C	D	E	F	G
1	Character Traits	Catherine	David	Jason	Kristi	Mom	Ryan
2	ashamed	+		+			
3	anxious	+	+				
4	selfish	+			+		+
5	friendly	+	+	+	+		
6	thoughtful	+		+			
7	loyal	+		+			
8	accepting	+				+	-
9	impatient	+	+				
10	well-liked				+		
11	lonely	+		+			

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What conclusions can you draw by studying the information on the chart? Provide evidence from the text to support your response.

Catherine definitely changed over the course of the book. There were times when she was ashamed or embarrassed by her brother and Jason, but there were other times when she was proud especially toward the end of the book. In the beginning, she was impatient with David and gave him lots of rules to follow. Also when she first met Jason at the clinic, she was not very friendly. So at first she wasn't accepting, but by the end of the story she was because she went to the dance with Jason and decided that she accepted her brother David despite his autism.

***Note: Students worked collaboratively within their book club to complete the matrix and collaboratively write their conclusion using Google Drive.

Figure 2.3 • Sample Semantic Feature Analysis Plus**Social Studies—Thirteen Colonies**

	Grain	Tobacco	Iron	Cattle	Furs	Lumber	Naval Supplies
Connecticut	–	–	+	+	–	–	–
Massachusetts	+	–	+	+	–	–	+
New Hampshire	–	–	–	–	+	–	+
Rhode Island	–	–	+	–	–	–	–
Delaware	–	+	–	–	–	–	–
Maryland	–	+	–	+	–	–	–
New Jersey	–	–	+	–	–	–	–
New York	+	–	+	+	+	+	–
Pennsylvania	+	–	+	+	+	+	–
Georgia	–	–	–	–	+	–	–
North Carolina	+	+	–	+	+	+	+
South Carolina	+	–	–	–	–	+	+
Virginia	+	+	–	–	+	–	–

What conclusions can you draw by studying the information on the chart? Provide evidence from the text to support your response.

These thirteen colonies produced many types of goods. Page 112 in our textbook says that furs were gathered in states from north to south, but cattle was more common in the north than the south. Naval supplies were made only in states near the coast, and tobacco was grown mostly in the Middle States.

STRATEGY 3 VOCABULARY CARDS

Objective

To strengthen students' knowledge of vocabulary related to a unit of study through the use of visual connections.

Rationale

Vocabulary Cards are a simple but powerful tool for helping students learn new words and concepts. While they look like flash cards, Vocabulary Cards go beyond a sole reliance on definitions by adding a visual element as well as a phrase or sentence explaining the connection between the word and the picture. See the template provided in Figure 3.1.

Digital Applications

Vocabulary Cards are most often created using index cards or similarly sized slips of paper; however, the following Web 2.0 applications can also be used for this strategy:

- **SlideShare:** Slides can be created by the teacher and/or students using visuals, pictures, charts, and diagrams to illustrate word meaning and use in context.
- **Google Presentation:** This is a similar tool that offers an engaging way to create and share Vocabulary Cards. These can be created collaboratively by groups of students and shared so that all students in a class have access to them. See Figure 3.2 for an example of using Google Presentation with Vocabulary Cards.

Procedures

Teacher Preparation Stage

- **Step One:** The teacher selects key vocabulary terms from a unit of study.
 - Note: Students can also identify key terms (vocabulary self-selection) as they read. They can discuss the terms with others in class and negotiate with the teacher for those terms that are most important.
- **Step Two:** The teacher also identifies the key texts students will use, such as a textbook, article, websites, or other media.

Prereading Stage

- **Step Three:** The teacher introduces the list of vocabulary terms and the Vocabulary Card strategy to the students and provides information about any technology like SlideShare that students will be using.
- **Step Four:** Students are assigned readings that relate to the unit and that include the vocabulary.

Reading Stage

- **Step Five:** Students read the assigned texts and take notes on the vocabulary as they encounter the terms. If necessary, students can use other resources to help them define the terms.

Postreading Stage

- **Step Six:** After students read and take notes about the key vocabulary terms, they can work independently or in pairs or small groups to create a Vocabulary Card for each term.
- **Step Seven:** If the Vocabulary Cards are created with a digital tool like SlideShare or Google Drive, the slides can be shared with others in the class. These can be posted as links to a class wiki or website, or in a shared folder in Google Drive or Dropbox so that students can access each other's Vocabulary Cards.
 - See Figure 3.3 for an example of a completed Vocabulary Card.
- **Smuggling Writing:** Students are asked to use what they have learned to make connections with the new term. In addition to the visual element, they are asked to compose a sentence or more that reflects the new learning.

Standards-Based Connections

Examples of Common Core Anchor Standards

CCSS.ELA-Literacy.CCRA.W.6: Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

CCSS.ELA-Literacy.CCRA.L.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

CCSS.ELA-Literacy.CCRA.L.5: Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

CCSS.ELA-Literacy.CCRA.L.6: Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Figure 3.1 • Vocabulary Cards

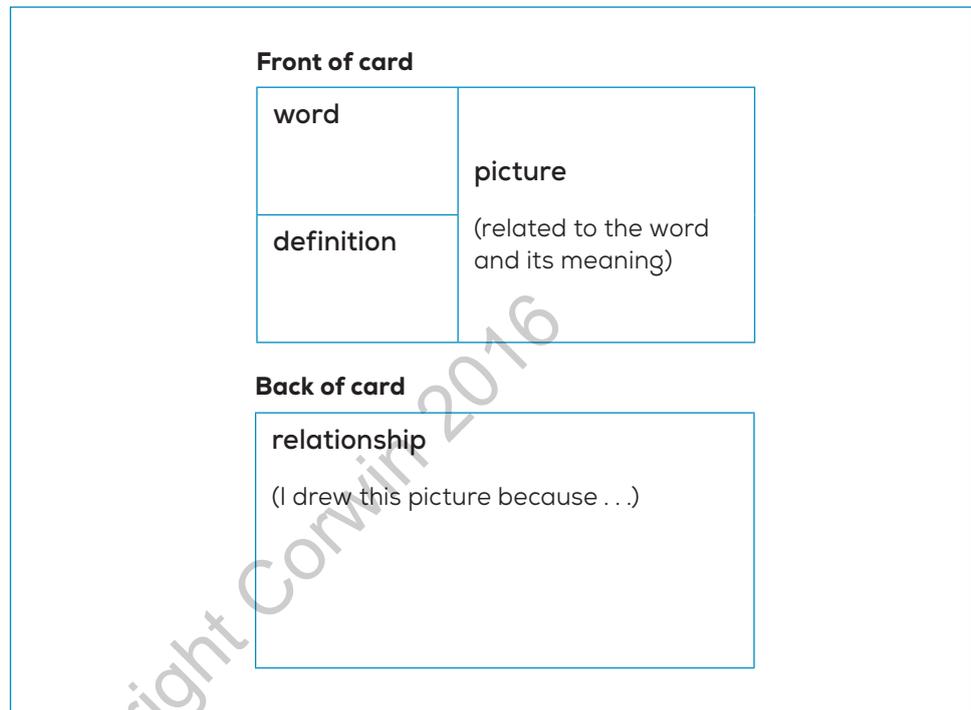


Figure 3.2 • Vocabulary Card Example Using Google Presentation for Spanish Vocabulary

Casa	
Def: house or home	Esta es mi casa. This is my house.
	

Cocina	
Def: kitchen	Hago la cena en la cocina. I make dinner in the kitchen.
	

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Figure 3.3 • Vocabulary Card Example for a Chemistry Class

kinetic energy the energy of motion	 Run!
Kilocalorie a thousand Calories	 Hamburger = 1,000 Calories
Heat Amount of kinetic energy due to molecular motion in a body	
Calorie Amount of heat need to raise 1 gal of water 1°C	H_2O 1°C ↑  1 gal

STRATEGY 4 VOCABULARY-CONCEPT JOURNALS

Objective

To enable students to learn new terms to develop and increase their vocabulary and concept knowledge by going beyond definitions to make multiple connections between words and concepts.

Rationale

Many of the most challenging vocabulary terms and related concepts that students encounter come through content-area texts and topics. Often, vocabulary terms learned by students are determined by the teacher, usually through commercially prepared materials and textbooks. Consequently, students do not get many opportunities to become actively engaged in word learning. The Vocabulary-Concept Journal (VCJ) can be used by teachers across subject areas to help focus students' attention on new words and concepts related to a text, topic, or unit and get them involved in finding multiple connections to the terms by searching and seeking evidence from the text. The end goal toward independent learning is to allow students to select the terms they want to learn more about. See the template provided in Figure 4.1.

Digital Applications

Since the Vocabulary-Concept Journal is a word learning tool, it is helpful to have individual students or groups of students create collections of words or groups of Vocabulary-Concept Journal entries. There are several Web 2.0 platforms that can help facilitate these collections including:

- **Popplet (www.popplet.com):** Students can make multiple Popplets for various vocabulary words to reference as a resource. Students create a Popplet by writing the definition found in the print or online dictionary and posting image(s) they found. In the Popplet, students will draw a picture for the meaning of the word, type their own definition of the word, and write a sentence using the word. Students can share their Popplet in small groups or with a peer by looking at the computer or by having a printout of the Popplet. See Figure 4.2 for an example of using Popplet with the Vocabulary-Concept Journal.
- **Edmodo (www.edmodo.com):** Teachers can create a folder in their Edmodo class library with Personal Vocabulary Journal entries that students can access. These can be shared as word processing documents or PDF files.
- **Wikis:** Wikis allow teachers and students to create folders, upload documents, and store them so that they can be accessed from any computer and shared with others. The teacher can create a class folder and have students upload VCJ entries by topic, unit, or text, or each student can be given their own folder to create a personal dictionary with terms using VCJ.
- **Dropbox:** Like Edmodo, teachers or students can create a free account with Dropbox and use it to store documents, in this case collections of VCJ

entries by topic, text, or unit. Each student can have their own folder and collection of terms or the teacher can create shared folders.

- **Google Drive (<https://www.google.com/drive>):** Google Drive offers multiple ways for teachers and students to create and share Vocabulary-Concept Journals. Like a wiki or Dropbox, Google Drive allows teachers and students to create shared folders in which VCJ collections can be stored and accessed from most computers. The VCJ forms can be uploaded as Word documents or created as Google documents. Another way to use Google Drive is for students to create a presentation document (like PowerPoint), which can be created with multiple VCJ entries by topic or text.
- **Notebook+ app or other journal applications for tablets and smartphones:** Journal apps like the Notebook+ app are great tools for students to use to create Vocabulary-Concept Journals of their own. Many of these apps allow students to create documents or PDFs that are shareable.

Procedures

Teacher Preparation Stage

- **Step One:** The teacher identifies key vocabulary terms from a text, topic, or unit of study. For example, in a biology class in which students are studying parts of the cell, the teacher might select terms including *cytoplasm*, *ribosomes*, *golgi body*, *nucleus*, *cell membrane*, and *mitochondrion*.

Recommended Option: Selection of the vocabulary can be shared with both students and teacher, with some or all of the terms being chosen by the class.
- **Step Two:** The teacher decides on a format for sharing the Vocabulary-Concept Journal with students. This can include paper copies of the form or digital versions using a shared word processing document available in Edmodo, Dropbox, Google Drive, or a wiki.

Prereading Stage

- **Step Three:** The teacher introduces the text, topic, or unit of study to students and discusses key vocabulary, or, if the students have identified terms, the teacher leads a brainstorming session and discussion with students to select a set of vocabulary terms.
- **Step Four:** The teacher displays a copy of the Vocabulary-Concept Journal and, using one of the terms, models its use by filling out any information about the term that students know before reading. This might include “it is related to” and “I think it means.”

Optional: If using Google Drive, a wiki, Edmodo, or Dropbox, the teacher should provide students with access to their document or folder, or show them how to create their own.
- **Step Five:** The teacher models the use of VCJ by reading some of the text aloud and leads a think-aloud with students to complete the entry on the VCJ form for that term. It’s important to talk about using context to

learn about a word but also prior knowledge and explicit support, such as talking with others about a word's meaning.

Reading Stage

- **Step Six:** Students work independently to read and refer back to the text and complete a VCJ entry for each vocabulary term. It is a good idea to provide time during class for this, but the reading and VCJ entries can be completed for homework as well.

Postreading Stage

- **Step Seven:** After students have had sufficient time to read and write down what they know about the key terms on the VCJ forms, the teacher can have students work in pairs or small groups to discuss their entries. This can be done as a whole class as well. It is important to confirm that the definitions, connections, and illustrations lead to a thorough and reasonable understanding of the terms. With the teacher modeling how to use the vocabulary journal, it is now time to allow students to use the journal independently, self-selecting key terms of interest related to a unit of study in any subject area.
- **Smuggling Writing:** Students are asked to compose a sentence or two that illustrates how the key term is used in another context. They use information from the text resources to compose their sentences.

Standards-Based Connections

Examples of Common Core Anchor Standards

CCSS.ELA-Literacy.CCRA.R.4: Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.

CCSS.ELA-Literacy.CCRA.W.6: Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

CCSS.ELA-Literacy.CCRA.L.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

CCSS.ELA-Literacy.CCRA.L.5: Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

CCSS.ELA-Literacy.CCRA.L.6: Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Reference

Wood, K. D. (1994). *Practical strategies for improving instruction*. Columbus, OH: National Middle School Association.

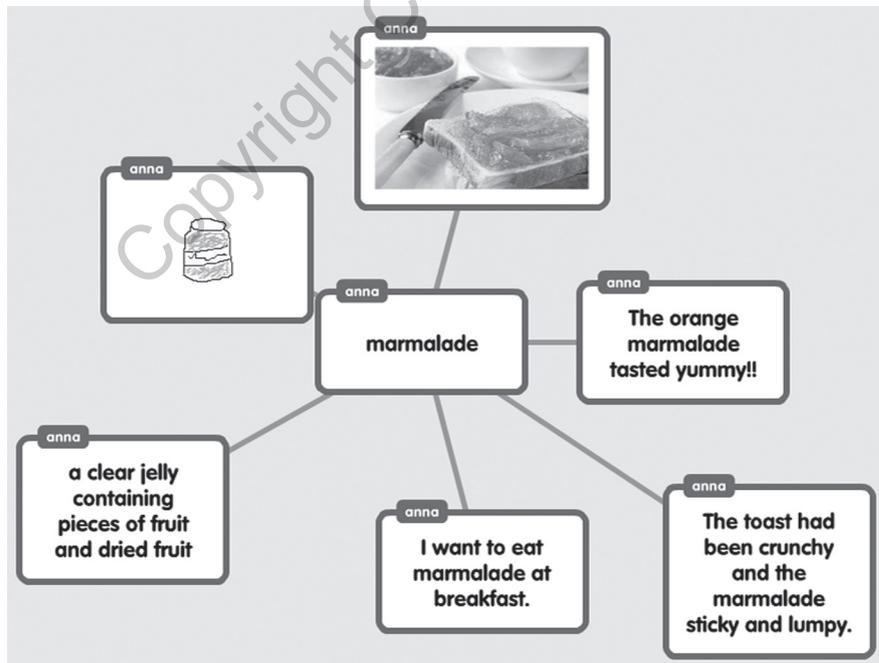
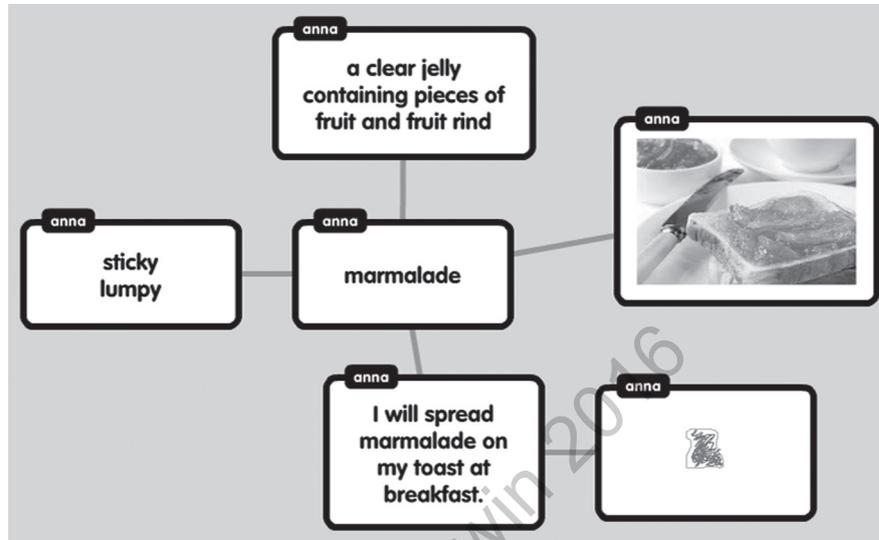
Figure 4.1 • My Vocabulary-Concept Collection Template

My new word is	
It is related to	
I found it	
I think it means	
Definition	
Example	
Picture	

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Figure 4.2 • Vocabulary-Concept Journal Entries Using Popplet in the Elementary Grades

The word "marmalade" was found in a story the students were reading. Note: The teacher has adapted VCJ for use in their classroom.



Source: Content created by Anna Derrick. Screenshots from Popplet.

Figure 4.3 • Vocabulary-Concept Journal Entries for Art Terms “Armature” and “Assemblage”

The teacher has adapted VCJ for use in their classroom.

My new word is	Armature	Assemblage
It is related to	Armor or the structure to support and protect	Assembling something
I found it	In a sculpture	On a collage
I think it means	Protection or support for a piece of artwork, especially a sculpture	A piece of artwork created from many parts
Definition	A base made of wire, metal, cardboard, or sticks for supporting a sculpture	A sculpture created from related or unrelated materials
Example	A wire figure used as a base for molding a clay figure	A collage
Picture		

STRATEGY 5

VOCABULARY SELF-AWARENESS CHART

Objective

To enhance students' knowledge of content-specific vocabulary by helping them connect examples to definitions.

Rationale

Traditions of learning vocabulary rely primarily on memorizing definitions—an age-old approach of look up the words and perhaps write a sentence using them. Research documents that this is a passive approach to learning new words that is not effective. The Vocabulary Self-Awareness Chart provides students an opportunity to connect words to their definitions and to examples. The examples can be written out or drawn as quick illustrations or, as in the case of math and science, written as formulas. A Vocabulary Self-Awareness Chart also adds an element of self-assessment by asking students to note their knowledge of a word—its definition and the example. This provides students and teachers the added dimension of organizing terms into words they know well (definition and example), know somewhat (definition or example), or do not know (neither the definition nor the example). This provides teachers with information about words to reteach and the student with an understanding of what they need to study. See the template provided in Figure 5.1.

Digital Applications

Teachers and students can draw from many digital apps to create an interactive Vocabulary Self-Awareness Chart.

- **Notebook+:** The notebook app has note taking, text processing, task management, and file management capabilities and is a great tool for adding to and editing the Vocabulary Self-Awareness Chart. See Figure 5.2 for an example of using the Notebook+ app with the Vocabulary Self-Awareness Chart.
- **Google Drive (<https://www.google.com/drive>):** This tool can be employed by students to create their own chart and/or the class can work from a shared copy—especially if the list of words is substantial.

Procedures

Teacher Preparation Stage

- ➔ **Step One:** The teacher identifies key terms from a unit of study.

Prereading Stage

- **Step Two:** The teacher informs the students they will be identifying vocabulary terms they need to know throughout the lesson.
- **Step Three:** The teacher models the use of the Vocabulary Self-Awareness Chart (VSA) using an example term from the lesson. For example, in a biology unit on osmosis the teacher might model VSA using a term such as *cell membrane*. The teacher should show students how they can use pictures, examples, and context to figure out or guess at the meaning of a word.

Reading Stage

- **Step Four:** Once the teacher and students decide on the vocabulary terms to be defined, students will read the text for the unit and note where the terms are used in the text. Sticky notes are great for marking the words in the text.
 - Note: While the teacher may identify all the terms, the students can also identify and suggest terms. The final list of words can be negotiated between teacher and students.

Postreading Stage

- **Step Five:** After reading, the student will determine a meaning for the word by using their resources, and will make note of it on their chart.
- **Step Six:** The class may come together to discuss similarities and differences from each groups' chart, and make a class Vocabulary Self-Awareness Chart.
 - See Figure 5.3 for an example of a completed Vocabulary Self-Awareness Chart.
- **Smuggling Writing:** Students are asked to put the new vocabulary/concepts in their own words by writing a definition statement and an example. They must refer back to the text to support and justify what they have learned.

Standards-Based Connections

Examples of Common Core Anchor Standards

CCSS.ELA-Literacy.CCRA.SL.4: Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.CCRA.SL.5: Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

CCSS.ELA-Literacy.CCRA.L.4: Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

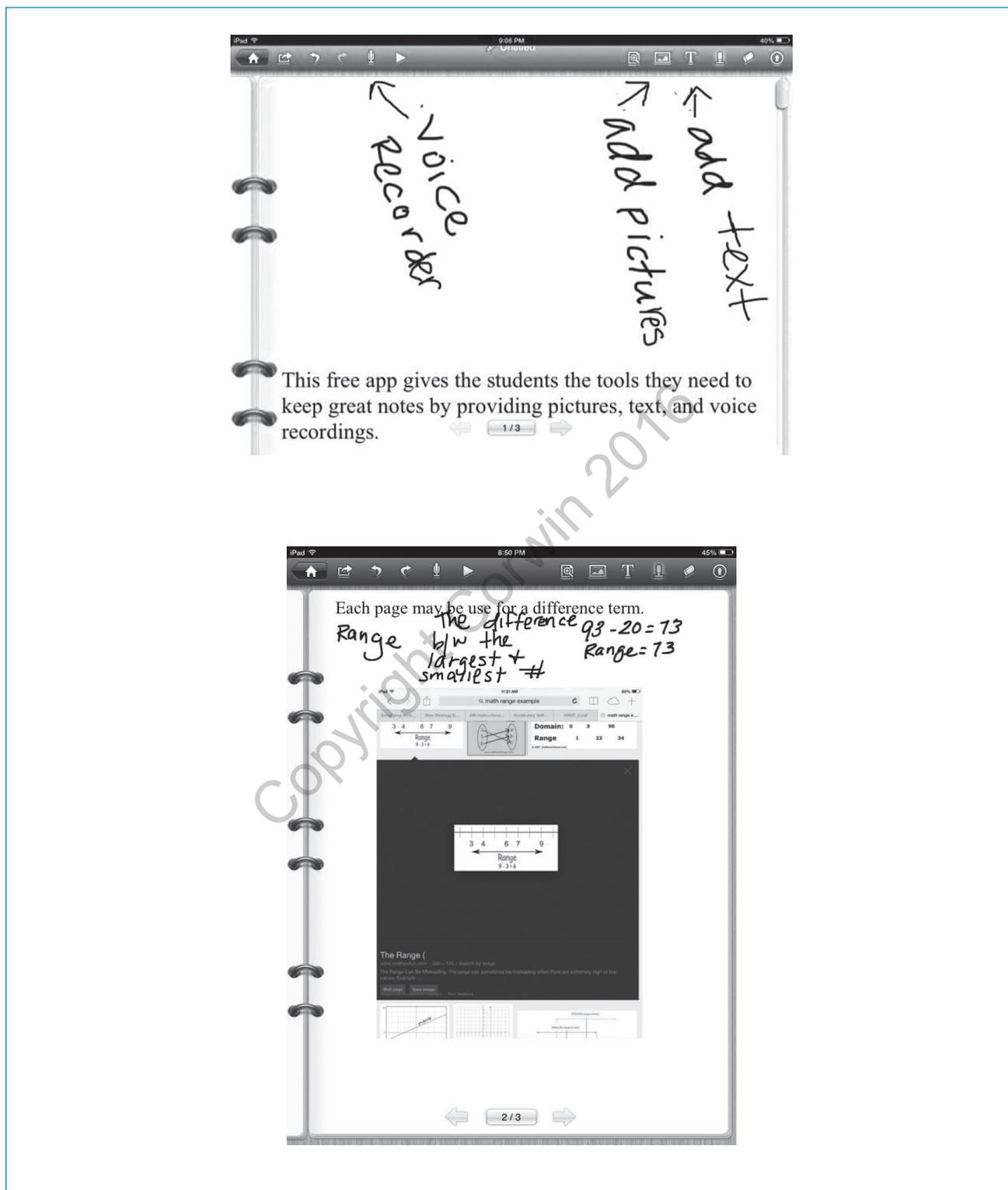
CCSS.ELA-Literacy.CCRA.L.6: Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Reference

Goodman, L. (2001). A tool for learning: Vocabulary self-awareness. In C. Blanchfield (Ed.), *Creative vocabulary: Strategies for teaching vocabulary in grades L-12* (p. 46). Fresno, CA: San Joaquin Valley Writing Project.

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Figure 5.2 • A Vocabulary Self-Awareness Chart Entry for the Mathematical Term “Range” Created Using the Notebook+ App



Source: Content created by Talisa Jackson. Screenshots from Notebook+ App, developed by weiwei zhang.

Figure 5.3 • Vocabulary Self-Awareness Chart Examples

This Vocabulary Self-Awareness Chart comes from a biology lesson.

Word	+	✓	-	Example	Definition
Osmosis		✓			Movement of fluid through a cell membrane
Cell membrane	+			The cell membrane protects the cell	Semi-permeable wall of a cell
Nucleus		✓			Part of the cell with the RNA and DNA
Mitochondria			-		

Procedure:

1. Examine the list of words you have written in the first column.
2. Put a "+" next to each word you know well, and give an accurate example and definition of the word. Your definition and example must relate to what we are studying.
3. Put a "✓" next to any words for which you can write only a definition or example, but not both.
4. Put a "-" next to words that are new to you.

This Vocabulary Self-Awareness Chart comes from math.

Word	+	✓	-	Example	Definition
Associative	+			$(2 \times 3) \times 4 = 2 \times (3 \times 4)$	When you multiply 3 or more numbers, it does not matter what order they are in.
Commutative	+			$4 \times 8 = 8 \times 4$	When you multiply numbers, it does not matter what order they are in.
Distributive			-		

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VOCABULARY AND
CONCEPT DEVELOPMENT

DISCUSSION

RESEARCH AND INQUIRY

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