Visualizing Vocabulary

What is it?

A technique that helps students master critical vocabulary by asking them to process important terms both nonlinguistically (students find or create images to represent each term) and linguistically (students explain why their image is a good representation of the term)

What are the benefits of using this tool?

One of the simplest—and most powerful—ways to enhance students' understanding and retention of important vocabulary terms is to tap into the power of "dual coding" (Clark & Paivio, 1991; Paivio, 2006). When students dual code information, they store it in two different ways—through language and through images—thus making the memory stronger. What's more, by asking students to find or create images to represent their own understanding, this tool makes learning personally meaningful, which "can be especially helpful when students are learning new vocabulary words and terms" (Dean et al., 2012, p. 71).

What are the basic steps?

1. Identify an important term that you want students to process deeply using dual coding.

   Note: You may choose to use this tool for multiple terms as well (see Example 2 and Teacher Talk).

2. Explain to students the importance of dual coding—how using both words and images to process new vocabulary makes learning deeper and leads to better retention.

3. Introduce the term to students. Allow them to write down the definition of the term and, if needed, to ask questions that will help them build a solid understanding of the term's meaning.

   Tip: Encourage students to write the definition in their own words, either in addition to or instead of the textbook definition.

4. Have students create or select (e.g., via image libraries) a personally meaningful image or set of images to represent the term. Remind students that their images can be literal (a direct representation of the term) or conceptual (an icon or symbol).

5. Have students write a simple explanation of their image. Remind students that their explanations should tell why the image is a good representation of the term.

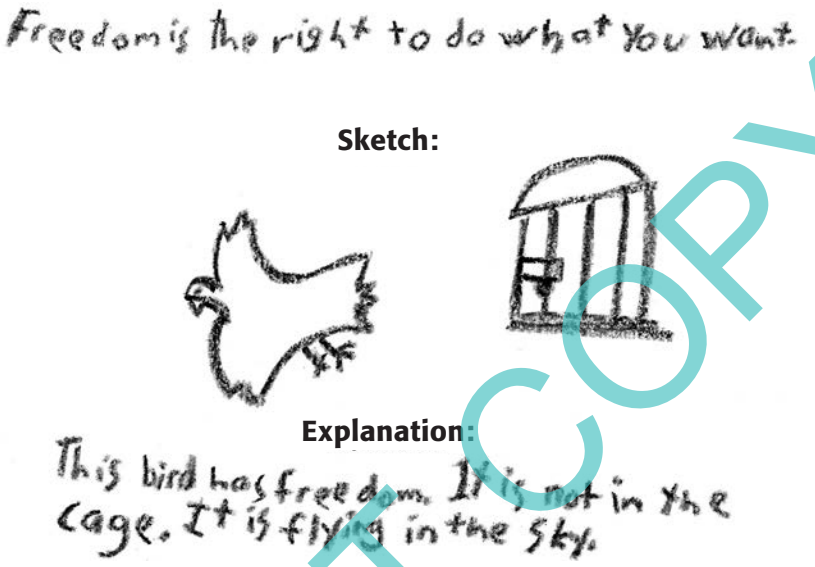
6. *Optional:* Allow students to share their images and explanations in pairs, small groups, or with the entire class. If you include this step, give students the chance to refine or add to their images and definitions if they choose.

7. Encourage students to use their definitions, images, and explanations as a study guide.

How is this tool used in the classroom?

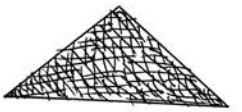
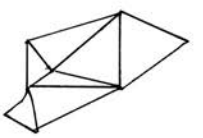
- ✔ To help students develop a deep understanding of vocabulary terms
- ✔ To make direct vocabulary instruction personally meaningful for students

EXAMPLE 1: A second-grade teacher uses Visualizing Vocabulary throughout the year, especially when students encounter abstract concepts that she wants them to concretize. Here is how one student used the tool to express his understanding of the term *freedom*:



SOURCE: From *Word Works: Cracking Vocabulary's CODE*, Second Edition (p. 34), by Silver Strong & Associates, 2007, Ho-Ho-Kus, NJ: Thoughtful Education Press. © 2007 Silver Strong & Associates. Reprinted with permission.

EXAMPLE 2: A middle school math teacher integrates Visualizing Vocabulary into his instructional sequences by providing students with a specially made student glossary at the beginning of the year. Whenever a new term is introduced, students create a new entry by recording the textbook definition of the term. Then, as students learn more about the term, they add to their entries by developing their own definition of the term, creating relevant images, and explaining the reasoning behind their images. An excerpt from one student's glossary is shown below.

Term	Textbook Definition	My Definition	Visualization	Explanation
Triangular Region	The union of a triangle and its interior.	A triangle plus its inside area		The inside is colored in to remind me that a triangular region also includes the interior.
Polygonal Region	The union of a finite number of nonoverlapping triangular regions in a plane	A set of connected triangles that don't overlap and that create a new shape		The triangular regions are all connected (union) but don't overlap.

EXAMPLE 3: A fourth-grade teacher likes to use Visualizing Vocabulary in a cooperative learning setting to help students learn to think through important content together. For a unit on the water cycle, the teacher posted the following terms on the class word wall: *precipitation*, *condensation*, *evaporation*, *water vapor*, *pollution*, *ground water*, *water table*, and *renewal*. For each term, groups of four students were asked to develop a definition of the term in their own words, an image to represent the term, and an explanation of their image. Before posting their work on the word wall, all four group members had to sign off on all elements of the work (definition, image, explanation). Once all groups' work was on the word wall, the class conducted a "word-wall walk" by getting up and reviewing all of the groups' definitions and images. During the walk, student groups were given the choice of the following for each term:

- Select the definition/image that you think is best and tell why.
- Create a new "super definition" by stealing and combining elements of different groups' work.

Teacher Talk

➔ Not all nonlinguistic information needs to be visual. Indeed, the authors of *Classroom Instruction That Works* (Second Edition) point out that we can also enhance students' understanding of terms and concepts by asking students to act the terms out or represent them physically (e.g., hold up two hands with an equal number of fingers up to represent the concept *equation*). To see how one teacher helped students build deep understanding of important terms through physical representation, see Example 2 in the tool called Do, Look, Learn (p. 128).

➔ Some teachers wonder, How many terms is too many to visualize in this way? When using Visualizing Vocabulary, think about your overall instructional goals. If you are looking for students to develop a deep conceptual understanding of a unit's core concepts, you may want to reserve Visualizing Vocabulary for those select concepts. To learn more about how to identify core concepts, see the Teacher Talk section of the Vocabulary Knowledge Rating tool (p. 92).

On the other hand, you may want to have students tap into the power of dual coding for all of the terms in your unit and use Visualizing Vocabulary whenever students encounter new terms. If you choose to use Visualizing Vocabulary this way, consider providing or having students create a simple glossary, as the teacher in Example 2 did. A glossary gives students a set place to record, define, and visualize new terms as the unit progresses. The glossary then becomes a powerful study guide where students can check in on and review their emerging understanding of new terms.