S-O-S Graphic Organizers

What is it?

A tool that shows how using graphic organizers before, during, and after instruction can save our students from drowning in a sea of information

What are the benefits of using this tool?

Many students feel overwhelmed in our classrooms because they don't know what's important to pay attention to or how information fits together to form a big picture. Providing students with an "organized conceptual framework" (Dean et al., 2012, p. 51) in the form of a graphic organizer can help, but only if we use organizers strategically. S-O-S Graphic Organizers outlines a three-phase process for maximizing the use of organizers in the classroom: The teacher **S**hows students how the information they're about to learn is structured *before* instruction begins, students **O**rganize the information they acquire *during* learning, and students use their organizers to review and **S**ummarize key points *after* learning.

What are the basic steps?

1. Review the content for a lesson you're about to teach. Think: What do I want students to know and understand? What are the key topics/concepts/details? What is the overarching structure of the material I plan to present (e.g., topic/subtopic, chronological sequence, cause/effect)?

2. Create or select a graphic organizer (see pp. 116–117 for options) that reflects the structure you identified in Step 1. Customize the organizer as needed to fit your content. Then, add a title or focusing question that will help students understand what they're expected to learn.
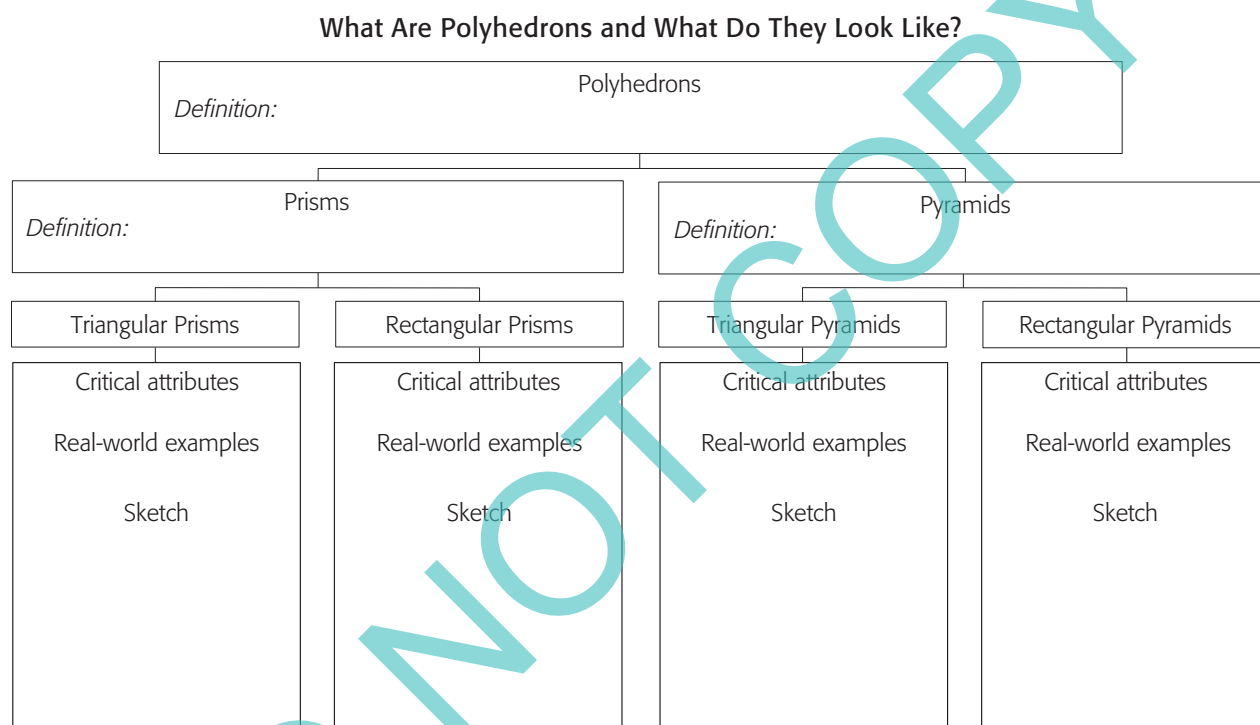
   Note: Graphic organizers can be designed around texts or activities as well as presentations.

3. Prepare students for the learning to come by walking them through the organizer. **S**how them how the presentation will be structured, the kinds of information you want them to focus on, and the way(s) the organizer highlights relationships between individual chunks of information.

4. Present the content one chunk at a time. Instruct students to record key points in the appropriate sections of their organizers. This will help them **O**rganize the information that they acquire.

   Tip: Teach students to take accurate, complete, and concise notes by modeling the process for them. Take notes on a blank organizer as you present, and have students either transfer your notes to their organizers *or* take their own notes, compare their notes with yours, and revise as needed.

5. Pause after presenting each chunk of information—and then again at the end—to help students review and process the information on their organizers. Posing different styles of questions about that information (see the Questioning in Style tool, pp. 100–105, for details) is a great way to do this.

6. Have students **S**ummarize what they learned using their completed organizers as a guide. Explain that their summaries should reflect the same general structure as their organizers (e.g., if their organizer introduces, compares, and contrasts two things, so should their written summary).

How is this tool used in the classroom?

✔ To provide students with a strong conceptual framework for upcoming learning

✔ To focus teaching and learning on the most important ideas

✔ To model and help students develop good note-taking behaviors

✔ To promote retention and understanding of critical content via questioning and summarizing

EXAMPLE 1: A middle school math teacher created the Topic-Subtopic Organizer shown below to accompany a presentation she planned to deliver about the family of three-dimensional solids known as polyhedrons. Her goal was for students to develop a strong conceptual understanding of the polyhedrons they'd be studying before they learned how to calculate surface area and volume.

What Are Polyhedrons and What Do They Look Like?

Polyhedrons
Definition:

Prisms	Pyramids
Definition:	*Definition:*

Triangular Prisms	Rectangular Prisms	Triangular Pyramids	Rectangular Pyramids
Critical attributes Real-world examples Sketch	Critical attributes Real-world examples Sketch	Critical attributes Real-world examples Sketch	Critical attributes Real-world examples Sketch

The teacher walked students through the organizer before beginning her presentation, calling their attention to the types of polyhedrons they'd be learning about and how those polyhedrons are related to one another and classified. She explained that students would be expected not just to understand these important relationships but also to sketch each solid accurately, identify its critical attributes, and provide real-world examples.

The teacher stopped regularly during her presentation to let students record the relevant information in their organizers. She then encouraged them to check their notes against hers and make any necessary corrections before moving on.

For homework, the teacher asked students to review their organizers and to use them to write a summary of what they learned. She explained that their summaries should reflect not just the notes they took about each individual solid but also the relationships that exist between the various solids they learned about. She also reminded them to use their organizers as a guide when structuring their summaries. ("Introduce and explain the largest family of solids first: the polyhedrons. Next, discuss the two types of polyhedrons you learned about—prisms and pyramids. After that …")

Finally, to ensure that students addressed all the vocabulary terms from the organizer in their summaries, she instructed them to underline those terms in their summaries. The summary that one student developed using his completed organizer as a guide is shown here:

> <u>Polyhedron</u>s are <u>3D</u> solids with faces that are all polygons. There are many different kinds of polyhedrons, but two common types are prisms and pyramids.
>
> A <u>prism</u> is a type of polyhedron with two identical and parallel polygon bases. The shape of those bases determines the type of prism you have—for example, a triangular prism or a rectangular prism. A <u>rectangular prism</u> has two rectangular bases and six total faces. Things like bricks and a Rubik's Cube are rectangular prisms. <u>Triangular prisms</u> have two triangular bases and five total faces. A triangular tent is shaped like a triangular prism.
>
> Another type of polyhedron is the <u>pyramid</u>. Pyramids are 3D solids that have one base and triangular faces. The shape of the base determines the type of pyramid you're talking about, be it a rectangular pyramid or a triangular one. <u>Rectangular pyramids</u> look like the Egyptian pyramids. They have one base shaped like a rectangle and four sides shaped like triangles. <u>Triangular pyramids</u> have a triangular base and three triangular sides. Four-sided dice are examples of triangular pyramids.

EXAMPLE 2: A third-grade teacher recognizes that students often think spiders are insects, and he wants to help them understand the difference. To do this, he asks them to research similarities and differences between spiders and insects on the Internet—and to collect their notes on a Top Hat Comparison Organizer. (One student's completed organizer is shown at the right.) He shows students how the organizer has places for recording similarities and differences—and explains that they should record comparable types of information in the same row when completing the differences section. (See, for example, how *6 legs* and *8 legs* appear across from each other in the organizer.)

For homework, he challenges students to write a comparison paragraph that summarizes what they learned. Because many of his students struggle to write coherent summaries from scratch, he scaffolds the process by giving them this simple comparative writing frame to use as a model:

> I am comparing _____ and _____ .
> Although _____ and _____ are different, they are alike in some important ways. For example, _____ and _____ both _____ . There are also some interesting differences between _____ and _____ .
> For example, _____ .
> [Concluding sentence] _____ .

EXAMPLE 3: Prior to having students read a textbook passage about the Cuban Missile Crisis, a teacher used the Episode Organizer below to review the essential elements of any important historical event (time, place, causes/effects, important players, individual incidents, etc.). She reminded students to pay attention to each of these elements while reading and then make notes in the appropriate boxes of their organizers. After checking their organizers against hers and making any necessary revisions, students used their completed organizers to help them summarize the key elements from the original passage in their own words.

The What, Why, and How of the Cuban Missile Crisis

Sequence of specific incidents
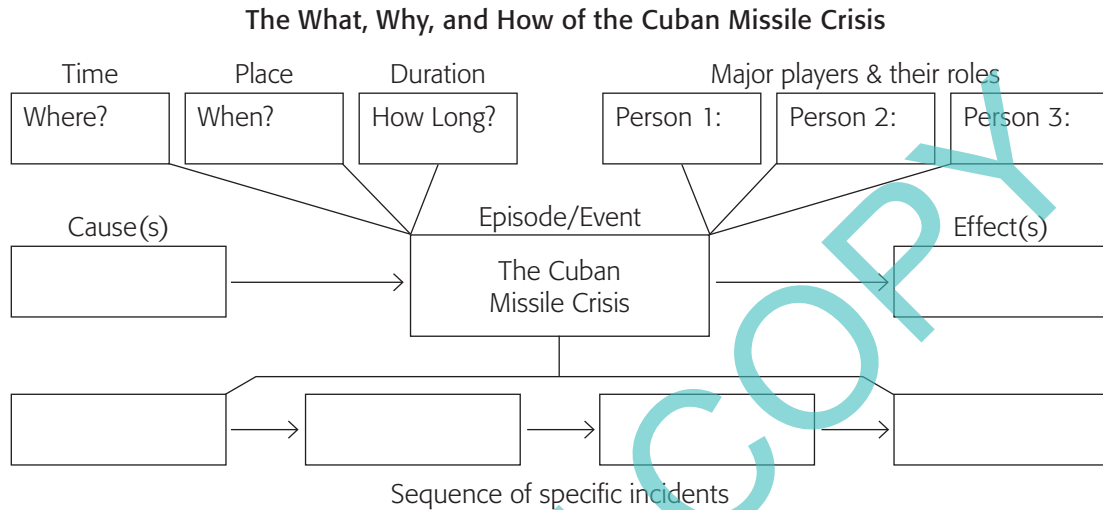
EXAMPLE 4: After realizing that none of the standard graphic organizer structures would meet her needs, a primary-grade teacher got creative and designed an organizer from scratch (see below). She used this organizer to show students how they could make a basic sentence more interesting and beautiful by adding different kinds of descriptive words. ("In the same way we add different kinds of flowers to a garden to make it more interesting and beautiful, we can make basic sentences more interesting and beautiful by adding different kinds of descriptive words—things like adjectives, adverbs, and prepositional phrases.") She reviewed the different parts of speech on the organizer and their functions within a sentence. She then showed students how to "grow" fabulous sentences using the organizer as a guide. For homework, students grew sentences of their own.
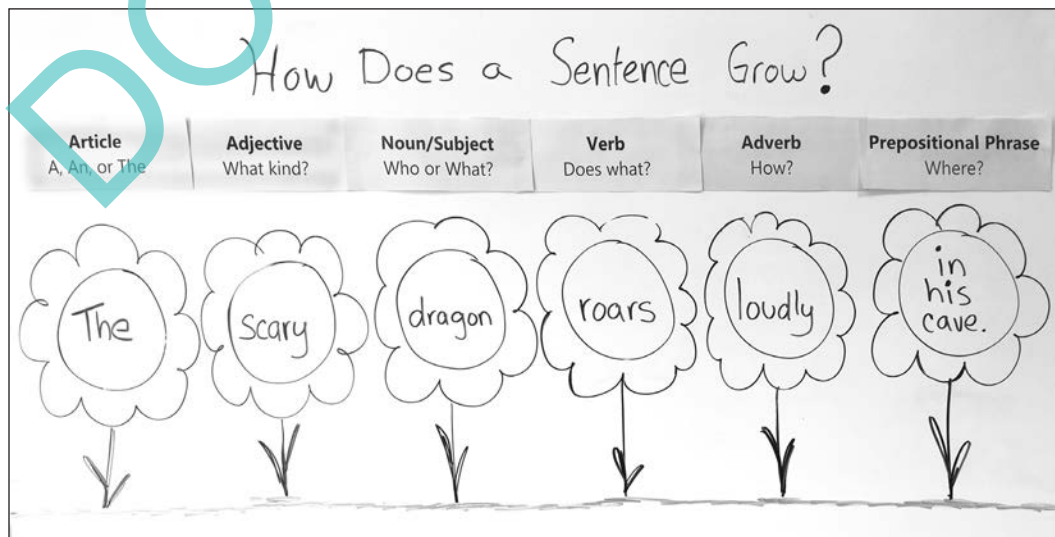
A Potpourri of Graphic Organizers
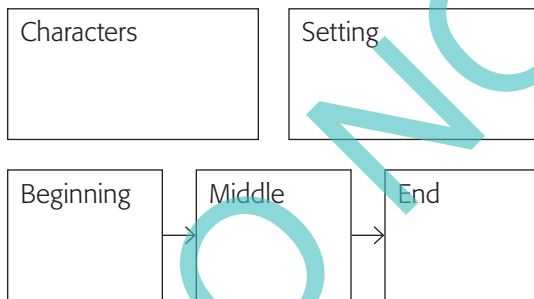
Topic-Subtopic Organizer

States of Matter

Solid	Liquid	Gas	Plasma

Details   Details   Details   Details
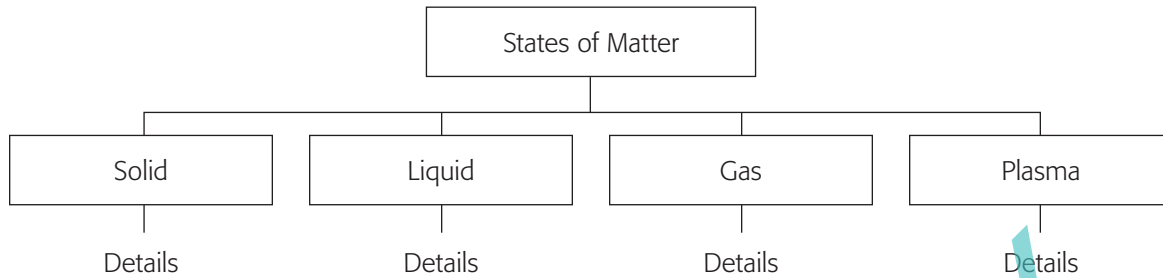
Matrix Organizer

	Impressionism	Post-Impressionism	Expressionism
Themes			
Stylistic Innovations			
Major Artists			
Key Works			

Story Maps

Version 1

Horton Hears a Who by Dr. Seuss

Characters	Setting

Beginning	→	Middle	→	End

Version 2

"The Birth-Mark" by Nathaniel Hawthorne

Someone…	Somewhere…
Wanted…	But…
So…	Then…
Therefore…	Finally…

Time Sequence / Timeline Organizer

Harriet Tubman: The Life of an American Hero

Date	Date	Date	Date
Event	Event	Event	Event
Significance	Significance	Significance	Significance
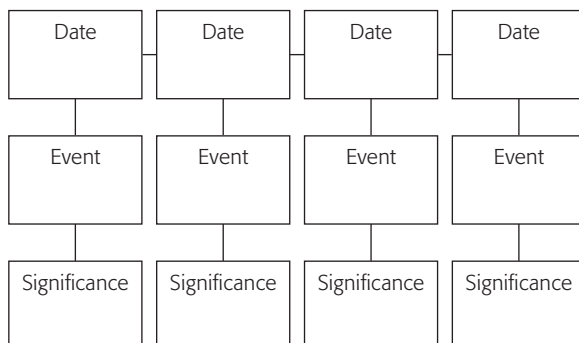
Comparison (Top Hat) Organizer

Key Differences	
Surface Area	Volume
Similarities	

Episode Organizer

| Time | Place | Duration | Key Events Timeline |

The Boxer Rebellion

Cause — Effect
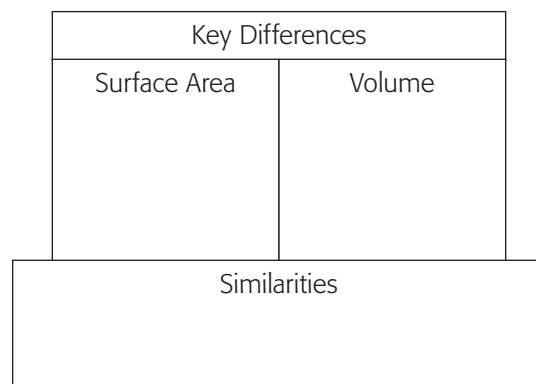
Key Player   Key Player   Key Player
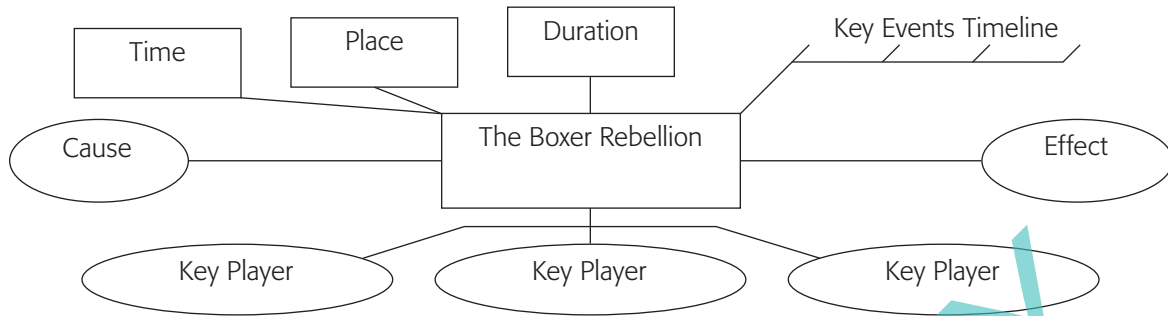
Chronological Sequence Organizer

How to conduct a hair strand test

Step → Step → Step

Step ← Step ← Step
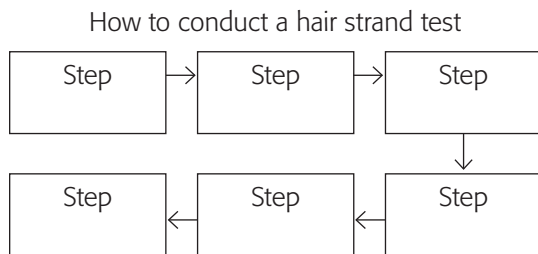
Principle/Generalization Organizer

Osmosis: Movement of water from a less concentrated solution to a more concentrated solution across a selectively permeable membrane.

Example:

Example:

Example:

Concept Definition Map

Other items in this category   Larger category   Key attributes

Jazz

Examples

Cycle Organizer

The life cycle of a butterfly

Cause/Effect Organizer

The Space Race

Cause	JFK declares the US will have a man on the moon by decade's end.	Effect	Implication
Cause		Effect	Implication
Cause		Effect	Implication
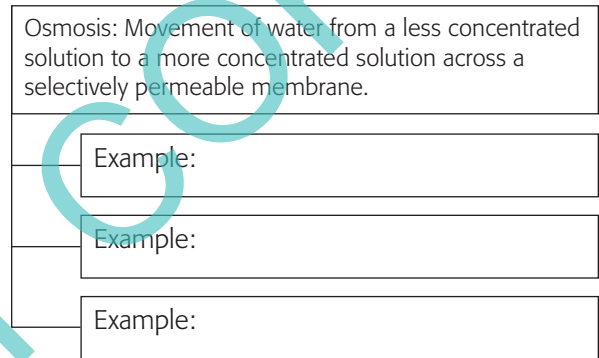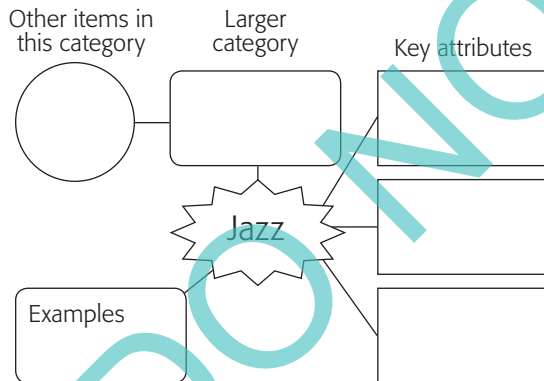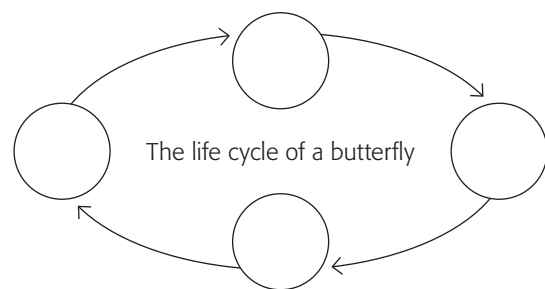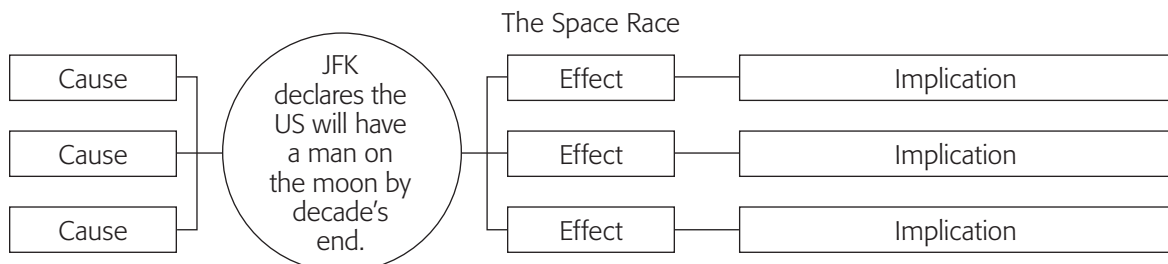
Note that Cause/Effect Organizers can be designed to focus on the causes behind an event, the effects of the event, or both, as in this example.

🌓 Teacher Talk

→ Students are more likely to appreciate and use a tool well when they understand its purpose—particularly if that purpose is to help them. For this reason, it's worth taking the time to tell students how using graphic organizers before, during, and after instruction will benefit them.

Sample language: Organizers help you determine what to pay attention to by highlighting the big ideas BEFORE instruction begins. They give you an organized framework for taking notes DURING instruction. And they make it easy to review and summarize key points AFTER instruction.

→ This tool supports a number of recommendations from different chapters in *Classroom Instruction That Works* (Second Edition). Specifically, it supports these recommendations:

- Introduce graphic organizers before a lesson, for the purpose of previewing and preparing students for the learning to come (Chapter 4, p. 51).
- Use graphic organizers as a means of having students represent and organize information both linguistically and nonlinguistically (Chapter 5, pp. 66–67).
- Model the process of good note taking by providing teacher-generated notes for students to look at and learn from—and note-taking templates that call students' attention to important information (Chapter 6, pp. 90–91).
- Help students understand and use the critical elements of common organizational structures (e.g., topic/subtopic) to summarize important information (Chapter 6, p. 83).

→ Don't feel boxed in by the organizer structures featured on pages 116–117. If none of those structures meets your needs, design an organizer from scratch as the teacher in Example 4 (p. 115) did.

→ Use your organizer to outline your presentation before delivering it. This will help you present your material in an organized way that's aligned to the organizer. It will also let you determine whether your organizer needs to be modified in any way before using it. (Do you need to add/remove/reorganize boxes? Insert headings or titles for clarity? Make other changes?)

→ Keep students oriented during a lesson or presentation by referring to the organizer as you go. ("Now, let's look at the second type of reptile on our organizers.") Help students see how individual bits of information fit together by using appropriate organizing and connecting words. In a presentation about a sequence of events, for example, you might use words like *first*, *next*, and *after that*. If you were comparing two items, words like *similarly* or *in contrast* might help.

→ Knowing how to use graphic organizers isn't something that comes naturally. For this reason, it's important to familiarize students with the various organizer structures on pages 116–117 (What kind of information is each one designed to collect? What kinds of relationships does each one highlight? What topics/types of material might each kind of organizer lend itself to?) and practice using them as a class before asking students to take notes on the organizers independently. Dean et al. (2012) advise using familiar content when introducing each type of organizer "so students can focus on learning to use the graphic organizer without having to worry about new content" (p. 67).