

GRADES

**6-12**

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MINING

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# COMPLEX TEXT

Using and Creating **GRAPHIC ORGANIZERS** to Grasp Content and Share New Understandings

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## GRAPHIC ORGANIZERS

**1. Acquire and use academic language appropriately.** One aspect of the Common Core standards is that students can acquire and use academic language, including vocabulary, to become conversant with content. Academic language is different in many respects from the language students (and their teachers) use in most day-to-day literacy activities, such as conversation. Academic language focuses on more specialized knowledge of academic disciplines and concepts and often requires different language registers and vocabulary (see Townsend & Lapp, 2010). Academic language features discipline-specific terms and syntactic structures as well as terms that students would not generally use in conversation, such as *abandon* or *clarify*, that cut across disciplines.

**How graphic organizers help:** Organizers help students visually map their thinking about content onto a single, focused page, and both the written directions and the spheres themselves have academic language embedded. Think of the popular Venn diagram: two interlocked circles and directions that ask students to *compare and contrast* something using terms that are new or used in a new way. As they create and use these organizers and the information they contain, students have opportunities to use and improve their academic language proficiencies.

**2. Make connections.** In some ways, making connections is the essence of learning. Neurons connect with each other to produce powerful new learning (see Zull, 2002). Readers connect what they know of how texts are coherent, how one text connects with that of another (Hartman, 1995), or how texts connect with the world as they know it (see Harvey & Goudvis, 2000).

**How graphic organizers help:** Organizers allow students to see, almost at a glance, how one idea relates to another or how one process is contingent upon another. Our experience tells us that students do not need to have things simplified so much as they need to see the big picture before they can look at the details. We liken this to looking at the box showing the final product of a jigsaw puzzle before spending time assembling the parts into a whole.

**3. Comprehend complex processes or events (e.g., sequences).** A recurring theme throughout this book is that sometimes it is necessary to make things simpler than they may first appear. Learning occurs when problems, events, concepts, and processes present a challenge to our thinking. Learning simpler constructs can lead to greater understanding of complex concepts, just as learning complex constructs might be made more comprehensible with the support of an organizing schema.

**How graphic organizers help:** As with other academic goals, students are frequently challenged to understand information and ideas that are complex and sometimes complicated. *Complexity* takes into account nuances and details, while *complicated* sometimes means that the steps can be confusing, in our view. Graphic organizers, in the hands of a skillful teacher, have the potential to make the complex comprehensible so that the details and nuances can be integrated into a richer understanding. They also offer the opportunity to make the complicated comprehensible as students grapple with new learning.

**4. Understand five types of informational text structures.** Five general, or top-level, structures of text are often found in informational material. When students know the five structures of cause/effect, problem/solution, compare and contrast, descriptive, and sequential, they have a greater chance of making the complexity of a text more comprehensible (Meyer, Brandt, & Bluth, 1980).

**How graphic organizers help:** Though top-level structures, such as descriptive or cause/effect, seem obvious, applying them as a reader or writer is often a challenge given the complexities of the texts students are reading and those they compose. Graphic organizers give students the visual support to discern what those top-level structures are and thereby concentrate their efforts on understanding the content.

**5. Understand content.** Students use a graphic organizer most frequently in the process of trying to learn and organize information, be it a science concept, the truth found in a work of fiction, a mathematics problem, and so on. They are trying to learn discipline-specific information.

**How graphic organizers help:** Graphic organizers help for a couple of reasons. The obvious reason is they help students make notes and thereby create a placeholder for facts and other information. Students develop understandings in the midst of reading and learning, making recall and analysis a bit easier. The less obvious reason is that different types of organizers work better with some students than with others and that they are tools that can be used on an as-needed basis with a select few students. In fact, when they are assigned to every student as a kind of catch-all, and when teachers' assumption is that all students' automatically understand the content and benefit from the visual organizer, results are uneven. It turns out that students seem to learn best when graphic organizers are used strategically, and as they come to know them, they can choose ones that work best for them or create ones to illustrate their thinking. It's imperative to consider the organizational patterns different students know and respond to well. There are also students who don't like to use them at all for certain purposes; those who do not need them should be invited to create other ways to organize information. In many instances, these may become personally created graphic organizers.

**6. Explore a concept and determine the nature of inquiry.** In our experience, students learn well when they have something intriguing to investigate or a problem to be addressed. Learning is naturally a process of wondering and inquiring into many topics.

**How graphic organizers help:** Knowing content is one thing, but figuring out broad concepts and how those relate to an inquiry stance is quite another. Children in Grades 6–12 are fabulously curious and can become content experts on rainforest life, trucks, butterfly species—you name it. But what the CCSS ask teachers to do is “flip” or apply the knowledge into interconnected investigations (e.g., How is camouflage in the rainforest connected to survival? How does preserving rainforests relate to improving human conditions in and near the rainforests?). Even students in the primary grades can engage in these bigger quests if we scaffold learning with graphic organizers, so recording, comparing, contrasting, and so on become more concrete processes.

Inquiry is often informed by the discipline involved. Scientists approach a question they have in a particular manner, writers of fiction grab us with a hook or question, and historians may choose timelines and photographs. Graphic organizers can help students understand what they need or want to know, but also how to form a framework for thinking about their inquiry even if they later propose something different than a traditional approach. Knowing *how* it has been done is often the lever (Gardner, 2006) that leads to creativity.

7. **Synthesize multiple sources.** Though students often become used to working with a single text, much learning occurs when students compare and contrast the ideas found in several sources. Synthesizing a number of sources of information while reading, during discussion, and through composing appears to be a key skill expected in rigorous standards and in the digital age when many sources are readily available.

**How graphic organizers help:** Working with multiple sources of information is a key criterion for college and career readiness, but as any K–5 teacher knows, it can be a daunting task for young students. Graphic organizers provide a means of managing many diverse sources, and looking for confirming evidence for a given opinion, disconfirming evidence, and commonalities. Though teachers may choose to provide an organizer for such purposes, students are well served when they are able to recognize their own needs for an organizer and select or create one themselves. Though younger students are not always conversant enough with content and the way it is structured, teachers can help them by calling attention to the organizer and how it relates to the text they will read. As students move into higher grades, they will be better prepared to make their own choices or modify graphic organizers for specific purposes.

8. **Use reliable sources to form and write arguments.** Jumping to an opinion often short-circuits deep thinking. Everyone, it seems, has an idea about why something is the way it is, what it means, or how things should work, but effective opinions that lead to deeper understandings and conversations are based on well-considered evidence, and they are subject to refutation or disconfirming ideas. (See our companion book for younger students, *Mining Complex Text, Grades 2–5*, which explores in more detail how students might use graphic organizers to scaffold and promote skills with opinion and how they can become more independent at crafting their own thinking and their own student-created organizers.)

**How graphic organizers help:** Graphic organizers provide structures so that secondary students can more easily collect evidence, sort that evidence, and put it to use in written work or other multimodal composition tasks.

## WHAT LIES AHEAD IN THIS BOOK

A structured overview is a type of graphic organizer that shows broad connections between and among related topics. It helps readers, listeners, and viewers of content understand how narrower topics relate to larger concepts. Typically, the teacher (or text author) prepares this in advance as an overview. We provide one here to give you a broad view of what lies ahead.

Throughout the book, we include marginal notes that refer to the eight academic goals or big ideas we described above; in organizing this book, we were mindful of the Common Core State Standards and related rigorous goals as well as college and career readiness outcomes. We illustrate through example how to use graphic organizers to help students engage with and comprehend timeless text types and also use and craft organizers as they think and write in genres that are evergreen as well as those that are newer, such as those found in digital environments.

**Chapter 2: Thinking on the Page: The Research Behind Why Graphic Organizers Work.** This chapter shares the research base illustrating how the cognitive processing of information can be supported by using graphic organizers. Also noted is how graphic organizers provide learning scaffolds, assessment options, and promotion of differentiated learning.

**Chapter 3: Using Graphic Organizers to Acquire Academic Vocabulary.** Here we demonstrate how graphic organizers can promote comprehension and use of academic language. Beginning in kindergarten students are immersed in academic language that comprises words essential to understanding content (e.g., *sink, float, community, insect, migration*) as well as words that describe the processes involved when reading, writing, discussing, and crafting a multimodal composition (e.g., *same, different, compare, contrast, sequence, evaluate, infer*). At the end of the book, you will find a glossary of terms that may be helpful as a reminder about the way we have used terms such as *academic language* and *academic vocabulary* throughout this book.

**Chapter 4: Graphic Organizers Support Literary Text Reading and Writing Tasks.** Works of fiction and informational genres of text share many qualities. However, they also differ in significant ways. This chapter shows how graphic organizers help students understand major text patterns specific to literature and help learners both read and write narrative.

**Chapter 5: Graphic Organizers Support Informational Text Reading and Writing Tasks.** This chapter zeroes in on how graphic organizers can extend and deepen students' thinking about expository or informational genres as both readers and writers.

**Chapter 6: Graphic Organizers Support Students' Reading Proficiencies.** This chapter supports teachers' objective to improve students' reading proficiency. The Common Core State Standards emphasize this goal (Common Core State Standards Initiative, 2010a). Graphic organizers that direct students' attention to specific information in a text can help them organize, analyze, summarize, and evaluate complex ideas in the "four corners" of the text (Coleman & Pimentel, 2012). In the elementary grades, special attention to top-level organizational structures and their interplay supports comprehension. As students become increasingly proficient with these and more fully understand how they work together in the secondary grades, they also become more capable with composing tasks. Secondary students will know the structures, but they may struggle with the increasingly complex nuances of the text.

**Chapter 7: Graphic Organizers Boost Questioning and Responding.** No effective teacher ever said, "Gosh, I wish my students did not ask questions about what we are learning or reading!" However, students in secondary grades are not yet experts at learning as a process or with content knowledge. In this chapter we show how graphic organizers can help students know what questions to ask, how to ask them, when and where to ask those questions, and how to respond to other students and members of the community who pose questions about learning tasks and content knowledge.

**Chapter 8: Graphic Organizers Foster Understanding and Writing Arguments.** Understanding and constructing graphic organizers are a cornerstone of writing tasks for



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secondary students working with the Common Core and similar standards. But just what constitutes an effective and informative argument? How might middle or high school student write or otherwise express an argument that others, who may not be of like mind, want to hear or read? Graphic organizers are on the job, again; they have the potential to help students think about what an opinion is and how it might persuade or convince others who do not quite think the way they do. (See our companion book for elementary teachers for more on how opinion and graphic organizers work together.)

**Chapter 9: Graphic Organizers Support Collaboration.** Most people agree that to be ready for college, career, the next grade level, or just getting a task done requires communication and collaboration. Who is going to do what? When will this occur? What class meetings did we have and what did we decide? Wait—there’s a graphic organizer for that! Organizers that support collaboration are shared in this chapter.

The goal of this book is for students to learn the importance of organizing the information they are reading or presenting and, in doing so, to become confident in selecting or constructing graphic organizers to organize and share information and their ideas.

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