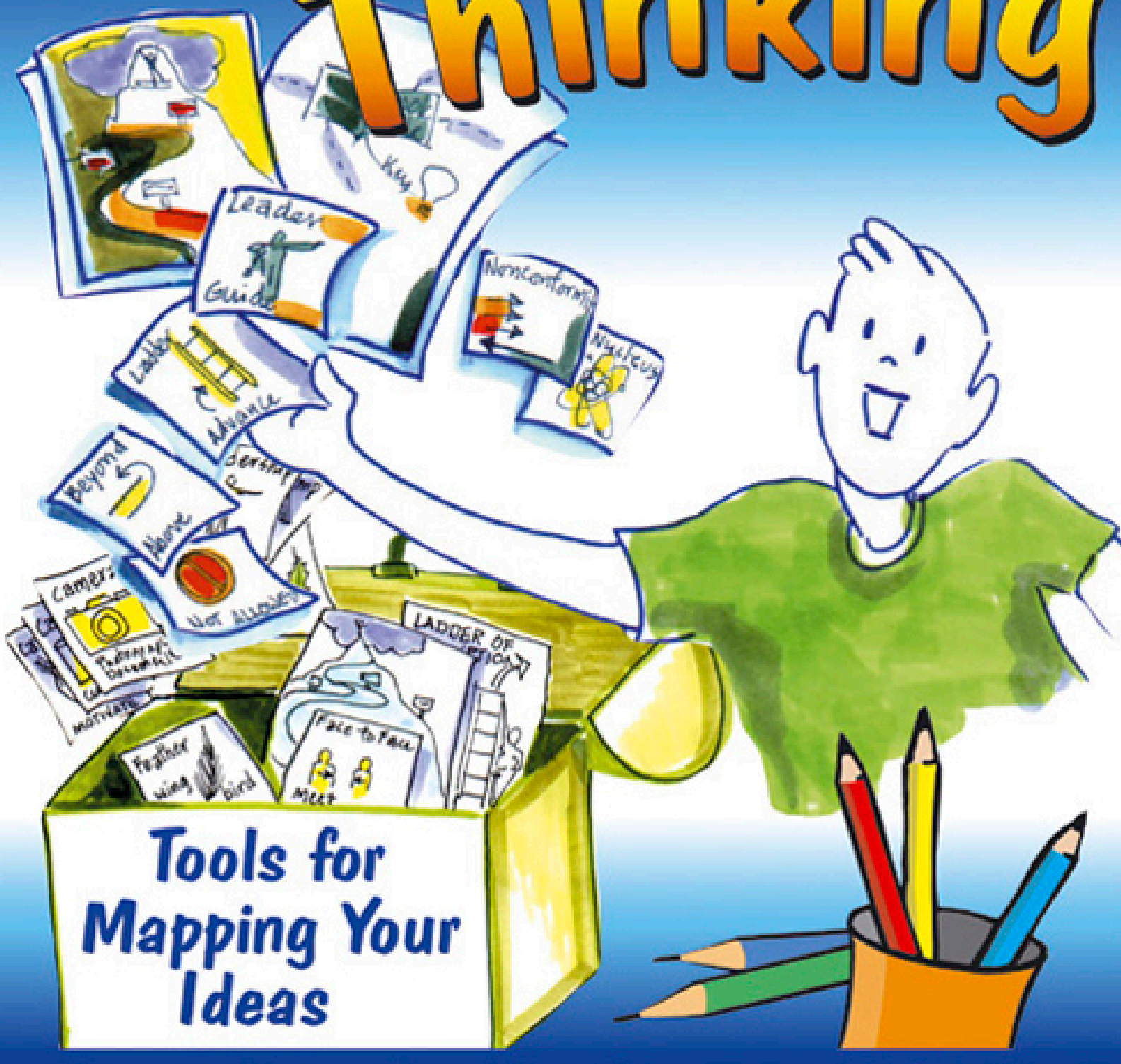
Visual Thinking



Tools for Mapping Your Ideas

Nancy Margulies and Christine Valenza

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Tools for Mapping Your Ideas

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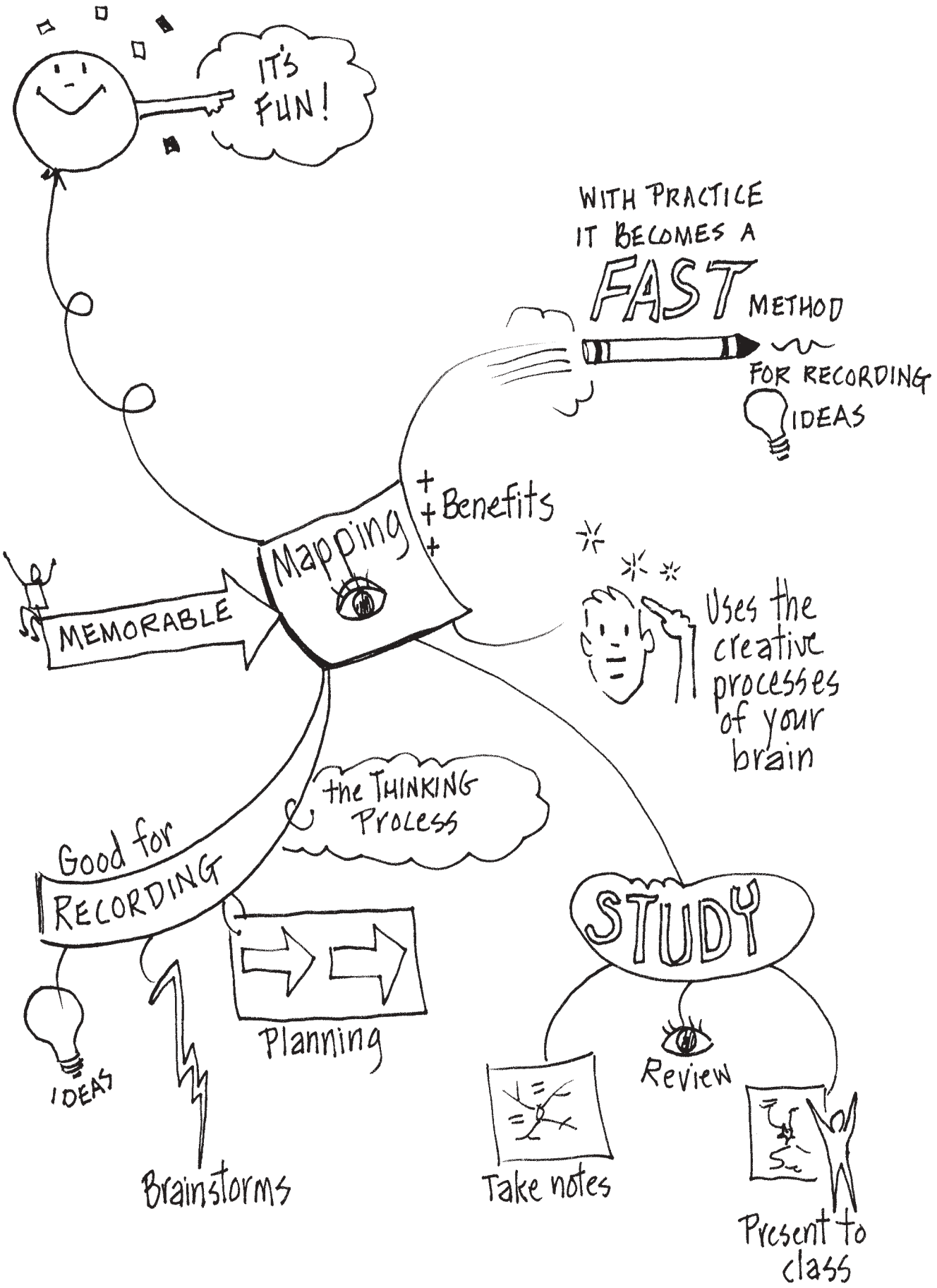
Introduction

This book is a response to requests from teachers and parents around the globe for more ways to use visual mapping to enhance thinking skills and for a greater resource for finding and creating symbols. Many teachers have discovered that mapping ideas helps them communicate with students by creating engaging, memorable experiences. Students find the process of visually recording ideas, whether for taking notes or creating presentations, to be more fun than traditional written recording, such as linear note taking. By mapping the ideas, students can record new ideas where they fit in terms of content. This process enables students to organize their notes by category and relationship while mapping. See, for example, the maps that capture science lessons, on pages 00 and 00, and the map about ancient Egypt, on page 00. Not only is the process more memorable and fun, the results are excellent review tools. It's far easier for students to remember a symbol than a string of words.

Although the benefits of visual mapping have long been established, one of the most important aspects of making ideas visible is often overlooked. Making ideas visible, using both words and images, means that we are making our very process of thinking visible. Often we go about thinking and attempting to solve problems without a conscious awareness of our own process. This is much like trying to maneuver your way through a crowded room in total darkness. You stumble blindly along, hoping that your memory of the room is accurate. Much of what goes on in our minds that is usually unavailable to us—that is, in fact, invisible—becomes knowable when it leaves the far reaches of our brains and shows up on paper. Once our ideas exist outside our brains, we can explore them in greater depth. This capacity to work with ideas made visible is an important aspect of visual intelligence (McGuinness 2003).

Visually mapping ideas is a process that allows you to see the whole picture, to see the parts and the whole and notice the relationship between them. Often our minds move from detail to detail without the ability to step back and see the entire system. Once ideas are poured onto paper and made visible, the big picture comes into focus.

Whether you are new to visual mapping or an experienced Mindscaper, this book will bring you a wealth of symbols and templates to use for mapping, creating worksheets, making the chalkboard or whiteboard more


IT'S FUN!
WITH PRACTICE IT BECOMES A FAST METHOD
FOR RECORDING IDEAS
Mapping
+ Benefits
+
+
MEMORABLE
Uses the creative processes of your brain
the THINKING Process
Good for RECORDING
STUDY
IDEAS
Brainstorms
Planning
Review
Take notes
Present to class

appealing and meaningful, and teaching your students how to create symbols to express their own ideas. (Note: Except when we discuss Mindscapes specifically, we generally refer to Mindscaping, Mind Mapping, visual organizers, graphic organizers, clustering, and other note-taking systems for visually representing ideas as "maps" and "mapping." We use the term "symbols" to represent any image that conveys an idea.)

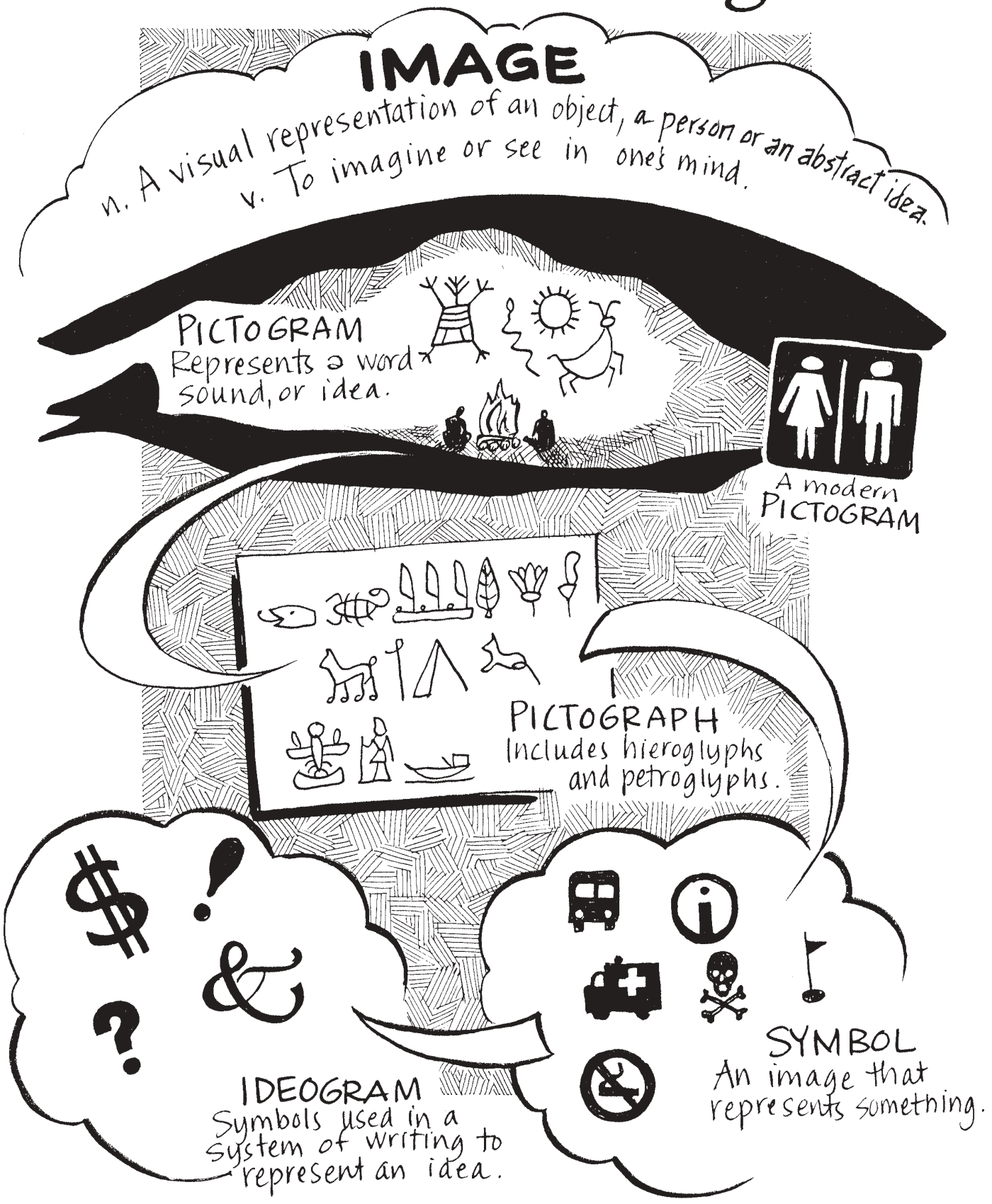
Visual Language

> Man has functioned as a seer and embraced vastness for millennia. But only recently, through television and the modern media, have we been able to shift from the clumsiness of speech as a means of expression and therefore of communication, to the powers of infinite visual expression, thus enabling us to share with everybody the immense dynamic wholes in no time.
>
> —Caleb Gattegno, *Towards a Visual Culture*

The integration of images and words creates powerful visual languages. Have you ever noticed that as you think, images come to mind? When we use visual tools, such as images, we make our thinking visible. Students' capacity to think through complex problems is enhanced when they can see the process on paper. Using the Mindscapes provided in this book, students will be better able to organize their thoughts. The ideas a child may have about how to accomplish a certain goal, for example, may be floating in his or her head outside the realm of awareness. Once they are on paper in a fashion that shows their relationship to one another, however, ideas become clearer and easier to manipulate. Mental energy is freed to examine the combination of thoughts and to plan next steps.

Throughout history human beings have used images—cave paintings, icons, pictographs—to express their thoughts. Pictographs (pictures representing ideas, as in primitive writing) and hieroglyphics are among the oldest forms of visual language. The Sumerians in 4000 BCE used over 2,000 pictographs in their writing. In our modern world, the addition of visual images to our work can clarify context and meaning between us and our students. Symbols that express specific meaning have been used for centuries in disciplines such as science, mathematics, music, and dance. As we develop international symbols and recognize the value of visual intelligence, more symbols appear daily. As people who speak different languages come together in a global culture, it is natural that we invent a new language that can convey complex ideas using images as well as text.

The Evolution of Images



Visuals can condense extensive amounts of information and are often comprehended regardless of age or culture. When you are able to bring simple images into the classroom you enrich the learning environment.

About This Book

> The use of visual tools creates a shift in classroom dynamics from passive to interactive learning for all to see.
>
> —David Hyerle, *Visual Tools for Constructing Knowledge*

Chapter 1 introduces the many uses and approaches to basic Mindscaping, the simplest and most free-form visual recording method. In addition to an introduction of how mapping will benefit you and your students, the chapter details the steps for creating a Mindscape, with examples of Mindscaped student reports and an example outline to illustrate the practical and effective use of Mindscapes in the classroom.

Chapter 2 walks you and your students through basic drawing techniques that anyone can use to create symbols, even if you think you can't draw. Use this chapter to build your own confidence and photocopy the pages to use as handouts for your students. For many adults and older students, the idea of drawing stands like a giant boulder in our paths marked "No, you can't." Chapter 2 will enable you to sidestep the boulder and continue blazing a new trail. You will be able to prepare worksheets, make posters, and convey ideas in a manner that appeals to your students, especially those students for whom reading is challenging. When the book *Mapping Inner Space* was published, many teachers wrote to say that with the introduction of simple maps, their most challenging students were transformed into the most engaged.

In chapter 3, you will find a "symbolary," which provides you with hundreds of simple images you and your students can draw to convey a variety of ideas. Next to each symbol are words that it could represent, although this list is by no means exhaustive. You are encouraged to use these symbols *with* written words to reinforce your point and lessen the chance of confusion.

Hand-drawn symbols can be applied to a range of subjects and do not need to be taught as a separate unit. However, for those students interested in drawing, you can hand out the symbol-drawing pages to give them an opportunity to copy the images and create symbols of their own. Other students, who are less confident, may wish to begin with the step-by-step symbol drawing on pages 00 and 00.

We are living in a culture that is communicating with more icons and symbols than ever before. Encourage your students to notice the symbols in their world. You may want to begin a collection of symbols copied from magazines or seen on the computer screen. Students may be more symbol-savvy than you think. They encounter symbols when using e-mail, using electronic equipment of all sorts, and reading common signs, such as those indicating disabled parking, ladies' and men's rooms, no smoking, and a host of other everyday symbols. Take a look at the common symbols we see around us daily, shown on page 00. We will also introduce you to the world of clip art graphics that are relevant to lesson planning and encourage you to explore those resources.

Chapter 4 provides you with a number of ways to use symbols with templates to enrich your students' thinking skills. We have designed the templates so that students can fill them in and, in doing so, move through stages of thinking and problem solving. With younger children, you can show the map and ask the questions, filling in the map for them, using words and pictures. Mapping in this way can be applied across the curriculum. In both cases (whether students use the templates or you work through them as a class), the steps in the thinking process become more clear, and students can slow down the thinking process in order to be more thorough and skillful. Armed with stronger thinking skills and visual recording methods, your students will find note taking, studying, review, and all learning tasks to be easier, more fun, and more memorable, and they will soon see a difference in their ability to retain and understand what they learn and to apply their enhanced abilities on tests and other assessments.

The resources section will lead you to books, organizations, and other sources for delving deeper into the teaching of thinking skills, the use of visual language, and mapping for classroom use.

Chapter 2

The Copy Cat's Guide to Drawing

He who can copy can do
—Leonardo da Vinci

The notion that some people can draw and others can't is one of the myths of our culture. In fact, learning to draw simple images is easy. It can be accomplished by following the step-by-step methods shown in this chapter, on pages 000–000, and later by simply copying the images shown in the symbolary (starting on page 000). Not only is it OK to copy, copying is central to learning to draw.

Most of drawing is not in the hand, as we assume, but in the mind and eye. You can practice drawing by looking closely and noticing the everyday objects that surround you. As you develop your ability to understand how things look, you will be adding to your capacity to draw. Look at the walls around you. Follow the ceiling line to a corner. Can you see the letter Y created by the corner where the walls meet the lines of the ceiling? If you were drawing this, the line where the walls meet would be exactly parallel to the sides of your sheet of paper.

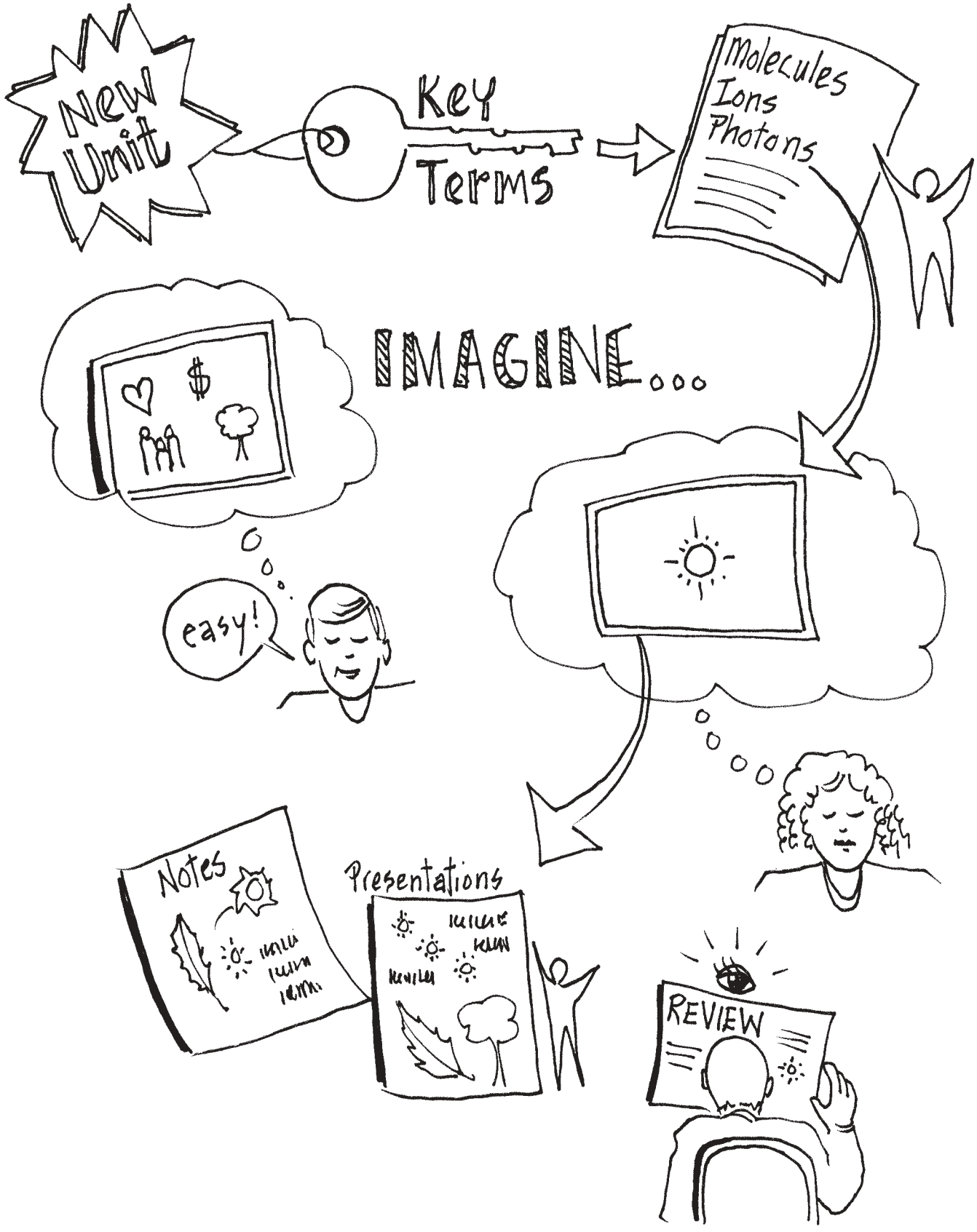
Imagine someone giving you a sheet of clear paper and a photograph of some buildings. If you laid the plastic on top of the photo, could you trace the lines of the photograph onto the plastic sheet? Most people know that they can trace the outlines of buildings. The next step is to copy an image without tracing it.

Copying what you see will help you overcome the feeling that you can't draw. If you haven't drawn much since your childhood, now is an excellent time to pick up where you left off. Your willingness to be a beginner and share your drawings with the class will serve as a model for giving it a try and not being embarrassed when your work isn't perfect.

I See What You Mean

Drawing is not necessarily about producing a work of art. It is a process that enables us to capture the images, thoughts, plans, and ideas in our heads and externalize them—put them on paper where we can *see* them. It is like creating a projection of the mind onto paper.

As our minds conceive of an idea, we visualize it instantly—for most people an inner image instantly appears. Our thoughts come and go at a rapid pace. Often we dismiss an idea without really "seeing" it fully. We have such a multitude of ideas that it isn't


New Unit
Key Terms
Molecules
Ions
Photons
IMAGINE...
easy!
Notes
Presentations
REVIEW

Chapter 3

Creating and Using Symbols

> The language of symbols has no words but it can shout warnings, give instructions, direct traffic, and play cards. Without words it can speak in a hundred languages . . . all at once. Almost everyone understands it but no one speaks it.
>
> —Jan Adkins, *Symbols: A Silent Language*

You can introduce symbols to the students while teaching any subject matter. You might start by showing students familiar symbols, such as the ones on the opposite page, or try drawing a number of symbols and asking the students to come up with ideas about what the symbols might represent (see the examples on page 000). Then reverse the process: Write a number of concept words, such as "integrate," "above," or "constitution," on the board and ask the students to come up and draw symbols beneath them. Since there is no right or wrong symbol, no *one* correct answer, students can draw many symbols for each concept. Notice that most symbols have multiple interpretations. The same symbol can have numerous meanings. That is why it's important to use words along with images to avoid confusion.

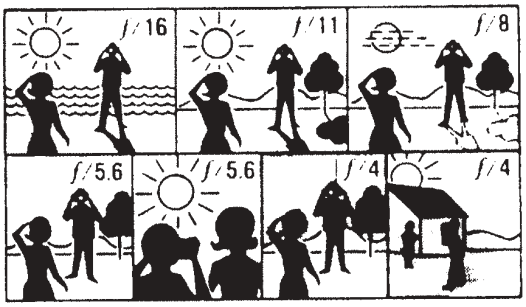
Once you have set the tone by demonstrating symbol drawing, students can create their own images using the symbolary in this chapter for inspiration or drawing upon their own memories and imagination. Let your students know that the root of the word "imagination" is "image." We each have an inner source of visualizing what we want to draw—our own imagination.

Symbols and the Curriculum

Encourage students to use symbols when you introduce a new unit. Give an overview of key terms and challenge students to come up with symbols for each term. You and the class can then use the symbols for taking notes, presenting ideas, and reviewing. You could even request a Mindscape as part of a test. If students have trouble drawing the symbols, encourage them to begin with a word map and add symbols later.

SYMBOLS WE SEE AROUND US

Do you RECOGNIZE them?



About *Visual Thinking*

Free yourself from the limiting belief that you can't draw and move into the dynamic world of visible thinking for you and your students. The authors have compiled a *symbolary* of easy-to-draw iconographs that can be used to enrich communication, provoke deeper thought, and make the process of creating Mind Maps and Mindscapes for note taking and review in your classroom a breeze. *Visual Thinking* breaks down the process of drawing into small steps so that anyone who thinks they cannot draw will find that in fact, they can. Visible thinking templates help students work through challenging problem-solving activities. As their thinking processes are recorded, students become more thorough and skillful in reaching conclusions and making decisions.

"*Visual Thinking* is a wonderful, inviting workbook that gives you the basic tools for "speaking" visual language, a language I have predicted will be a new international auxiliary language. **With this book, nobody has an excuse like "but I can't draw." With *Visual Thinking* anybody can begin to put thoughts in graphic form. And teachers, parents, and kids will delight in the ease and fun of doing it.** The authors have provided easy-to-follow tips for drawing, over 500 simple-to-draw icons and visual symbols, and more than a dozen templates for putting together ideas to create and convey larger patterns of thoughts."

—Robert E. Horn
author of *Visual Language: Global Communication for the 21st Century*

Nancy Margulies and **Christine Valenza,** two of the best-known visual facilitators in the business world, bring their expertise to the classroom and share their secrets for conveying complex ideas simply. If one picture is worth a thousand words, this book is worth millions.

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