A number of years ago, Steph walked into a staff developers’ meeting and mentioned that she was in search of a picture book to teach visualizing. Our colleague and friend Chryse Hutchins suggested Estelle Condra’s *See the Ocean*, a beautiful book filled with stunning watercolor illustrations, striking poetic words, and a moving narrative.

It is the tale of a little girl who travels to a beach house with her parents and her brothers each summer. As we read through the story, we soon notice that something is different about Nellie. She never begs to sit near the window in the car, she describes the ocean as an old white-bearded man, and she asks her parents endless questions. Near the end, we discover that she is blind. As Steph read through it, she, too, had endless questions.

“I wonder why Chryse recommended this for visualizing,” she said to Anne the next day. “I think it’s perfect for questioning.” Anne read it and commented that she thought it was just what
she was looking for to teach inferring. When we talked with Chryse later, she said that from her perspective the poetic language, metaphoric writing, and stunning imagery best lent itself to teaching visualizing.

Different readers rely on different strategies to help them gain better understanding. We mention this because, as we have said, well-crafted picture books can be used to teach and practice just about any strategy. To gain understanding of See the Ocean, readers are likely to activate several strategies, including visualizing, questioning, and inferring.

Many teachers we know introduce this book after their students have spent considerable time practicing different strategies. They encourage their kids to think about which strategies they are using to make sense of See the Ocean and to mark sticky notes with whatever strategy seems to help them gain meaning. Veronica’s sticky notes show how this eighth grader activates all three of these strategies and more as she reads and thinks through the book (see Figure 10.1). These sticky notes provide strong evidence of her flexibility with strategy use. She activates multiple strategies to comprehend.

**Figure 10.1**
Veronica's Sticky Note Responses for See the Ocean
We discuss visualizing and inferring in one chapter because they are closely related. Visualizing strengthens our inferential thinking. When we visualize, we are in fact inferring, but with mental images rather than words and thoughts. Visualizing and inferring don’t occur in isolation. Strategies interweave. Inferring involves merging background knowledge with text clues to come up with an idea that is not explicitly stated in the text. Inferring is the proverbial reading between the lines.

A variety of mental processes occur under the umbrella of inferential thinking. When we teach kids to infer, we might teach them to draw conclusions or make predictions. Predicting is related to inferring, of course, but we predict outcomes, events, or actions that are confirmed or contradicted by the end of the story. Prediction is one aspect of inferential thinking. To help our students understand the difference, we encourage them to consider the outcome of an event or action each time they make a prediction and notice whether there has been a resolution.

Inferring also involves using the context to figure out the meaning of unfamiliar words or noticing a character’s actions to surface a theme. Our colleague Judy Wallis created a visual that describes the multifaceted nature of inferential thinking. She chose an umbrella to represent the many aspects of inferring. We have adapted it here to show the different ways readers use inferential thinking to enhance understanding. (See Figure 10.2.)
Visualizing: Movies in the Mind

Visualizing brings joy to reading. When we visualize, we create pictures in our minds that belong to us and no one else. As more and more books are routinely churned into movies, we are not surprised that most people prefer the book over the movie, kids included. One problem inherent in transforming text to film is that Hollywood routinely takes a four-hundred-and-fifty-page novel and converts it into a one-hundred-page script. Not surprisingly, depth and texture suffer. Another common complaint relates to the characters. Steph could never sit back and enjoy the film *Seven Years in Tibet*, based on one of her favorite books by Heinrich Harrer, because Brad Pitt, no matter how cute he was, did not jibe with her image of the book’s protagonist.

When we visualize, we create our own movies in our minds. We become attached to the characters we visualize. Visualizing personalizes reading, keeps us engaged, and often prevents us from abandoning a book prematurely. When we introduce visualizing, we are likely to facilitate a conversation about books and movie adaptations in an attempt to make the strategy concrete. Kids relate and quickly weigh in with their own thoughts.

Strategy Lessons: Visualizing

**Drawing to Respond to Reading**

*Purpose:* Creating images to better understand the text

*Resource:* *The Watcher* by Jeanette Winter

*Response:* Drawings on the iPad using the Drawing Pad app

*Audience:* Primary

Kids love responding to read-alouds using iPad apps such as Drawing Pad. Artistic responses such as these reflect children’s visualizations as they listen to text being read aloud. With young children, their drawings of their ideas and images often give us far more information about what they are thinking than what they can write in words. Teacher Marisol Payet’s second-grade students are flexible; with only a few iPads in the classroom, kids use sticky notes and pencils as well as devices. As Marisol read *The Watcher*, by Jeanette Winter, a book about Jane Goodall and how she studied and lived with chimpanzees, the kids were chock-full of mental images of every sort.

Whether they had sticky notes or iPads, the children had many responses. As his drawing indicates, Egan wondered if Jane watched the chimps at night. (See Figure 10.3.) Kids were amazed to find out a few pages later that she slept in trees, just like the chimps, to observe their nighttime and early morning behavior. Giselle wondered if Jane was friends “of” the chimp. (See Figure 10.4.) This led to a class discussion of whether or not humans can befriend chimps. As they looked back in the text to answer this question, kids noticed that first Jane observed the chimps from a distance, becoming more familiar with them as they became used to her presence. These drawn representations of their mental images allowed the kids to better understand and remember what they were listening to or viewing, enriching their reading experience.
Figure 10.3
Egan’s Question About Jane Goodall

Figure 10.4
Giselle’s Question About Jane Goodall
Visualizing from a Vivid Piece of Text

Purpose: Merging prior experience and the text to create visual images
Response: Drawing visual images with small groups
Audience: Primary and intermediate

We work on and practice strategies with small groups. A group of six fourth graders had chosen to read E. B. White’s Charlotte’s Web in their book club. Steph saw this as a great opportunity to talk to them about visualizing because E. B. White writes in such a strikingly visual way.

Chapter 3, “Escape,” begins with a vivid, detailed description of the barn where Charlotte, the magical spider, lives with all of the other animals in the story. The passage describing the barn is about a page and a half long and is filled with specific nouns and compelling descriptions:

The barn was very large. It was very old. It smelled of hay. . . . It smelled of the perspiration of tired horses and the wonderful sweet breath of patient cows. . . . It smelled of grain and of harness dressing and of axle grease and of rubber boots and of new rope. . . . It was full of all sorts of things that you find in barns: ladders, grindstones, pitch forks, monkey wrenches, scythes, lawn mowers, snow shovels, ax handles, milk pails, water buckets, empty grain sacks, and rusty rat traps. It was the kind of barn that swallows like to build their nests in. It was the kind of barn that children like to play in.

Steph read the passage out loud to the group and asked them to close their eyes and visualize the scene. When she finished, she said to them simply, “Tell me about your barn.” Jon said that the barn was rickety and old and in need of a coat of paint. Jessica said she visualized a red barn with white trim. Jason mentioned beautiful green pastures with cows and horses grazing peacefully. Others mentioned farmers pitching hay and kids jumping from the hayloft. E. B. White had not explicitly written these details. The kids’ comments reflected the movies running through their minds.

After about ten minutes of discussing their images of the barn, Steph asked them to sketch their barn. Each drawing was unique. The drawings included kids swinging on tire swings, riding the horses, and driving tractors. Some of the barn roofs were rounded; one was pointed with a rooster weathervane on top. Some pictures had farmers working and birds flying in and out of a small opening on top. Others had no people or animals. Some included wheat and corn fields. One was a detailed drawing of the interior of the barn loaded with mousetraps, milk pails, and water troughs. In some cases, none of the items drawn were mentioned in the text. As the kids shared, it became clear that many of their pictures came from their own prior knowledge of barns combined with the words of E. B. White.

This is what visualizing is all about—taking the words of the text and mixing them with the reader’s background knowledge to create pictures in the mind. Good writers like E. B. White act like old-time movie projectionists who crank up the projector with their vivid words and then sit back as the reel runs unfettered for the viewer. The movie becomes the reader’s own. In this case, if we were raised on a farm, we have the most detailed movie of all. If we live around farms or have seen pictures of farms, we pick up on those. Combining the author’s words with our background knowledge allows us to create mental images that bring life to reading.
Visualizing and Sketchnoting Using Digital Tools

**Purpose:** Harnessing the power of digital tools to capture thinking in images for archiving or sharing with a wider audience

**Resources:** A drawing app and the article “You Can Grow Your Intelligence” (Mindset Works 2014), or any text to read aloud

**Responses:** Drawings on a drawing app

**Audience:** Intermediate and middle

In this lesson, fifth-grade teacher Katie Muhtaris uses sketchnoting to help her students explore a different way to capture their thinking and learning. Sketchnoting is the use of doodling to capture ideas, information, and thoughts while listening to a story or lecture. If you’d like to learn more about how sketchnoting is being used in classrooms, you can visit Kathy Schrock’s website (http://www.schrockguide.net/sketchnoting.html).

Katie explains to her class that sketchnotes use colors, drawings, and words to help hold information. As she talks about her example, she shows students how she’s taken information and put it into visual form using little images and codes for herself. She also shares that instead of trying to type everything that she was hearing, she worked to listen, think, and then represent that new learning with a few key pictures or words that would trigger her memory. (See Katie’s example of sketchnotes in Figure 10.5.)

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Figure 10.5
Katie’s Example of Sketchnoting in Color
Before having students begin, Katie shares a few tips on sketchnoting:

- It doesn’t need to be perfect! Don’t dwell on the details, so you can keep up with the reading.
- Share ideas for “codes.” Use codes you already know from reading.
- Use color to highlight important information, but don’t go overboard.
- It’s okay to use words and pictures.

Katie gives students the option to do their sketchnotes by hand or on a digital tool. While most students prefer to try the tablet first, because they know the power of being able to quickly share and add audio, some choose markers and paper, which is fine. Either works.

Katie pauses frequently as she reads to enable students to internalize this new skill. She starts by showing the article “You Can Grow Your Intelligence” (Mindset Works 2014) on the projector so that students can refer to the text if needed. She reads the first two paragraphs aloud and then pauses to give students time to quickly sketch their ideas. She encourages them to draw quickly and not erase too much, so that they can keep up a quick pace. As students work, Katie draws on Drawing Pad, pausing to show her work to any students who need help. Throughout the lesson, she asks students to turn and talk, share what they’ve done, and tell their partner what their sketches help them remember.

Students continue reading in partners, pausing to stop and sketch as they go, until they finish the article. When students have completed their drawings, they come back together to share with the class, talk about what they learned from the text using their sketchnotes, and debrief about the process. Katie asks the class a few questions: “Is this something you would like to try more of? How did it help you learn?” Students also start a classroom chart of ideas for symbols to use as they sketch, including codes they have used before as well as those new to the repertoire, for example, a brain for thinking and up arrows to show growth or positive ideas.

Katie wraps up the lesson by sharing how students might use an app called Explain Everything to do more with their sketchnotes. She shows how she uses this app to go back and record her voice talking about each part of her image while pointing to it with a digital arrow. When she finishes, she reflects that she is surprised at how much she remembered about the article from just a few pictures and words.

Visualizing with Wordless Picture Books

**Purpose:** Visualizing to fill in missing information

**Resource:** *Good Dog, Carl* by Alexandra Day

**Response:** Drawing what you visualize

**Audience:** Primary and intermediate

We teach visualizing in many different ways, but one surprising way is through wordless picture books. One might think that when a book has only pictures with no written text, visualizing is rendered unnecessary. Not so. We take the clues revealed in the illustrations and combine them with the missing pictures we create in our minds to make meaning.

Alexandra Day’s picture books about Carl, the babysitting rottweiler, are wonderful examples of wordless books that kids love and that we can use for the purpose of teaching visualizing. *Good Dog, Carl* tells the story of a household adventure in which Carl leads the baby on a romp through the house while the mother is out shopping.

Midway through the book, we find a picture of the baby sitting in front of a laundry chute with Carl standing right behind her. The picture on the very next page shows Carl dashing down the
stairs, and when we get to this point, the kids’ expressions are priceless. Many students erupt with laughter. We ask them what they visualize between the two pictures and then have them draw, write, or talk about their response. Angie Carey’s first-grade class visualized an array of scenarios, including the baby falling down the laundry chute, the baby sliding down on purpose, and Carl pushing the baby down.

Cristina and Max had different mental pictures, but both had the baby headed down the chute, which is exactly what happened one way or another. Cristina visualized an elaborate floor plan of the house in relation to the laundry chute (see Figure 10.6). Max created a less complicated image but used the phrase “shot down the laundry shoot” to convey how the baby got down (see Figure 10.7). As with all comprehension strategies, we bring our schema to our mental images to make sense of things. Both Cristina’s and Max’s images make perfect sense.

We can alert ourselves to misconceptions by looking at student work. For instance, if a drawing had the baby sprouting wings and flying into the clouds, we would talk to the child about whether that was reasonable given the context of the story. We don’t want kids to go too far afield because the purpose of visualizing is to help them better understand the actual text. One student in Angie’s class drew a picture of Carl carrying the baby down the stairs. While this was closer to reality than a baby sprouting wings, it was still a misconception. The first picture clearly showed the baby at the edge of the laundry chute followed by the next picture of Carl running down the stairs, no baby on his back. In either case, we would confer with the child to help clear up any misconceptions.

Visualizing with wordless books helps readers build meaning as they go. Visualizing with text does the same thing. This lesson might become an anchor to help kids remember how visualizing helps them better comprehend. Although the examples here are from first graders, we have used wordless picture books for teaching visualizing with older kids as well, to give them a concrete sense of the strategy and how it works. They are frequently amazed at how their notion of visualizing is clarified when we show them wordless picture books.
Visualizing in Reading, Showing Not Telling in Writing

**Purpose:** Creating images with compelling nonfiction

**Resources:** Baseball, the American Epic series, including *Shadow Ball: The History of the Negro Leagues* (Ward, Burns, and O’Connor 1994) and *Who Invented the Game?* (Ward, Burns, and Walker 1994)

**Responses:** Class discussion; charting of responses

**Audience:** Intermediate and middle

Some years ago, hordes of American baseball fans switched their channels from ESPN for several nights and glued themselves to their local public broadcasting system affiliate to watch documentary filmmaker Ken Burns’s series titled *Baseball, the American Epic*. Later, much to our delight, Knopf published a series of nonfiction trade books based on the compelling documentary programs.

The print series includes *Shadow Ball* and *Who Invented the Game?* and comprises one of the most comprehensive young adult trade book accounts of baseball history. We love both books, but *Shadow Ball: The History of the Negro Leagues* stands out as one of the finest pieces of narrative nonfiction that we have ever encountered. It is striking not only for its content but also for the quality of the writing.

This book is multifaceted. We have used it to build background knowledge about the black experience in America, to develop a greater sense of the American civil rights movement, and to teach questioning and inferring. But above all, we have found it to be a terrific model for writing. *Shadow Ball* is written in such a vivid and compelling way that readers can’t help but create stirring visual images in their minds when reading it. It begins this way:

"The crowd stirs with anticipation as the Indianapolis Clowns, an all-black team, take the field for their warm-ups. The second baseman’s glove snaps back when he snags a quick peg from first. He hurls the ball to the third baseman, whose diving catch brings the fans to their feet. Then a batter steps to the plate. The pitcher sets, gets his signal, winds up, and throws. The batter swings. He hits it! The shortstop leaps to his right and makes a tremendous backhand stab. He jumps up, whirls, and throws to first just ahead of the sprinting runner. The low throw kicks dirt up by the first baseman’s outstretched glove. The runner is out! The crowd roars.

But wait! There’s no ball in the first baseman’s glove. The batter didn’t really hit it. The Clowns were warming up in pantomime—hurling an imaginary ball so fast, making plays so convincingly, that fans could not believe it wasn’t real.

They called it shadow ball—and it came to stand not only for the way the black teams warmed up, but the way they were forced to play in the shadows of the all-white majors. Many black ballplayers were as good—if not better—than the big leaguers. All that kept them out was the color of their skin.

After overcoming our surprise at the pantomime warm-up and the rich shadow-ball metaphor, we can’t get over the compelling writing. This is a terrific piece to point out how active, visual verbs and specific nouns enhance writing quality and paint pictures in our minds. After discussing the content, we reread it and ask the kids to close their eyes, visualize the scene, and then comment on what makes this scene come alive for them. We write their comments on a large chart:

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The running
The sliding
The kicked-up dirt
The outstretched glove
The tremendous backhand stab
Snagging a quick peg from first
Hurling the ball

In this excerpt from *Shadow Ball*, all of these images and more combine to create a realistic movie in the mind. Carefully chosen nouns and verbs give writing its life. We label the nouns and verbs and ask kids to think about how these parts of speech bring such striking visual imagery to the piece. Before we finish, we encourage them to think about this vivid piece the next time they try to recount a true event in writing.

**Beyond Words and Pictures: Musical Response to Literature**

**Purpose:** Using the senses to interpret literature

**Resources:** GarageBand app and *Harry Potter and the Sorcerer’s Stone* (Rowling) or other literature

**Response:** Creating sounds and songs with GarageBand

**Audience:** Intermediate and middle

Picture a class of fifth-grade students assembled around the classroom: huddled in pairs, headphones shared; sprawled on the carpet; perched on the edge of their chairs; spread across tables. Copies of *Harry Potter and the Sorcerer’s Stone* by J. K. Rowling rest open next to iPads. A constant din of quiet conversation and finger taps on glass screens fills the room. Kai Johnson had asked his language arts students to compose a musical score for a scene in *Harry Potter* by using the GarageBand app. He envisioned this as an activity for students to read closely and immerse themselves in the text, and the class quickly took the project in directions he had not imagined.

First, Kai demonstrated a few aspects of the app: starting a project, picking an instrument, “playing” the instrument. The class immediately lost interest in his explanation, browsing on their own through the variety of instruments available. Especially popular were cacophonous drum-beats and sound effects for the electric guitar.

Lesson learned: giving students fifteen minutes of unstructured time to simply explore allows them to learn about an app and find their own path in using it. Consider our own learning experiences with technology; who doesn’t need to try things out to see what works? More often than not, we discover something new as we explore.

After students had ample time to explore and become familiar with the app, Kai brought the class back together and asked students to share what they discovered. Kids suggested different approaches and ideas, and Kai jotted down some guiding questions to focus their music-making:
The kids carefully reread parts of the text, chose a scene, and brainstormed ideas in pairs or small groups; Kai met with them to troubleshoot technology issues. In some cases, Kai prompted the students to dig deeper into the text to explore more fully their understanding of the scene and mood.

Kids flipped through the pages to find a spot in the book that would highlight the right note of drama or terror or levity. One group placed their iPad near the classroom door to record its swoosh and creak, using the sound to highlight a particularly suspenseful moment in the corridors of Hogwarts. Two boys asked to go into a quiet room so that they could record the dialogue through a dramatic reading, later revealed to include faux British accents. Dialogue between characters was recorded again and again to get the pacing and expression just right. A student with a background in piano composed an original melody and set the bright, upbeat song to the scene when Harry is on his first train ride to Hogwarts. She explained that her idea was to capture the mix of excitement and anxiety that children know so well from starting a new year at school. The engagement and depth of thinking was impressive; kids’ creativity and ingenuity with a brand-new tool surfaced interpretations of the text that Kai hadn’t anticipated.

This simple activity transformed how Kai thought about the role of technology in his classroom. Students worked collaboratively, with focus and energy, motivated entirely by their own interest and engagement rather than a teacher’s external prodding. Importantly, the audience for their work widened; it could now be easily shared not just with the teacher, but with their peers and families. Students moved beyond the typical responses of written words and illustrations and were expressing their understanding in an entirely novel way that allowed multiple entry points for those with a variety of learning styles. But what really surprised Kai was that students were intrinsically motivated to reread and think more deeply about the text. A “fun activity” to integrate music and technology ended up deepening kids’ reading and understanding in powerful ways.

Steps to Integrate GarageBand Meaningfully into Your Reading Lesson

1. Before the lesson, download the app onto students’ iPads.
2. Plan five minutes to model opening the app and selecting an instrument.
3. Give students fifteen minutes of unstructured time to “play” in the app to help them learn how to navigate it and explore options for their work.
4. Enlist the support of students already familiar with the app to go around and help their peers who are novices.
5. Take out books and model rereading to find an interesting scene.
6. Brainstorm with students key words to describe the mood in different scenes.
7. Model key questions to help them think more deeply about the section they select.
8. As some students begin to add music, encourage the ones who are finished to record their voice reading the book, partner with another student to act out multiple characters, and record sound effects to add into their musical score.
9. Differentiate by letting students work at their own pace, and allow for a range of complexity. If one group finishes quickly by recording a brief song, ask them to extend their first try, select another scene, or add other elements to their work.
10. Give an opportunity for students to stop and share their work in progress as a way to bolster collaboration and creativity. Let the ingenuity of the class emerge, and be sure to highlight and share creative strengths and ideas to deepen the activity.
Inferential Thinking: Reading Between the Lines

Inferring is the bedrock of comprehension, not only in reading. We infer in many realms. Our life clicks along more smoothly if we can read the world as well as text. If our boss looks grumpy in the morning, it might not be the best day to ask for a raise. If a kid’s lips are quivering, it might be a sign to give him or her a hug. To help students understand the nature of inferential thinking, we might feign a terrified look and ask them what they can infer from our facial expression. If they mention scared or frightened, they’ve made an accurate inference. Inferring is about reading faces, reading body language, reading expressions, and reading tone as well as reading text.

Strategy Lessons: Inferring

Inferring Feelings with Kindergartners

**Purpose:** Helping kids to better understand their own and others’ feelings

**Resources:** A feelings chart and a card with the word sad written on it

**Response:** Clues to how students feel when their feelings match an emotion written on a card

**Audience:** Primary

Kindergarten teacher Sue Kempton organizes a game with a twofold purpose. She wants her students to have an opportunity to explore feelings, and she hopes to help them begin to get a handle on the notion of inferential thinking. Every few days, Sue introduces a new emotion and writes it on a card. At this point, the kids have mad, sad, happy, disappointed, and frustrated in their repertoire of cards. Sue reviews the nature of these feelings and then chooses one of the cards. She pins it on the back of a class volunteer; on this day Andrew wears the card. Andrew stands in the middle of the circle and turns around several times slowly so that everyone has an opportunity to see his card. He doesn’t know which card he wears on his back.

“Who has a clue for Andrew?” Sue begins. Kids raise their hands and give clues that might help Andrew figure out what word he is wearing on his back. Each student begins with “I felt that way when . . .” and completes the clue:

... my sister hit me with a golf club
... my dog died
... my mom said we couldn’t go to the Children’s Museum
... my dad didn’t let me go to the movies
... my grandpa Nick died

After five or six kids have shared their clues, Sue asks, “Okay, Andrew, can you infer what the feeling is?”

“Sad,” Andrew answers triumphantly.
“Good thinking, Andrew. How did you know?” Sue asks.
“Because people get sad when animals and grandparents die,” Andrew answers.
And he was right, of course. The kids love this game. As they play more often, they clarify their feelings and predict which situations might lead to one feeling or another.

Kindergartners Get the Message

**Purpose:** Understanding the text and inferring the big ideas in fiction

**Resources:** *Oliver* by Birgitta Sif

**Response:** Short written and illustrated responses on sticky notes

**Audience:** Primary

Kindergartners in Kristin Elder-Rubino’s class love to hear stories—and they eagerly gather on the rug each day to listen to a picture book. Birgitta Sif’s *Oliver*, a story about a little boy with a huge imagination who lives in his own world, has humorous illustrations and important messages that kids can understand and connect to. When he finds a friend at the end of the story, kids are relieved and happy to see that someone so different from everyone else finds a best friend. As they read and stop to talk about the book, they also learn that stories have many ideas that are worth discussing with your friends.

Early in the year, Kristin launches an interactive read-aloud by giving kids plenty of practice with routines such as turning and talking about the story. Rather than emphasize the talker during this routine, Kristin reminds kids that the most important job is probably to listen to what one’s partner is saying, encouraging kids to take turns talking and listening to each other.

Kristin begins by thinking out loud as she reads the story, writing her thoughts on the chart. She comments and writes that Oliver does not seem to notice what’s going on around him and creates his own world using his imagination. Kids chime in that Oliver is happy playing by himself with his stuffed animals, and many make a connection that they love to do that, too. When, at the end of the story, Oliver accidentally meets a little girl just like him, the kids get it. Gina comments, “Maybe they’ll be friends so he doesn’t have to keep playing with his stuffed animals all alone.” After they talk about the ending, kids rush back to sticky notes at their tables, eager to draw and write their thinking.

While kids are encouraged to write their thoughts in invented spelling, Kristin occasionally jots a longer and more complex idea to capture a child’s thinking. When she conferred with Michael, he asked her to write: “The book *Oliver* reminds me of *Corduroy*, when Lisa got to bring him home and hugged him and became friends.” He and Kristin discussed the idea that both main characters in these stories found friends in unusual places. Cullen chimed in on the conversation, showing Kristin and Michael his drawing of two houses, one Oliver’s and one Olivia’s. He asked Kristin to write “I’m glad they found each other.” At the end of the lesson, the kids eagerly put their sticky notes on a big chart (Figure 10.8), coming up to share their thoughts and the big ideas in the story: that having an imagination is great, but it may be even better to have friends.
Making Inferences in Media

Purpose: Applying inferring skills to images and media in order to become critical viewers as well as readers

Resources: The image of an elephant rampaging through a city in India from the New York Times (2016) website “What’s Going On in This Picture?” or any other image

Responses: Annotating images and sharing using digital tools

Audience: Intermediate and middle

We’ve long known that students gain important information from images in a text. Learning to examine, evaluate, and infer from images is a skill that all students benefit from. Now in a digital world filled with images this lesson becomes even more critical.

Teacher Arlene Amonte uses this lesson across the curriculum in her fourth-grade classroom. She offers a variety of images for students to examine and evaluate—to teach students...
how to make thoughtful inferences, to help launch a unit of study, and as a way to give access to all students in her class. When digital tools are available, she uses them to provide high-quality color images for students to examine carefully and closely. In classrooms with many devices it is easy to give students digital copies and have them use any number of apps to type, write, circle, or highlight on the image. Without devices you can provide printed copies, perhaps to small groups, and annotate by hand. Either way, the power comes in sharing the thinking. Students might do a gallery walk or share on a personal blog so that they can write about their ideas. Today Arlene is asking students to post to Padlet, an online bulletin-board website.

Arlene projects her first image on the screen to pique student interest as the kids gather materials and come to the carpet. “What do you see in the image and what does it make you think?” she asks as students gather. “Today we’re going to make inferences based on evidence in the images.”

Arlene first models this process, showing how she is sure to find evidence in the image for each inference she makes. She displays a few images to the entire class, using a projector, and uses explicit language:

- I see . . . which makes me infer . . .
- I’m inferring that . . . because I notice . . .
- These details here make me think . . .
- I infer . . . because when I look at the image, I see . . .

The students join in, using the language of inferring as they work in partners discussing, reflecting, and sharing with the class. Once students have demonstrated that they understand the challenge of the day, they move off to practice in partners to annotate a new image with their thinking. Arlene works with small groups, pairs, or individuals, depending on the needs of her students.

While students work, Arlene listens carefully to ensure that students are applying the inferring strategy with ample evidence for their thinking.

Jeremy, I notice that you say you’re inferring that this image is from a desert. What makes you think that? Could it also be someone at the beach? What evidence do we see for each theory? Let’s look carefully at the details so that we make sure our inferences are really grounded in the image we are looking at.

The powerful piece of this lesson is that all of Arlene’s students have access to the image regardless of reading ability. This access allows all kids to participate in the discussion and have thoughtful conversations with each other, while reinforcing that inferences must be based in evidence from the text.

One strategy that Arlene uses with today’s lesson is to have students share their thinking on a digital bulletin board. For this she uses the Padlet website (https://padlet.com). There, students follow the link to the online bulletin board she has created and are able to share their thinking with the entire class (Figure 10.9). This quick snapshot of student thinking serves several purposes: it gives kids a wider audience for their work, provides a view of the work of the entire class, and acts as formative assessment data for the teacher. Students find this medium engaging and interesting and benefit from being able to read and respond to one another’s ideas on a larger scale.

Additional resources: For images or media clips for making inferences check out pics4learning.com; the New York Times What’s Going On in This Picture? website, or a daily student news outlet like Time for Kids. For media clips, The Kid Should See This has a variety of thought-provoking videos.
Inferring and Visualizing with Poetry

Purpose: Constructing the meaning of a poem through inferential thinking
Response: Annotations on a poem
Audience: Intermediate and middle

Poetry is both a highly visual and inferential genre. Poems are often loaded with figurative language, and poets try to paint pictures with their words. So inferring and visualizing are two strategies that are very helpful to us when we are reading and understanding poetry.

Steph models this lesson with a poem from National Geographic Magazine:

Celebrations of Earth
A small planet in a modest solar system
a tumbling pebble in the cosmic stream
and yet . . .
This home is built of many mansions,
carved by wind and the fall of water,
lush with living things beyond number,
perfumed by salt spray and blossoms.
Here cool in a cloak of mist
or there steaming under a brazen sun
Earth’s variety excites the senses and exalts the soul.

She begins by explaining that poets often search for words that represent ideas in ways that prose does not, and that poets really try to paint pictures with their words so that the reader can
visualize what the poem is saying. Poems are often shorter than most prose, and poets try to capture meaning with minimal text, which requires us to think inferentially when constructing meaning in poetry.

As she shares this poem, she thinks aloud and annotates it so kids can see how she goes about making meaning. She infers that the first line, “A small planet in a modest solar system,” probably refers to Earth, especially since the title is “Celebrations of Earth.” She has the kids turn and talk about what they think that line in the poem means and what they are inferring as she continues thinking aloud and annotating.

As she moves to the next line, “a tumbling pebble in the cosmic stream,” she shares how she infers that the pebble is the poet’s way of seeing Earth as it orbits the sun. She continues to share how she visualizes Earth as a place with canyons carved by the wind, and oceans giving off salt spray. She codes her inferences with an I and her visualizations with a V. Throughout her think-aloud, she continues to have kids discuss the poem and talk about what they are inferring and visualizing. Her annotated version of the poem is shown in Figure 10.10.

After modeling, she hands out several poems to these fourth graders, including “He’s Still Here,” written by a wonderful teacher (and poet) Holly Occhipinti. Gabriel and Rachel choose Holly’s poem and work together to reason through it. They infer and visualize to understand it, as well as make connections as they read. They annotate the poem like Steph did as she modeled (see Figure 10.11).

We need to share much more poetry with our kids. They love the sound, the flow, and the puzzle of it. And inferring and visualizing offer a key to unlocking the meaning.
Inferring from Images and Text in Nonfiction

**Purpose:** Using images, features, and simple text to infer information

**Resources:** Simple nonfiction books with vivid photographs, various features, and text

**Responses:** Drawings and explanations inferred from the text and images

**Audience:** Primary and intermediate

Teachers often ask how kids use inferential thinking to gain information in nonfiction. In fact, inferential thinking is one of the primary ways that children access and learn information. Show kids a photograph of a great white shark and have them turn and talk about what they can learn simply from viewing the photo. “Must be a carnivore,” a child may quip after noticing the sharp teeth. Ask them what makes them think that and most will shout out, “The teeth!” Show them a diagram of a volcano erupting and someone will almost certainly infer that anybody living close is in trouble. This is inferring at its simplest and most useful.

In fact, we do it so frequently that we may not even notice that we are inferring. We need to teach kids explicitly to read and view closely so they can use their inferential skills to more fully understand the information derived from illustrations, photos, maps, diagrams, close-ups, and, of course, text. We often ask kids to illustrate and/or explain any information they inferred from viewing features and reading text. And we don’t just do this lesson one time only. Viewing and analyzing features is a practice that we engage in every time we read for information. So inferring is one of the most powerful avenues we have for learning information.
Analyzing Infographics: Understanding and Interpreting Visual and Text Features

Purpose: Inferring about words, illustrations, and features to learn from infographics

Resources: Loreen Leedy’s *The Shocking Truth About Energy*

Response: Organize information, inferences, and conclusions on a chart

Audience: Intermediate and middle

Infographics barely existed when we wrote the previous edition of *Strategies That Work,* and now they are ubiquitous. The short text, engaging illustrations, vivid colors, and sheer variety of visuals make infographics appealing to young readers. Once we begin to dig into the array of visuals and text, however, the information and ideas on these popular graphics may be more complex than is apparent at first glance. We teach kids to slow down, pay careful attention to the visuals, and merge their thinking with many different kinds of clues to fill in gaps that the author or illustrator may not have fully explained.

Engaging and informative, Loreen Leedy’s book *The Shocking Truth About Energy* makes an often-complicated topic fun for kids to learn about. Packing a lot of information and concepts into each infographic, Leedy makes the often-abstract science behind energy sources such as solar power, wind power, and geothermal power concrete and comprehensible for kids. To get the full meaning of the infographics in the book, Jeanette Scotti’s fifth graders needed to fire up their detective skills to infer and draw conclusions about the catchy but complex illustrations and text. Kids worked together to closely read sparse text, interpret visuals, and pool their collective background knowledge as they plumbed the meaning of arrows, diagrams, and other nonfiction features.

In the first part of this lesson, the class analyzed an infographic about fossil fuels. Although they had quite a bit of background knowledge, students had to slow down when they came to unfamiliar information describing how fossil fuels were formed to closely view and read the visuals and the text. To make the process of reading and interpreting the infographic more visible, Jeanette guided the kids to create a class chart explaining how they pulled out important information and made inferences about it. Then kids turned and talk about their conclusions, referring to the infographic for evidence.

**How We Read, View, and Interpret Infographics**

<table>
<thead>
<tr>
<th>Visuals/Features/Text</th>
<th>Information</th>
<th>Inferences/Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arrows show a process; illustrations clarify this.</td>
<td>How coal, oil, and natural gas formed in prehistoric times</td>
<td>If coal and oil were formed a long time ago, we infer that this isn’t happening anymore. But is it?</td>
</tr>
<tr>
<td>Illustration and a thought bubble</td>
<td>Takes a long time for fossil fuels to form</td>
<td>If it takes so long for these to form, must be using up coal, oil, and natural gas.</td>
</tr>
</tbody>
</table>

Once kids reached the conclusions, shown in the chart, their inferences sparked lingering questions. Those questions were the perfect segue to explore another infographic in the book—one that explained the science behind global warming. Jeanette projected the infographic titled “Earth is getting hotter because of Global Warming” on the document camera—and posted versions of the kids’ questions up on the screen:
What is global warming?
How is it related to fossil fuels and pollution?
What will happen to the earth as a result of global warming?

As Jeanette introduced this infographic, the class noted a play on words: “It’s a hot topic.” They immediately interpreted this to mean that there is a lot of talk about global warming and that the topic is controversial. They also discussed the big idea of the infographic, “The earth is getting hotter because of global warming.” As they noticed various features on the infographic, kids realized that it was explaining a process: how and why the earth is getting hotter. Small groups continued to interpret the text and visuals and draw inferences and conclusions, creating their own charts as they analyzed the infographic. As Jeanette wrapped up the lesson, the kids voiced their amazement at how much information they had learned from a single infographic.

Figure 10.12
The Global Warming Infographic

Inferring the Meaning of Unfamiliar Words

Purpose: Using context clues to crack open vocabulary

Resource: Fly High! The Story of Bessie Coleman by Louise Borden and Mary Kay Kroeger

Responses: A four-column think sheet titled Word/Inferred Meaning/Clues/Sentence and a chart with the same titles

Audience: Intermediate

Readers are frequently frustrated when they meet unfamiliar vocabulary words as they read. Jumping up and grabbing a dictionary takes time and wrests readers out of the text. Asking the teacher can be time consuming as well. One of the quickest and most effective ways of dealing with unfamiliar vocabulary is through inferential thinking. To figure out the meaning of unfamiliar...
words, readers need to take what they know and gather clues in the text to crack the meaning of vocabulary. They need to consider the context to understand what they read.

James Allen, a third-grade teacher, introduced his students to a four-column think sheet headed Word/Inferred Meaning/Clues/Sentence to help them figure out the meaning of unfamiliar words. James modeled this lesson with the picture book *Fly High! The Story of Bessie Coleman*, the gripping story of an extraordinary woman who has the distinction of having been both the first woman and the first African American pilot. James created a four-column lesson chart with headings identical to the ones on the think sheet. As he read the story aloud, he asked kids to raise their hands when he came to a word that they had never heard before. Several pages into the story, he read the sentence “Bessie’s brother Walter had moved to Chicago years ago when Bessie was little. Now Walter was a fine Pullman porter.” Hands waved in the air. Few, if any, of the kids knew the meaning of the term *Pullman porter*.

So James wrote *Pullman porter* in the first column on the chart and then thought through how he could crack the meaning of that term. He first tried to read on, but to no avail. Then he tried rereading and that didn’t help either. Luckily for him, there was a picture at the top of the page of a gentleman in a uniform carrying a suitcase and helping a young woman off the train. So James shared his thinking of how he inferred that a Pullman porter was a railroad worker who carried bags for people as they boarded and disembarked the train. He then proceeded to fill in the chart with the word, the inferred meaning, and the clue that helped him infer (which was the picture in this case). Then, together with the kids, he wrote a sentence in the final column. James explained that the purpose of writing the sentence was to demonstrate understanding of the word. As James continued reading, the kids raised their hands at different points in the text, and together with their teacher they co-constructed the following anchor chart:

<table>
<thead>
<tr>
<th>Word</th>
<th>Inferred Meaning</th>
<th>Clues</th>
<th>Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Pullman porter</em></td>
<td>Railroad worker who carries bags and helps passengers</td>
<td><em>Picture</em></td>
<td>The Pullman porter helped the woman onto the train.</td>
</tr>
<tr>
<td><em>manicurist</em></td>
<td>Someone who trims nails</td>
<td><em>Reading on</em></td>
<td>A manicurist trims nails.</td>
</tr>
<tr>
<td><em>The Defender</em></td>
<td>The name of something</td>
<td><em>Capital letters</em></td>
<td><em>The Defender</em> was a Chicago newspaper.</td>
</tr>
</tbody>
</table>

After James modeled this lesson for the whole class, he gave them each their own think sheet and asked them to practice this in their own reading. So they jotted down unfamiliar words and used the context to infer the meaning. This became a regular practice in James’s classroom and provided ongoing support to his kids as they came across unfamiliar words and tried to discern the meaning.
Recognizing Plot and Inferring Themes

**Purpose:** Differentiating between plot and theme, and inferring the big ideas or themes

**Resource:** *Teammates*, by Peter Golenbock

**Responses:** Class discussion; chart of themes; theme boards

**Audience:** Intermediate and middle

Literature, both fiction and nonfiction, is rife with themes. Books and articles rarely promote just one main idea but rather several for readers to ponder and infer. When we talk to students about themes, we help them discern the difference between theme and plot. We explain that the plot is simply what happens in the narrative. The themes represent the bigger ideas of the story. The plot carries those ideas along. To demonstrate plot, we choose a simple narrative that everyone is likely to be familiar with. We might recount the plot of *Goldilocks and the Three Bears* by summarizing the events of the story as follows. A girl named Goldilocks was wandering through the forest and entered an unfamiliar, empty house. She tasted porridge that didn’t belong to her, broke a chair, and slept in a bed that wasn’t hers. She was caught when the bears returned, and she ran out of the house scared to death.

We explain to our students that themes are the underlying ideas, morals, and lessons that give the story its texture, depth, and meaning. The themes are rarely explicitly stated in the story. We infer themes. Themes often make us feel angry, sad, guilty, joyful, frightened. We tell kids that we are likely to feel themes in our gut. To help students more clearly understand the difference, we might ask, “What are the bigger ideas in *Goldilocks and the Three Bears*?” Kids tend to identify taking things that don’t belong to you, selfishness, thoughtlessness, and so on. They have experienced these notions and they understand them.

A nonfiction picture book we have used to demonstrate inferring themes is Peter Golenbock’s *Teammates*. It is the moving story of Jackie Robinson’s courageous breakthrough into the all-white major leagues. It goes beyond the history and describes the personal relationship between Jackie and his white teammate Pee Wee Reese. Pee Wee was the only player on the Brooklyn Dodgers team who supported Jackie’s quest.

To continue their study of inferring, Steph demonstrated a think-aloud with *Teammates* to the fifth graders in Jennifer Jones’s class the day after taking them through the Goldilocks exercise. After describing the difficult, segregated life of players in the Negro leagues, Golenbock writes that life was much better for players in the major leagues. They were paid well, and many were famous all over the world. Steph coded her sticky note I for Inference while noting that this kind of racial inequality might breed anger. She suggested that both racial inequality and anger might be themes in the story even though the writer hadn’t written those very words. So Steph created an anchor chart headed Evidence from the Text/Themes. Under Evidence from the Text, she wrote *Words, Actions, Pictures* and explained that we can infer themes from the words in the text, the actions of characters, and the pictures and illustrations. All of these provide evidence that supports the bigger ideas and themes we infer in a narrative.

When Curtis heard that Branch Rickey, the manager of the Brooklyn Dodgers, was looking for a man who “would have to possess the self-control not to fight back when opposing players tried to intimidate or hurt him,” he suggested that self-control might be a theme. Steph concurred and added it to the chart and pointed out that Curtis was using evidence from the text. When Steph finished reading the story, she facilitated a discussion about the bigger ideas in the narrative based on text evidence.

“Jackie was alone without a single friend. No one would sit near him or talk to him,” Chantal mentioned.
“Good noticing, Chantal. Why didn’t he get mad about that?” Steph asked.
“Because he had a lot of self-control. The manager wanted a man who wouldn’t fight back, no matter how mad he got, and Jackie never did.”
“Chantal, that is exactly how we use evidence to infer a theme. Let’s put your thinking up on the chart,” Steph suggested. She wrote self-control in the Themes column and then Jackie never fought back in the Evidence column.
“So, what might be another theme?” Steph asked.
“I know how he felt. When I moved here, I didn’t have one single friend. I felt really lonely,” Rogers said. So Steph added loneliness to the chart and cited Rogers’s evidence.
“But Pee Wee was his friend,” Jaquon added.
“So, is friendship a theme?” Steph asked.
“Sort of, but most of the team would not be his friend because he was black,” Jaquon continued.
“That’s racist,” Curtis added.
“It sure is racist, Curtis. Are racism and friendship both themes in Teammates?” Steph asked.

The kids nodded, and Steph added both of those themes to the chart along with the evidence for them. And so the discussion went for nearly forty-five minutes, culminating in a long list of themes and evidence for them. Some of the themes that surfaced included racial inequality, segregation, anger, taking a stand, and bravery.

Steph reiterated that all of these themes represented the bigger ideas in the story and that most of them evoked strong feelings. We have noticed that kids are more likely to remember important themes when they derive the ideas themselves and feel them deeply. It is our role to help draw students out through engaging discussions about the bigger ideas in the story. Often, the kids used their prior knowledge to infer themes and better understand the narrative, as Rogers did when he mentioned being the new kid on the block. As students talk about the bigger ideas, it is our responsibility to help them label the ideas, articulate the themes, and cite text evidence. Inferring after all is about taking what we know, our background knowledge, and combining it with clues or evidence in the text to draw a conclusion or, in this case, surface a theme.

On the following day, Steph handed out a think sheet that matched the chart, with the headings Evidence from the Text/Themes. The kids went back and reread and reconsidered Teammates. They cited evidence from the text and recorded themes they discovered during the first read as well as themes that surfaced on their second reading and reviewing of the text. (See some of their think sheets in the assessment section of this chapter.)

Distinguishing Between Major Themes and Minor Themes

**Purpose:** Rereading to notice the preponderance of evidence and understand more deeply

**Resource:** Teammates by Peter Golenbock

**Response:** Two-column chart titled Major Themes/Minor Themes

**Audience:** Intermediate and middle

After several days of small groups working together to infer themes in Teammates, Steph thought it might be a good idea to help the fifth graders in Jennifer Jones’s class distinguish between major themes and minor themes. She and Jennifer had taught them that as long as there was
evidence for a theme in the words, actions, or pictures in the text, kids could identify it as a theme. This is true, of course. But writers often give more credence to some themes above others. They dedicate more words to the themes that are most important to them, and they allot more space to those major themes. Steph decided it might be helpful for kids to begin to discern the difference.

As she brought this up, she explained that some themes seemed to have more evidence in the text than others. She suggested that those themes the author wrote most about might be considered major themes. She noted that those with less evidence, while still important themes, might be considered minor themes.

As Steph modeled her own thinking, she began with the title. “I know something about titles,” she said. “Writers spend a lot of time thinking about the best title. Sometimes it is really hard to come up with one, but they often try to assign a title that synthesizes one of the most important ideas in the book. The cover is important too. So I’m thinking that the picture of both Jackie and Pee Wee on the cover and the title of *Teammates* suggests that being true friends and teammates might be one of the major themes in this book. Turn and talk. What do you think after having read this several times?” The kids agreed with Steph so she jotted *Teammates* and *Friendship* under the column for major themes.

“Now, besides the title and cover, another way writers try to let us know what they think are the most important themes is the amount of space they devote to that theme. Sometimes we call this real estate, meaning the more pages allotted to one idea, the more likely that is to be a major theme. And the fewer pages devoted to an idea, the more likely that is to be a minor theme.”

Steph continued paging through the story and asking kids to discuss what each page was mostly about and what themes the writer seemed to give the most attention to. The kids quickly noticed that the first five pages were almost exclusively about racism, prejudice, and segregation. They all concurred that the writer gave a lot of real estate to these themes and that they were definitely major themes in the book. They also found a good deal of evidence for *courage*, on the parts of Branch Rickey, Jackie, and Pee Wee and *determination* in Jackie. They decided that there was less evidence for *anger*, although there was enough to call it a minor theme. And so it went as they paged through the book.

It’s important to note that readers of this age would likely have difficulty distinguishing between major and minor themes on a first read. Rereading closely with a purpose such as this takes readers to a deeper, more complete understanding of text. And Steph made sure that kids understood that the minor themes were not necessarily less important to the reader, but that the writer was more concerned with the themes he gave the most attention to. She reminded them, however, that the reader writes the story and what matters most to them is also very important.

**Theme Boards: Hey, What’s the Big Idea?**

Jennifer continued to work on surfacing themes throughout the year. She reported that her students became quite adept at inferring themes as well as labeling them and distinguishing between major and minor themes. They even began to notice when certain ones appeared over and over in a wide range of texts. To reinforce theme identification and the connections between themes in one text and those in another, Jennifer established a theme board headed Hey, What’s the Big Idea? Each time the class read a book, they developed a theme list and added the list to the theme board.
Understanding Graphic Novels: Inferring and Visualizing for Deeper Comprehension

**Purpose:** Inferring from the illustrations and text in a graphic novel

**Resource:** *El Deafo*, by Cece Bell

**Response:** Jotting and sketching on sticky notes

**Audience:** Intermediate and middle

Graphic novels are increasingly popular in classrooms around the country. Although many students enjoy the genre because they resemble comic books, graphic novels challenge students to use inferring and visualizing as well as other strategies to explore complex ideas. They’re not as easy or straightforward as they appear to be.

*El Deafo* uses the subject of disability as a springboard to address more universal themes of friendship, school, and coming-of-age—issues that kids find engaging. Cece Bell’s memoir about her childhood is a particularly vivid mix of themes and events that tell her incredible life story. Due to an illness when she is very young, Cece loses most of her hearing. Her life is filled with challenges—new schools, new friends, her family’s move—all while learning how to read lips and fit in with hearing aids. In a profound realization, Cece eventually comes to think of being deaf not as a disability, but a superpower. With a special school hearing aid, she is privy to all manner of secrets throughout the school day. How’s that for turning disability into possibility? (For more information, listen to an interview with Cece herself at [http://www.npr.org/2014/12/14/369599042/el-deafo-how-a-girl-turned-her-disability-into-a-superpower.](http://www.npr.org/2014/12/14/369599042/el-deafo-how-a-girl-turned-her-disability-into-a-superpower.))

Graphic novels present their own particular challenges for the reader. Each page is a series of panels resembling a movie storyboard. The space limits of each panel on the page means the illustrations and the text leave much unstated. Readers have to fill in the gaps, making inferences about events, actions, and feelings. Students must build the scene and story in their minds, visualizing and inferring what's not explicit in the illustrations or words on the page.

This requires a different approach to reading, and students need instruction in ways to decipher the visuals and text in order to get the most out of the text. Once kids understand that the reader has to make inferences and create mind pictures even with lots of illustrations right there in the text, kids often get hooked on the genre. Emergent readers often become the genre’s most fervent fans.

Teacher Kai Johnson thought out loud about the first few pages of the book, showing what he did as a reader to make sense of the text. Kids immediately began chiming in with their observations.

One child said, “Look, that bubble seems different—it looks like a cloud—it must be a thought bubble!” Kids paid close attention to this comment—and they began distinguishing between “thought bubbles” that show the characters’ inner conversations and “speech bubbles” that capture what characters actually say. Other students noticed the different font colors in certain speech bubbles at the beginning of the text and drew inferences that helped them analyze how challenging it would be to go through the world without clear hearing.

Guiding the kids, Kai asked them to find a page with both a speech and a thought bubble and discuss in partners what Cece thinks to herself, comparing this with what she actually says to others. Conversations erupted as students found examples and made connections to the multiple instances in their own lives. They dug deeper into the challenges Cece faces as a young kid trying to fit in: can she always say what’s on her mind? Students observed that “we all say things that are different from what we are thinking,” especially when it comes to our friends.
Kids went off to read with a partner or independently, and Kai conferred with one pair. When kids made inferences, a question usually wasn’t far behind. They also sketched their insights about the characters’ interactions. As the students drew inferences and created their own images detailing Cece’s many challenges, they wondered: “Will she have a ‘normal’ childhood? How much does she understand about what is happening to her? Why don’t the other kids understand what she is going through?”

Students reviewed the sticky notes they created while reading the story and selected a scene they wanted to explain in depth. After snapping a quick photo, the students synthesized their thinking into a verbal narrative of the scene. They explained what occurs on the page but also offered their insights about what is on Cece’s mind on that page. See examples of their interpretations in the assessment section at the end of this chapter.

From his experiences with students who loved El Deafo, Kai discovered many ways to encourage students to infer based on their own experiences and insights. Students who were strong visual learners loved the opportunity to build understanding by filling in the missing pieces with their own interpretations and mental images. Students who typically resist reading dense text eagerly devoured page after page of panels, reading closely while feeling their confidence grow as they finished the book in a matter of days. Students internalized some of the illustration techniques and used them in their drawings throughout the year. Storyboard panels become a great way for students to visualize to explain their understanding. (See kids’ work examples in the assessment section at the end of the chapter.)

Inferring and Visualizing to Understand Historical Concepts

**Purpose:** Inferring and visualizing to understand ideas and concepts in historical fiction

**Resource:** *Encounter* by Jane Yolen

**Responses:** Inferring and visualizing to analyze and interpret big ideas and messages

**Audience:** Intermediate and middle

Powerful picture books bring ideas and concepts in history to life, so we use them whenever possible to provide a thoughtful introduction to topics from far away and long ago. The compelling illustrations and evocative language in Jane Yolen’s *Encounter*, a fictionalized account of Columbus’s encounter with the Taino people, is told from the perspective of a Taino child.

The book’s message is that history is all about different perspectives, and it sparks larger questions about what it means to “discover” a new land. The important historical concepts are brought to life with the story of this encounter between colonizers and indigenous people, whose very survival was threatened with the arrival of the Europeans. The essential question teacher Hilary Barthel posed was “What does it mean to discover something?”

Kids in Hilary’s fifth-grade class are bilingual in English and Spanish. The complex language of the English version of this book is challenging because the young Taino boy telling the story has never seen Europeans, so their clothing, weapons, and actions are strange to him. The language he uses to describe what is happening is grounded in his view of the world and his unique perspective, so the reader has to carefully infer from and interpret both the words and illustrations in the text.

Before introducing the story, the kids had gained some background knowledge about the topic by reading about the Taino culture in Spanish. Introducing the inferring equation,
Background Knowledge + Text Clues = Inference. Hilary modeled her own thinking and showed kids how to use their prior knowledge about the Taino culture to interpret and infer from the words and illustrations.

Kids were hooked as they read about the Taino child’s dream that foreshadowed Columbus’s ships arriving at their island; they became reading detectives, piecing together the visual and text clues to understand what happened.

As they read the end of the story, when the young Taino boy is now an old man reflecting on the tragic changes that this encounter brought to his land and people, the kids truly understood what had happened. They inferred from his last words, “So it was we lost our lands to the strangers from the sky. We gave our souls to their gods. We took their speech into our mouths, forgetting our own.” The kids inferred that the Taino people had lost their culture amidst the coming of many Spanish to their lands; students noticed that in the illustration, the old man’s feet were disappearing into the sea, which prompted Diego to infer that the man was forgetting his identity and realized his people and their way of life were disappearing. As the story came to its sad end, the kids’ sobering conclusions about the reasons for the demise of the Taino culture spurred them to want to investigate further the original essential question “What does it mean to discover something?” They had a whole list of questions: “What other people and cultures did this happen to? Could this happen today? Has this ever happened in our country?” Coming to understand different perspectives, in this way, sparked kids’ interest in history and motivated them to want to find out more. (See student work in the assessment section at the end of this chapter.)

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Rereading to Clear Up Misconceptions

When we come across information that surprises us, such as Nellie’s blindness in See the Ocean or the phantom baseball game in Shadow Ball, we can’t help but flip back through the pages and search for the clues we missed that might have led us to draw a more accurate inference earlier in our reading. Readers need to stay on their toes to make meaning, checking for misconceptions as they go. And teachers need to look closely at student work and listen intently to student comments to nip misconceptions in the bud.

As a little girl, whenever Steph heard the Christmas carol “Silent Night,” an image of a large, round Friar Tuck sort of character appeared in her mind. It wasn’t until later that she realized that this misconception had originated in her confusion about the words of the song. Where it actually said “round yon Virgin,” Steph had always heard it as “round John. . . .” She visualized a fat, jolly monk. This misconception disrupted meaning and kept her from fully understanding the carol.

Encourage your kids to go back through the text to check their mind pictures and inferences, and remind them to check their thinking with someone else if it doesn’t seem to make sense. A good reality check can go a long way toward keeping Friar Tucks at bay. Visualizing and inferring are strategies that enhance understanding, but if ill conceived, they can just as easily hinder understanding. Rereading is one of the best ways to check for meaning. It all makes so much sense the second time through.
Teaching with the End in Mind: Assessing What We’ve Taught

Inferring and Visualizing

Based on the lessons in this chapter, we look for evidence that

1. *Students visualize and create mental images to make sense of what they read.* As students listen to and read text, we look for evidence that they draw and write about their mental images or mind pictures to support understanding.

2. *Students infer the meaning of unfamiliar words.* We look for evidence that students are using the context to figure out the meaning of words and concepts that elude them.

3. *Students use text evidence to infer themes and big ideas.* We look for evidence that students are merging their background knowledge with clues in the text to surface themes and big ideas.

4. *Students infer and draw conclusions from many different texts and genres.* They also infer from a variety of text features, including infographics, diagrams, illustrations, and so on. We look for evidence that students enhance their understanding and build knowledge in all genres.

Suggestions for Differentiation

Visualizing and inferring lend themselves to differentiation. We cannot overestimate the importance of drawing as a means to understanding. When kids draw to clarify understanding, they are constructing meaning. Sensory imaging is about more than just visualizing. Kids taste, touch, feel, and smell their way through books as well as through experiences. So we model using all of our senses to understand what we read, hear, and view. Many times kids can express through drawing what they may have difficulty articulating in oral or written words.

We teach inferring in many contexts outside of text. Playing charades is a wonderful way for kids to get a concrete idea of what it means to infer. Role playing and drama also encourage kids to act out their understanding of what they read. Sharing unfamiliar items and objects like kitchen utensils, old-fashioned tools, and so forth require kids to use inferential thinking to make sense of them and infer their purposes. All of these activities give kids a more concrete idea of what it is to infer.
Visualizing and Inferring Assessment Commentary

Two-column think sheets on inferring themes using text evidence from the lesson “Recognizing Plot and Inferring Themes”

Josh’s think sheet about *Teammates*, by Peter Golenbock, shows a good understanding of using evidence to infer themes. In each case, Josh used the pictures, the words, and/or ideas as evidence for themes.
Luke also was able to use text evidence to surface themes. Although he has a good understanding of the story and some terrific ideas, we would confer with him regarding his organizational style. One of the purposes of a graphic organizer is to organize thinking, and his is a bit all over the page. He does draw arrows, but if he were to reread for information, he might struggle finding which piece of evidence relates to a given theme.
Independent sticky notes demonstrating inferential thinking from the graphic novel El Deafo

- This child explained her inferences about Cece, the main character in El Deafo. She drew inferences about how Cece is feeling from the author’s illustrations and events in the story. She also considered Cece Bell’s intent as she illustrated her work and shared her emotions. Since this is a memoir, thinking about the author’s intent and inferring meaning leads to deeper understanding.

- This child engaged in a sophisticated analysis of the illustrations in the novel. She interpreted the shadow creeping over Cece’s body as a metaphor for Cece’s feelings.
Illustrated think sheet about the picture book *Encounter* from the lesson “Inferring and Visualizing to Understand Historical Concepts”

Fourth-grader Osvaldo demonstrates how he inferred from the words, events, and illustrations. He included salient quotes and events from the text; his elaborate inferences and succinct illustrations are a great example of the deeper understanding kids develop as they delve into the text language and ideas.