

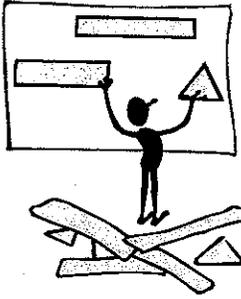


Reflective Learners

- are strategic about their thinking
- are able to apply strategies flexibly depending on their goals or purposes for learning
- reflect on their thinking and revise their use of strategies
- are metacognitive learners.

This is the goal for all of our students: reflecting on thinking before, during and after the process; pondering on progress and how to improve; being a fully cognitive learner. They consciously apply a strategy to a problem, task, or text and are aware that the result is satisfactory or otherwise. This includes the ability to take out their thinking, examine it, and put it back, rearranged if necessary.

They can also control mood and impulsivity to complete their tasks, and they can evaluate and monitor their own progress.



Strategic Learners

- use strategies to enhance understanding and acquire knowledge,
- and can monitor and repair meaning when it is disrupted.

A strategic learner is a good student who independently applies strategies to current tasks. The main difference between a strategic learner and a reflective learner is that strategic learners use strategies in the here-and-now, while the reflective learner plans for the future. For example, the reflective learner can extend what he is presently doing or learning to future tasks, whereas the strategic learner applies strategies effectively in the moment or situation at hand.

Aware Learners

- realize when meaning has broken down or confusion has set in,
- but do not have sufficient strategies for fixing the problem.



Aware Learners know that they don't understand a text or concept, but they don't know which strategy to use to "fix up" meaning. This is a real opportunity for the interventionist to step in and provide supportive strategies to help these learners tackle their confusions, modeling the thought process needed. An interventionist can help struggling students by bringing to conscious awareness his/her thoughts and feelings, and communicating them by "thinking aloud." As students are able to "see" our thought processes, they become more able to apply strategies and figure out puzzling texts, concepts, and vocabulary for themselves.

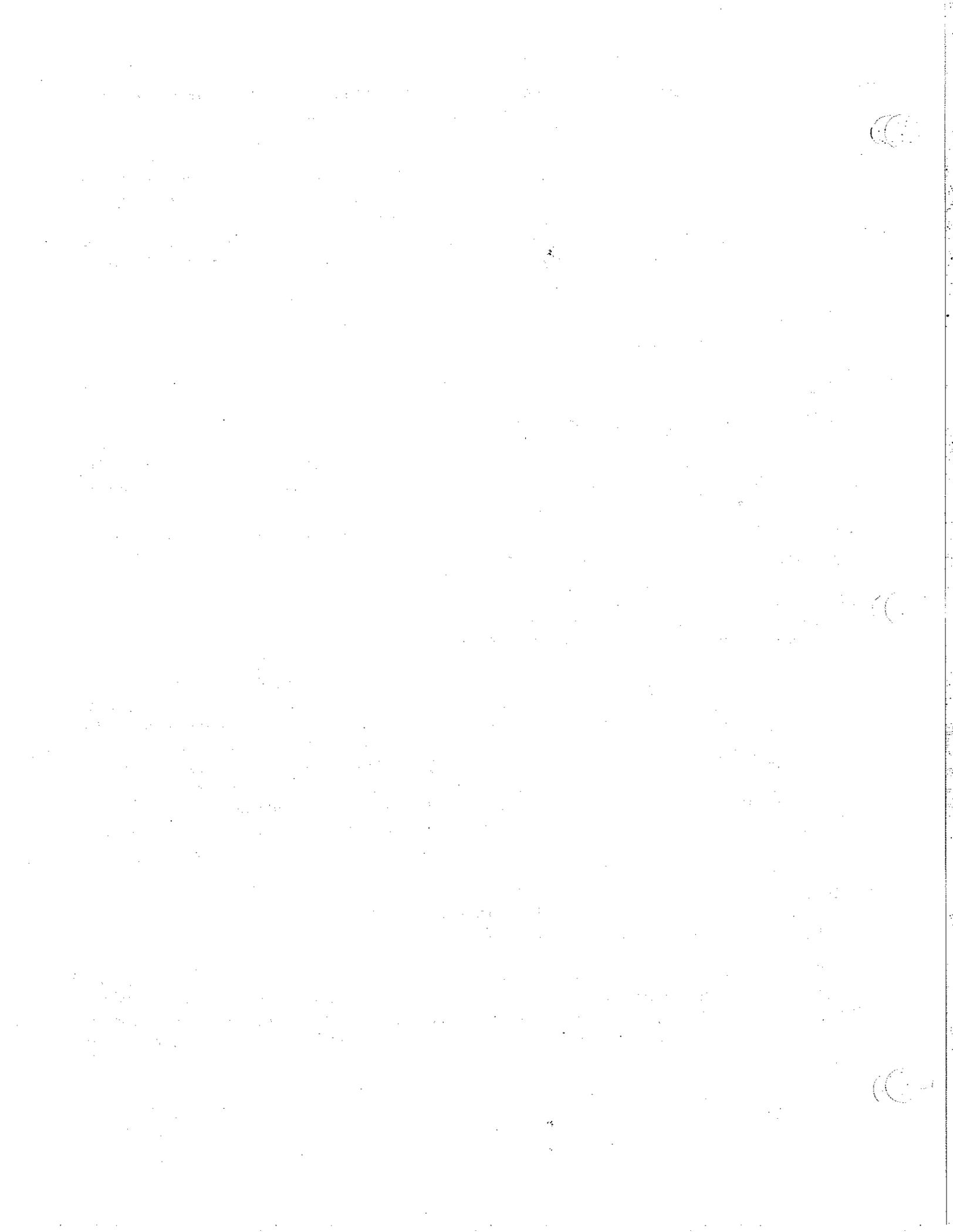
Tacit Learners

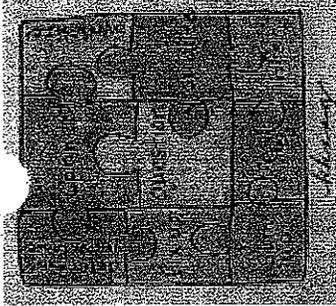


- lack awareness of how they think when they read and learn,
- and are not aware of their thinking while learning.

These are our struggling students. They do not see reading as a process; rather, they believe that the ability to read well is either something you "have" or "don't have." Unfortunately, tacit learners mostly believe that they don't "have" it. They are not able to control their mood and impulsivity, which directly hampers academic success. Finally, they do not naturally evaluate and monitor their

own progress.





Putting It All Together: Synthesizing.

"When do we use each strategy?" We don't use every strategy in every circumstance, so what strategy matches what text?

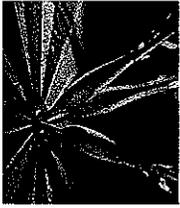
For example, if I read a difficult text, I might use monitoring and clarifying or summarizing. If I read a recipe, I might determine important ideas or access prior knowledge or predict. If I read a play, I ask questions or visualize. Our goal is to learn to use strategies appropriate to the task.

What reading strategy or strategies would you use if you had to read the following texts? Be prepared to justify your response.

- | | | |
|-------------------------|------------------------|---------------------------|
| 1. a poem | 9. a political cartoon | 17. a social studies book |
| 2. a biography | 10. a recipe | 18. an almanac |
| 3. a comic book | 11. a TV guide | 19. an atlas |
| 4. a play | 12. a magazine | 20. an encyclopedia |
| 5. nonfiction | 13. realistic fiction | 21. a thesaurus |
| 6. a personal narrative | 14. science fiction | 22. a dictionary |
| 7. a newspaper article | 15. historical fiction | 23. fantasy |
| 8. an editorial | 16. a science book | 24. a short story |



What to remember about reading strategy use...



Metacognition and reflection do not develop by accident; they must be taught intentionally.



Students cannot become proficient thinkers and readers without these processing strategies.



Relying on curriculum documents and textbooks is insufficient for developing effective reading strategies.



Struggling readers can become high achievers through explicit teaching, modeling, practicing and scaffolding of high-yield reading strategies.



The House

The two boys ran until they came to the driveway. "See, I told you today was good for skipping school," said Mark. "Mom is never home on Thursday," He added. Tall hedges hid the house from the road so the pair strolled across the finely landscaped yard. "I never knew your place was so big," said Pete. "Yeah, but it's nicer now than it used to be since Dad had the new stone siding put on and added the fireplace."

There were front and back doors and a side door that led to the garage, which was empty except for three parked 10-speed bikes. They went in the side door, Mark explaining that it was always open in case his younger sisters got home earlier than their mother.

Pete wanted to see the house so Mark started with the living room. It, like the rest of the downstairs, was newly painted. Mark turned on the stereo, the noise of which worried Pete. "Don't worry, the nearest house is a quarter mile away," Mark shouted. Pete felt more comfortable observing that no houses could be seen in any direction beyond the huge yard.

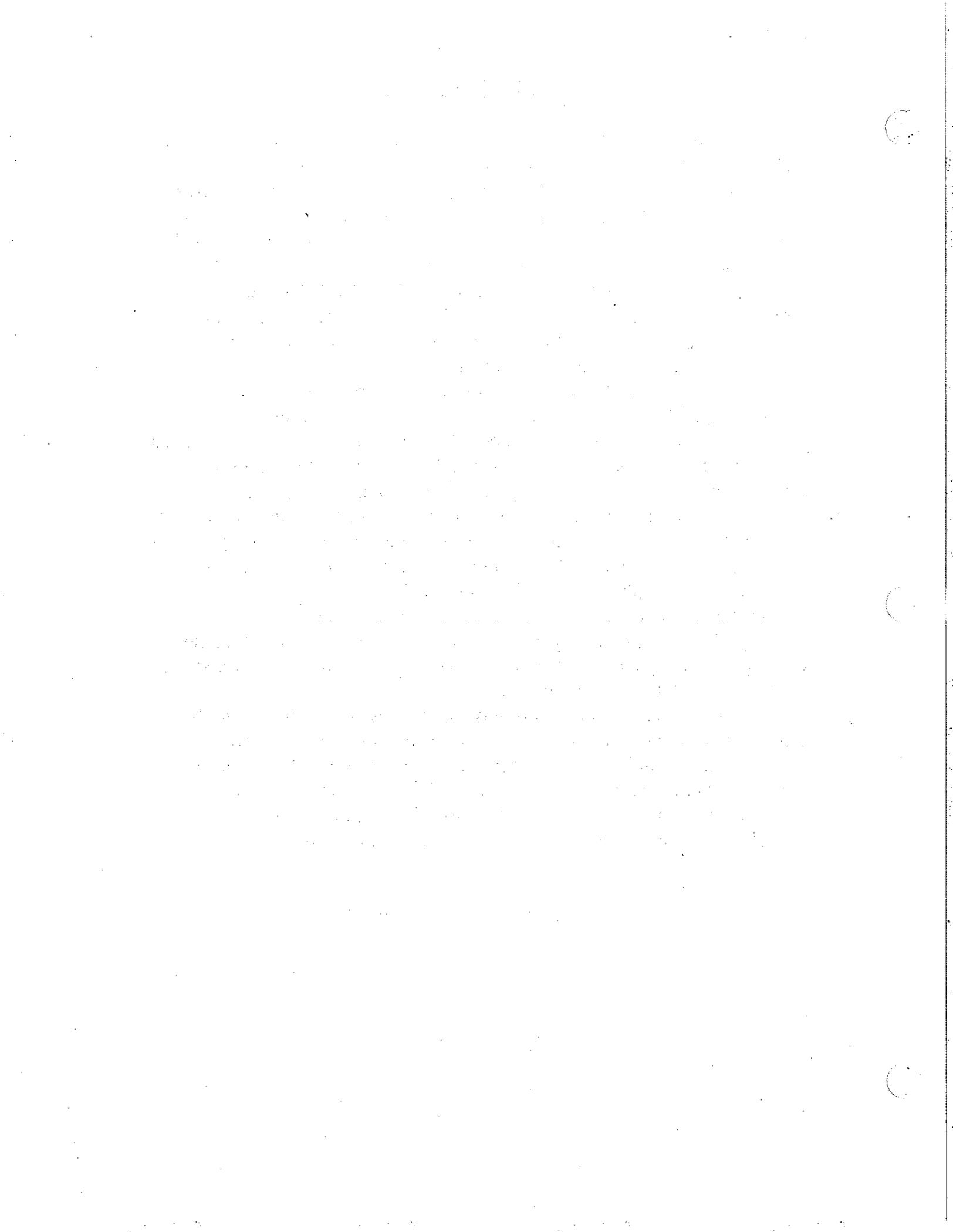
The dining room, with all the china, silver, and cut glass, was no place to play so the boys moved into the kitchen where they made sandwiches. Mark said they wouldn't go to the basement because it had been damp and musty ever since the new plumbing had been installed.

"This is where my Dad keeps his famous paintings and his coin collection," Mark said as they peered into the den. Mark bragged that he could get spending money whenever he needed it since he'd discovered that his Dad kept a lot in the desk drawer.

There were three upstairs bedrooms. Mark showed Pete his mother's closet that was filled with furs and the locked box that held her jewels. His sisters' room was uninteresting except for the color TV that Mark carried to his room. Mark bragged that the bathroom in the hall was his since one had been added to his sisters' room for their use. The big highlight in his room, though, was a leak in the ceiling where the old roof had finally rotted.

References: Chris Tovani (2000)

Picher and Anderson (1977)



Reading Strategies Comprehension Activity

Read the passage below and complete the task at the bottom of the page.

Highly unsettling for some to come into close contact with them. Far worse to gain control over them and then to deliberately inflict pain on them. The revulsion caused by this punishment is so strong that many will not take part in it at all. Thus there exists a group of people who seem to revel in the contact and the punishment as well as the rewards associated with both. Then there is another group of people who shun the whole enterprise; contact, punishment, and rewards alike. Members of the first group share modes of talk, dress, and deportment. Members of the second group however are as varied as all humanity. Then there is a group of others not previously mentioned, for the sake of whose attention this activity is undertaken. They too harm their victims though they do it without intention of cruelty. They simply follow their own necessities, however, they may inflict the cruelest punishment of all. Sometimes but not always they themselves suffer as a result." (Stiggins, 1991)

List any words you had difficulty decoding:

List any words you need help defining:

Write a 3 sentence summary of the passage.

Student talk is essential to active learning.

"If you have to talk, you have to think."

"By the age of 4, the child of professional parents in the US will have had nearly twice as many words addressed to it as the working-class child, and over four times as many as a child on welfare. For the middle-class child, encouragement from parents vastly outweighs discouragement; but for the child on welfare the climate of adult reaction is an overwhelmingly discouraging one. While talk is essential for intellectual and social development, for some children the talk which they engage in at school is nothing less than a lifeline." (Clark, 2008)

Talk Partners—

1. Students can be paired randomly or strategically, and can remain together for varying lengths of time.
2. Students need to have thinking time to answer a question (wait time), but discussing the question with a talk partner during that time makes the thinking time more productive.
3. Talk-partner discussions need to be focused and short to avoid students getting off-task. Ex. "You have 2 min. to decide what is wrong with this math calculation." "Take 30 seconds to tell your partner one way you are like *Bud* in this chapter."
4. Avoid asking for "hands up." If everyone has discussed with their talk-partner, everyone has an answer they can share. *Everyone is expected to have an answer when randomly called on.*
5. Randomly paired partners are most effective. Change partners every week or two. This is fair, and students know they have to

learn to work with this person for a short duration of time. They are also exposed to a variety of points of view.

6. Set the stage for quality talk—being a good listener, respectfully disagreeing, etc....
7. Avoid asking closed recall questions and ask questions worthy of a discussion.
8. Model respect for others' opinions.

Students engage in higher quality discussions and learn how to rethink their own answers after being exposed to more opinions or solutions.

Low achievers have the opportunity to try out their answer on one student before exposing themselves to the whole class. If they are not happy with their own answer, they may choose to use their partner's answer if called on to report to the class.

As the teacher "guides" discussion more than "leads" the discussion, there are more opportunities to formatively assess the students by listening to their answers.



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BRAIN-BASED LEARNING

Four Strategies to Spark Curiosity via Student Questioning

MARCH 22, 2012 | KEVIN D. WASHBURN

British archaeologist Mary Leakey described her own learning as being "compelled by curiosity." Curiosity is the name we give to the state of having unanswered questions. And unanswered questions, by their nature, help us maintain a learning mindset. When we realize that we do not know all there is to know about something in which we are interested, we thirst. We pursue. We act as though what we do *not* know is more important than what we do, as though what we do not possess is worth the chase to own it. How do we help students discover this drive?

Strategy One: Equip Students to Ask Questions

At its essence, curiosity is asking questions and pursuing answers. The brain does not like unanswered questions and will shift into seek-and-find mode to uncover and understand the unknown. Questions ignite curiosity.

We often ask students if they *have* any questions, but we rarely teach them *how to ask* advantageous questions. Like any skill, asking questions can be taught and practiced, and with technology enabling an increasing emphasis on self-directed learning, this skill is more important than ever. As Wendy Puriefoy explains, "The skill of question formulation – a thinking ability with universal relevance – can make all learning possible."¹ Students should be equipped to be inquisitive explorers, to pursue learning anytime, anywhere.

Strategy Two: Provide a Launch Pad

Even if students have mastered the full range (1) of question forming, it is difficult to inquire about topics with which they have no familiarity. When this is the case, giving *just* enough information to launch inquiry can help. Limit the information to true basics, such as a general context and term definitions. Then challenge students to generate questions that, when answered, uncover additional information. (For a more creative approach to launching questions, try something similar to Dr. Judy Willis' inventive use of radishes (2)!²) Guide and prompt as needed to encourage questions that address deeper concepts,

and connections that will help students construct understanding. If needed, eliminate duplicity by combining questions. Once the questions are articulated, let the search begin!

Strategy Three: Cast a Wide Net

During the information gathering phase of learning, the brain does its best work in an active and receptive state. (Neurologically, this is characterized by decreased frontal lobe activity but increased activity in the temporal, occipital and parietal lobes, and by increased alpha and theta wave activity, suggesting a relaxed and receptive mental state.³) Action associated with this neurological state includes searching and collecting that is both focused ("I know the topic I am pursuing") and open to discovery ("I do not know where I will find it or what else I may find in the process"). We can foster this by challenging students to "cast a wide net" as they gather information, striving for diversity in sources and source types. Not just a summary from Wikipedia, but also a poem that addresses some aspect of the topic; not just the labeled diagram, but also an artist's portrayal of the idea.

Keep the search active by praising student efforts to discover novelty. A new idea or perspective raises new questions, and since the brain does not like unanswered questions, curiosity continues to motivate the search.

Strategy Four: Avoid Cutting the Search Short

Curiosity cut off at its peak rarely regains its fervor, so allow ample time for students to thoroughly pursue answers and novel discoveries related to the topic or idea.

What is found -- the answers to the questions -- must eventually be sorted and related to known ideas or experiences for new knowledge and understanding to emerge. However, we can spark curiosity by engaging students in questioning and in pursuing answers. Learning "compelled" by questions is learning driven by curiosity.

References

¹Puriefoy, W.D. (2011). *Foreword in Rothstein, D. & Santana, L. Make Just One Change.* Cambridge, MA: Harvard Education Press.

²Washburn, K.D. (2010). *The Architecture of Learning: Designing Instruction for the Learning Brain.* Pelham, AL: Clerestory Press.

³Carson, S. (2010). *Your Creative Brain: Seven Steps to Maximize Imagination, Productivity, and Innovation in Your Life.* San Francisco: Jossey-Bass.

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Questions for Comprehension



Based on the title of the article, write one question.

Based on the first subheading, write one question.

Based on the second subheading, write one question.

Based on the third subheading, write one question.

Based on the fourth subheading, write one question.

After reading the entire article, write one question.

***Trade your question sheet with a partner and discuss the possible answers.**

Questioning "Try To" List:

1. Try to pause after asking a question.
2. Try to avoid frequent questions which require only a yes or no answer.
3. Try to avoid answering my own questions.
4. Try to follow up student responses with the question "why?"
5. Try to limit the use of questions which rely almost completely on memory.
6. Try to avoid directing a question to a student for disciplinary reasons.
7. Try to avoid repeating every student's answer.
8. Try to follow up a student's response by fielding it to the class or to another student for reaction.
9. Try to insist on attentiveness during question periods.
10. Try to avoid giveaway facial expressions to student responses.
11. Try to make it easy for students to ask a question at any time.
12. Try to avoid asking questions that contain the answer.
13. Try never to call on a particular student before asking the question.
14. Also try not to call on a particular student immediately after asking a question.
15. Try to ask questions that are open-ended.
16. Try not to label the degree of difficulty of a question.
17. Try to leave an occasional question unanswered at the end of the period (for follow-up the next day).
18. Try to replace lectures with a set of appropriate questions (guided discovery).
19. Try to avoid asking for verbal group responses.
20. Try to keep the students actively involved in the learning.

Questioning - Try "Not To" list:

Questions I should seldom ask

How many of you understood that?

Everybody see that?

You want me to go over that again?

Did I go too fast for you?

This is a _____, isn't it?

Right?

Okay?

Do you have any questions?

Formula for Inferential Comprehension

Inferential Comprehension involves "reading between the lines". In order to understand what is being communicated on an inferential level, one has to combine what he or she has as background knowledge with information that is provided. When students struggle with inferential comprehension, it is important for the teacher and student to understand what exactly is causing them to struggle.

Background Information



Story Clues



Inference

Text	Background Knowledge	+	Story Clues	+	Inference
Sally is wearing a bathing suit, drinking lemonade and sweating.					

Text Impressions

A text impression is a pre-reading activity that you can do with a relatively short text or chunk of text. It is very useful in activating/building background knowledge and predicting/infering.

The facilitator chooses 10 words from the text that could be vocabulary study words and which hint at the meaning/topic of the text. For example, a text impression for *The Three Little Pigs* might include words like bricks, leave, wolf, twigs, etc...

The facilitator reveals the words to the group one at a time, allowing for discussion/predicting of what the text might be about if this word is key to it and/or contained in it. After some discussion, the facilitator reveals another word; this time discussion centers on how this additional word broadens/narrows the initial prediction.

This process is continued until all 10 words are revealed, one at a time, and a logical prediction is made about the content of the text/story.

At the end of the story, the group revisits the list to clear up any misunderstandings they had or to discuss how the word meanings were broadened or clarified through reading of the text.

Reciprocal Teaching Model

Clarify

Question

On the Surface
Under the Surface

Summarize

Predict and Infer

Why?

Confirmed? Yes ___ No ___

Use this section with "Clarifying."

Page 1. Once there was a great kingdom. This kingdom was known throughout all lands for its splendor: its magnificent buildings, its great, terraced gardens and bountiful farms. But through time, all that had changed. Now the once great buildings were falling down and in need of much repair. The farms were now small and did not grow enough food for the kingdom. The poor villagers would oftentimes go to bed hungry.

Page 2. The people of this kingdom were not just poor by way of things, but they were poor of spirit – for there was not much joy in the village. There were no dances around the maypoles nor palace cotillions. Rarely was music heard but for the simple plucking from the lute of a traveling minstrel, now and again. Worst of all, the people had forgotten why their kingdom was once great.

Page 3. The kind of this land did not look as you might expect a king to look, for he did not wear a magnificent throne or flowing robes or a golden crown inlaid with precious gems. He was the king of a poor kingdom, so he looked quite ordinary and poor himself. His castle was always cold and in need of repair. He had but one manservant and one milkmaid. He did not entertain the kings of other lands, for he was greatly ashamed of his kingdom.

Use this section with "Questioning."

Page 5. The king did not often leave his castle, for he was weary of the complaints of his subjects. One day as he sat down to a meager dinner of bread, a slab of cheese, and boiled mutton, there came a knock at the castle door. The king's servant opened the door to find an old man with a large oak walking stick. The man wore a cap and a girdle and a coarse woolen tunic. A large cloak of skins was draped over his shoulders. He was carrying a leather canister, which hung from his shoulder by rawhide thongs.

"Hail," said the old man. "I am but passing through your kingdom to the village to the east. I am looking for an inn to spend the night."

The servant frowned. "This is not an inn. This is the king's castle."

The traveler looked around in surprise. "This is not much of a castle," he said.

"Aye," the servant agreed.

"Still, I am weary from my journey. I would like to rest here."

"You must inquire of my lord," the servant said.

"Lead me to him," said the old man.

Page 6. The servant led the old man down a dark, cold hallway to the king's dining room. The king looked up from his meal as the man entered.

"You are the king of this land?" the old man asked.

"I am," the king replied.

"You do not look like a king."

The king frowned. "I am the king of a poor kingdom. Our farms do not grow, our buildings are falling down, and my people weary me day and night with their complaints. We were once a great kingdom, but all that has changed."

The old man nodded slowly. "Why do you not change back?" he asked.

"Change?" the king replied angrily. "We have tried, only to fail. We lack all knowledge of what once made this kingdom great."

"You lack but one thing," said the old man. "If you will give me supper and lodging for the night, I will, on the morrow, show you why you fail."

The king looked at him thoughtfully, then said, motioning to the platters of bread, cheese, and meat, "Eat your fill."

The servant brought in a wooden platter and the old man ate with the king. When the old man had finished his meal, the servant led him to a room. That night as the king lay in his bed he wondered if the stranger had tricked him.

ie Page 7 with "Summarizing."

1. The next morning the old man came to the king in his throne room. "You have lived up to your part of the bargain. Now I will live up to mine. Follow me."

The king followed the old man to the castle balcony. There the old man brought out a long, round canister and pulled from it a brass tube with a sewn leather cover. A spyglass. He raised the spyglass to his eye and looked out over the land until a smile crossed his face. Then he handed the spyglass to the king. "Look thither."

2. The king looked out through the glass. He could see great farms and gardens, magnificent castles and cathedrals. He lowered the spyglass and said impatiently, "I have seen the wonders of the eastern kingdom. I hear far too much of them."

"You are mistaken," said the old man. "It is your own kingdom you see."

The king again raised the spyglass. This time he recognized the hills and glens of his own gdom. But where there had been barren pasture there were now fields of grain stretching as far as the eye could see. His own people were in the fields, their wagons overflowing with their harvest.

3. "You are a wizard," said the king. "It is a trick of the glass."

"It is no trick," said the old man.

But when the king put down the glass his kingdom looked the same as before.

"Nothing has changed."

4. "No," said the old man. "Change requires work. But one must first see before doing."

The king again raised the glass. "What greatness this kingdom holds."

"I have seen what might be," said the old man. "Now go and make it so. After two harvests I will return for my spyglass."

Use this section with "Predicting and Inferring."

Page 8. The king, on horseback, went out into his kingdom. He rode until he came to the edge of a once beautiful garden, now overrun with weeds and thistles. No one walked in the garden. There was neither the happy cries of playing children nor the pleased sighs of lovers. A group of villagers were standing outside its fence. Their children played at their feet in the dirty roadway.

"Why do you not use the garden?" the king asked them.

"It is not fit, sire," replied the woman.

"So it is not," agreed the king. "But it could be. Look." The king held out the spyglass. One by one the villagers looked through the tube at the garden. The weeds and thistles were gone and the lawns were lush and inviting. But when they set down the glass the garden had returned to its overgrown state.

"It is an amusing device," said one man. "But of no use."

No use indeed," the king said. "Behold, knave." And he went to the garden and began to pull the weeds up by his own hand. When the villagers saw what he was doing, they too began to pull up weeds until they had uncovered a large, marble statue of an angel, its wings spread, its face looking up toward heaven. The people stared at the statue in silent awe.

At length the king mounted his horse. Before he left he said, "You have seen what might be. Now make it so."

Use this section for Reciprocal Teaching Group Activity.

es 11. Day by day the king went out until he had visited all the people of his kingdom and shown them what might be. Though there were those who would not look through the glass or who refused to believe what they saw, the greater part of the villagers looked with wonder and hope.

That same year there was a plentiful harvest and the farmers filled their wagons and barns with grain. But not just the farmers prospered. The wagon builders were busy building wagons to carry all the grain. The millers were busy milling the grain into flour. For the first time, for as long as the villagers could remember, there was more than enough to eat. Music and dancing again filled the streets. Old buildings were repaired and new buildings arose, including the beginning of the most majestic cathedral in all the land.

Page 12. As promised, two harvests later the old man returned to the kingdom. He almost did not recognize the castle, for so greatly had it changed. The scarred wooden door he had once knocked on was new and intricately carved. Beautiful tapestries adorned the now polished marble floors. The castle's once cold chambers were warmed with heat and music, and the king was attended to by a bevy of servants and maids. The king, dressed in lavish robes of fur and silk, warmly welcomed the old man.

"My friend," he said, "I have awaited your return. Look what prosperity your spyglass has brought my people. Let us make merry and prepare a great feast in your honor."

The old man smiled. "You have done well," he said. "But I cannot tarry. I have only come from my spyglass, then I will be on my way."

At this the king frowned. "In the two seasons since you blessed us with your arrival we have accumulated much treasure. In exchange for the spyglass, I will trade all the gold in the royal coffers, with men and wagons enough to carry wherever your destination."

"You have spoken wisely," said the old man, "for the gift of the spyglass is worth more than all the gold in all the royal coffers all throughout the land. But keep your gold. You no longer need the spyglass."

"But there is still much to be done," pleaded the king.

"Yes," said the old man. "But you no longer need the spyglass. You can see without it."

"How is it possible?" asked the king.

Page 13. "The spyglass only showed you what could be if you believed, for it was only faith that you and your people lacked."

The king shook his head in disbelief. "How can this be? Faith is foolishness."

"So says the fool," the old man said. "Faith is the beginning of all journeys. It is by faith that the seed is planted. It is by faith that the foundation is dug. It is by faith that each book is penned and each song is written. Only with faith can we see that which is not, but can be. The eye of faith is greater than the natural eye, for the natural eye sees only a portion of truth. The eye of faith sees without bounds or limits."

"I had not supposed," the king said.

"That is why you once failed," said the old man. "Faith is why you now succeed." He placed his hand on the king's shoulder and said with a smile, "You have seen what might be. Now go and make it so."

14. And though the old man and his spyglass were never again seen in the land, the kingdom continued to prosper and became again the great kingdom of old. Yet, despite their abundance of food, their beautiful buildings, their lush gardens and majestic cathedrals, it was ever after said of that kingdom that their greatest treasure was their faith.



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visualizing

What Is It? Visualizing refers to our ability to create pictures in our heads based on text we read or words we hear. It is one of many strategies that makes reading comprehension possible.

Why Is It Important? Visualizing strengthens reading comprehension as students gain a more thorough understanding of the text they are reading by consciously using the words to create mental images. As students gain more deliberate practice with this strategy, the act of visualizing text becomes automatic. Students who visualize as they read not only have a richer reading experience but can recall what they have read for longer periods of time. (Harvey & Goudvis 2000)

Visualizing text as it is being read or heard also creates personal links between the readers/listeners and text. Readers who can imagine the characters they read about, for instance, may become more involved with what they are reading. This makes for a more meaningful reading experience and promotes continued reading.

How Can You Make It Happen? Visualizing is a strategy that can be helpful in many domains; even experienced readers can benefit from practice with this strategy. When selecting a text for a visualizing activity, start with a piece that contains descriptive language and strong verbs and that lends itself to conjuring vivid images. It is not necessary to start with an entire book—even a well-crafted sentence or short paragraph can provide a rich springboard for a visualizing lesson.

Starting Small. To begin a series of lessons that will focus on improving visualization, you might choose to start with a short passage taken from a text or of your own creation. For instance, the following sentences could be used to spark discussions:

Joan could barely believe her eyes. All these gifts were for her! She had never seen so many packages, not even on all her birthdays combined!

After listening to or reading the sentences once or twice, students can discuss the mental images created by the sentences. Students will likely differ in their descriptions of the scene. For instance, some may picture a small child surrounded by stacks of gifts. Others may imagine an older girl in front of a table piled with presents. There is no single correct answer, and those three simple sentences, though not particularly rich in detail, do offer enough information for the reader or listener to begin to form a mental picture.

Group Activities. Students can work on visualizing as a whole class or in small groups. One way to challenge young students to improve their visualizing is to read a picture book aloud, sharing only portions of the illustrations. Then ask students to create their own illustrations based on the text they heard. More advanced readers might listen to a selection from a novel that the class has been reading and create a picture or written description of a character or setting based on the information in the text.

Independent Reading. Students can also practice visualizing as a follow up to independent reading. Ask students who keep track of their reading in reading logs or journals to respond to prompts regarding the images created by the text they have read: "Does the main character remind you of anyone you know?" "Have you ever been to or seen any place that is like the setting of your book?" All students, even those who struggle, can draw images in their journals, recording their mental pictures in response to their listening or reading. You can discuss these drawings during one-on-one reading conferences.

Older students who are reading novels can think about questions such as, "If you were going to make a movie based on your book, who would you want to play the main characters?" "What would the scenery look like?" and "Where would you want to do the filming?" These questions get at the imagery created in the mind of the readers and encourage those readers to share their mental pictures in their responses.

Using Visualizing to the Next Level. Visualization activities lend themselves to follow-up lessons. For example, the few sentences suggested in the "Starting Small" activity lead the way for deeper discussions about making inferences. Students can discuss not only what they visualize when they hear or read given text but also the questions that the text suggests, such as, "Why do you think Joan received all of these gifts?" or "What do you think Joan will do next?" You can

take this particular discussion further by allowing students to personalize the experience by answering questions such as, "What would you do if you were Joan?" or "How would you feel if you were in Joan's place?"

When Can You Use It?

Reading. Students can sharpen their use of the visualizing strategy as they read independently, participate in small group reading activities, or listen to a text. To encourage visualizing, turn out the lights and ask students to close their eyes as they listen. Pause frequently to allow students to share their images and mental pictures with the class. The ability to generate visual images from texts becomes increasingly important as students move from richly illustrated storybooks into "chapter books" with relatively few pictures. Ease the transition by explaining that skillful writers use descriptive language designed to generate imagery in their readers' imaginations. Encourage students to create their own mental images, thereby illustrating the books themselves—filling in the pictures that the author paints using only words.

Writing. Text that is easy to visualize is often filled with vivid descriptions or strong verbs. Watch for sentences or paragraphs in students' writing that lend themselves to practice with visualization. With students' permission, share these examples with the class, encouraging discussion not only of the images created by the text but about why the chosen text allows for visualization. And encourage young writers to use language that generates images—this is when writing really sparkles!

Math. Visualization is a helpful strategy in mathematics as well. Students often use manipulatives to make math concepts more concrete, and visualization is a way of internalizing the concepts the manipulatives reinforce. For instance, a class that has been studying fractions and using fraction bars can segue into a discussion comparing the sizes of fractions using common images. A question such as, "Would you rather have $1/2$ or $1/3$ of a pizza?" is more easily answered if students can picture a pizza (or at least a circle) and what $1/2$ versus $1/3$ looks like. At the beginning of such a conversation, you can draw two pizzas on the board, shading in $1/2$ of the first and $1/3$ of the second. As the discussion continues, ($1/4$ versus $1/8$, $2/3$ versus $3/4$, and so on) challenge students to picture the pizzas in their minds or to draw their visual images.

Social Studies. As students study history, they are sometimes presented with a list of dates and names. For students to really visualize historic events, they need sufficient details to create rich pictures. Allow students opportunities to listen to or read personal accounts of an event or time period they are studying. When available, pieces written from a child's perspective are helpful in forging personal links between students and the time period in question. For instance, *Sarah Morton's Day: A Day In The Life of a Pilgrim Girl* and *Samuel Eaton's Day: A Day In The Life of a Pilgrim Boy*, both by Kate Waters, provide context to help young children understand colonial life.

Science. Visualizing is sometimes a good challenge with some of the more abstract concepts studied in science. For instance, many classes study plants, and students are told that plants need water to grow. While students can memorize the fact that water travels from a plant's roots through the stem to its leaves or buds, putting a white carnation in a vase filled with water that has been tinted blue with food coloring provides a vivid example of this process as students witness the flower eventually turn blue.



Activating Prior Knowledge

What Is It?

Call it schema, relevant background knowledge, prior knowledge, or just plain experience, when students make connections to the text they are reading, their comprehension increases. Good readers constantly try to make sense out of what they read by seeing how it fits with what they already know. When we help students make those connections before, during, and after they read, we are teaching them a critical comprehension strategy that the best readers use almost unconsciously.

Ellin Oliver Keene and Susan Zimmerman in *Mosaic of Thought* (1997), have identified three main types of connections students make as they read:

- Text to self
- Text to world
- Text to text

Why Is It Important?

Explicitly teaching strategies that proficient readers use when trying to make sense out of text helps to deepen understanding and create independent readers. Activating prior knowledge, or schema, is the first of seven strategies that Keene and Zimmerman identify as key for reading comprehension success.

Teaching children which thinking strategies are used by proficient readers and helping them use those strategies independently creates the core of teaching reading." (Keene and Zimmerman, 1997)

These strategies, identified through research based on what good readers do when they are reading, help students become metacognitive. They learn to think about their thinking as they are reading.

When students learn to make connections from their experience to the text they are currently reading, they have a foundation, or scaffolding, upon which they can place new facts, ideas, and concepts. As good readers read, they think about what they are reading and consider how it fits with what they already know. In this way, they build upon the schema that they already have developed.

When Should It Be Taught?

This comprehension strategy should be taught on an ongoing basis so that students learn independently to use it as they are reading. It should be taught explicitly and systematically over an extended period of time, moving from modeling the thinking process out loud by the teacher, to students using the strategy as a natural part of their comprehension process.

Prior knowledge should be discussed before reading the text to help set the stage for what is coming. During reading, students should be encouraged to make connections to the text from their experience and the teacher should model this process using his or her own connections. After reading, the discussion should center on how the connections helped students to better understand the text and how the text helped them to build their foundation of prior knowledge.

What Does It Look Like?

"In the early stages of teaching students the strategy of making connections to their prior knowledge, the teacher models thinking aloud." The teacher reads a text to the class and talks through his or her thinking process in order to show students how to think about their thinking as they are reading. Slowly, after students have seen and heard the teacher using the strategy, they are given the opportunity to share their experiences and thinking. Finally, students make

connections to texts independently. Teachers can check in periodically to have students articulate their thinking, in order to track progress, spot difficulties, and intervene individually or conduct a mini-lesson to reteach or move students forward.

When students are activating their prior knowledge and making connections, they use graphic organizers, such as a concept map, a flow chart, or a to help map their thinking. Often students keep reflection or response journals where they record thoughts, feelings, insights, and questions about what they read. Students, in large and small groups, discuss and write about the connections they are making to texts. (For examples of these and other graphic organizers, click the link.)

How Can You Make It Happen?

Start showing students how to make connections to their reading systematically and explicitly. Some teachers devote a good amount of time (6-8 weeks) to study a particular comprehension strategy in-depth before moving on to the next.

Begin by carefully choosing texts that can model how a proficient reader connects the text with experience. Picture books (even older students love them!) and shorter trade books that feature memoir writing are ideal texts to start with. Check the Resources section for a short list of books that are great for making connections. Use a variety of texts when teaching, including poetry and nonfiction books with different text structures and formats.

As you read the book with the class, "think out loud," stopping at appropriate points to articulate your thinking as a model for students. First, model connections between the text and your own experiences and encourage students to think of their own experiences that connect with the story. These are "text to self" connections. It is important during modeling to continually come back to the text and not allow personal experiences to divert the group from understanding the story. As students share connections, talk about how their experience helps them to better understand the text and how the text helps them to build their store of knowledge and experience.

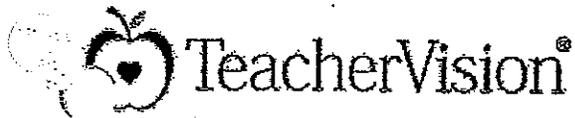
The next connections to model are "text to world" connections. What do they know about the world that will help them to better understand the story? If they are reading *When I Was Young in the Mountains* by Cynthia Rylant or *Tar Beach* by Faith Ringgold, have them think about what they know about life in the mountains or in the city that can help them to better understand the story. If they are reading *The Story of Ruby Bridges* by Robert Coles, think about the background knowledge your students have about the Civil Rights Movement or segregation that could help them make sense of what they are reading.

Finally, model connections that are "text to text." Model how a book you are currently reading reminds you of another book you read with the class. Discuss similar styles of writing, characters, themes, or how both stories describe childhood memories of two different places. How does a book like *Crow Boy* by Taro Yashima, the story of a boy with hidden talents who is teased by his classmates, help students to understand a book like *The Hundred Dresses* by Eleanor Estes? Students can also think about what they know about authors based on books they have read by that author. They can predict what a story might be about, or if the style is similar in all of the author's stories.

With all of these strategies for connecting text to previous knowledge, it is crucial to talk with students explicitly about how this helps them to more fully understand what they are reading. It is also important for students to understand how they are building more prior knowledge with each book read.

How Can You Measure Success?

Much of the assessment for this comprehension strategy will be ongoing and informal observation of student understanding through participation in class discussion and in individual reading conferences with students. As students gain experience, you can monitor their progress through their entries in a reading response or reflection journal. Selected entries, chosen to show student progress over time, can go into a student reading portfolio along with completed graphic organizers, when appropriate, for various texts that the student has read throughout the year.



Questions Before, During, and After Reading

What Is It? To aid their comprehension, strategic readers ask themselves questions before, during, and after they read. You can help students become more proficient by modeling this process for them and encouraging them to use it when they read independently.

Why Is It Important? Dolores Durkin's research in 1979 showed that most teachers asked students questions after they had read, as opposed to questioning to improve comprehension before or while they read. In the late 1990s, further research (Pressley, et al. 1998) revealed that despite the abundance of research supporting questioning before, during, and after reading to help comprehension, teachers still favored post-reading comprehension questions.

Researchers have also found that when adult readers are asked to "think aloud" as they read, they employ a wide variety of comprehension strategies, including asking and answering questions before, during, and after reading (Pressley and Afflerbach 1995). Proficient adult readers:

- Are aware of why they are reading the text
- Preview and make predictions
- Read selectively
- Make connections and associations with the text based on what they already know
- Refine predictions and expectations
- Use context to identify unfamiliar words
- Reread and make notes
- Evaluate the quality of the text
- Review important points in the text
- Consider how the information might be used in the future

Successful reading is not simply the mechanical process of "decoding" text. Rather, it is a process of active inquiry. Good readers approach a text with questions and develop new questions as they read, for example:

"What is this story about?" "What does the main character want?" "Will she get it?" "If so, how?"

Even after reading, engaged readers still ask questions:

"What is the meaning of what I have read?" "Why did the author end the paragraph (or chapter, or book) in this way?" "What was the author's purpose in writing this?"

Good authors anticipate the reader's questions and plant questions in the reader's mind (think of a title such as, *Are You My Mother?* by P.D. Eastman). In this way, reading becomes a collaboration between the reader and the author. The author's job is to raise questions and then answer them — or provide several possible answers. Readers cooperate by asking the right questions, paying careful attention to the author's answers, and asking questions of their own.

How Can You Make It Happen? To help readers learn to ask questions before, during, and after reading, think aloud the next time you are reading a book, article, or set of directions. Write each question on a post-it note and stick it on the text you have the question about. You may be surprised at how many typically unspoken questions you ponder, ask, and answer as you read. You may wonder as you read or after you read at the author's choice of title, at a vocabulary word, or about how you will use this information in the future.

You should begin to model these kinds of questions during read-aloud times, when you can say out loud what you are thinking and asking. Read a book or text to the class, and model your thinking and questioning. Emphasize that even though you are a strategic reader, questions before, during, and after reading continue to help you gain an understanding of the text you are reading. Ask questions such as:

"What clues does the title give me about the story?" "Is this a real or imaginary story?" "Why am I reading this?" "What do I already know about ___?" "What predictions can I make?"

Pre-select several stopping points within the text to ask and answer reading questions. Stopping points should not be so frequent that they hinder comprehension or fluid reading of a text. This is also an excellent time to model "repair strategies" to correct miscomprehension. Start reading the text, and ask yourself questions while reading:

"What do I understand from what I just read?" "What is the main idea?" "What picture is the author painting in my head?" "Do I need to reread so that I understand?"

Then reread the text, asking the following questions when you are finished:

"Which of my predictions were right? What information from the text tells me that I am correct?" "What were the main ideas?" "What connections can I make to the text? How do I feel about it?"

Encourage students to ask their own questions after you have modeled this strategy, and write all their questions on chart paper. Students can be grouped to answer one another's questions and generate new ones based on discussions. Be

sure the focus is not on finding the correct answers, because many questions may be subjective, but on curiosity, wondering, and asking thoughtful questions.

After students become aware of the best times to ask questions during the reading process, be sure to ask them a variety of questions that:

- Can be used to gain a deeper understanding of the text
- Have answers that might be different for everyone
- Have answers that can be found in the text
- Clarify the author's intent
- Can help clarify meaning
- Help them make inferences
- Help them make predictions
- Help them make connections to other texts or prior knowledge

As students begin to read text independently, you should continue to model the questioning strategy and encourage students to use it often. With struggling readers, a framework for questions to ask before, during, and after reading can serve as a guide as students work with more challenging texts and begin to internalize comprehension strategies. You can use an overhead projector to jot notes on the framework as you "think aloud" while reading a text. As students become comfortable with the questioning strategy, they may use the guide independently while reading, with the goal of generating questions before, during, and after reading to increase comprehension.

How Can You Stretch Students' Thinking? The best way to stretch students' thinking about a text is to help them ask increasingly challenging questions. Some of the most challenging questions are "Why?" questions about the author's intentions and the design of the text. For example: "Why do you think the author chose this particular setting?" "Why do you think the author ended the story in this way?" "Why do you think the author chose to tell the story from the point of view of the daughter?" "What does the author seem to be assuming about the reader's political beliefs?"

Another way to challenge readers is to ask them open-ended questions that require evidence from the text to answer. For example:

"What does Huck think about girls? What is your evidence?" "Which character in the story is most *unlike* Anna? Explain your reasons, based on evidence from the novel?" "What is the author's opinion about affirmative action in higher education? How do you know?"

Be sure to explicitly model your own challenging questions while reading aloud a variety of texts, including novels, subject-area textbooks, articles, and nonfiction. Help students see that answering challenging questions can help them understand text at a deeper level, ultimately making reading a more enjoyable and valuable experience.

As students become proficient in generating challenging questions, have them group the questions the time they were asked (before, during or after reading). Students can determine their own categories, justify their reasons for placing questions into the categories, and determine how this can help their reading comprehension.

When Can You Use It?

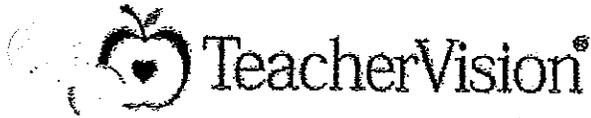
Reading/English. Students who have similar interests can read the same text and meet to discuss their thoughts in a book club. Members can be given a set of sticky notes to mark questions they have before, during, and after reading the text. Members can then share their question with one another to clarify understanding within their group. Since students' reading level may not necessarily determine which book club they choose to join, accommodations may need to be made, including buddy reading, audio recordings of the text, or the use of computer-aided reading systems.

Writing. Good writers anticipate their readers' questions. Have students jot down the questions they will attempt to answer in an essay or short story before they write it, in the order that they plan to answer them. Stress that this should not be a mechanical process – as students write they probably will think of additional questions to ask and answer. The key point is to have students think of themselves as having a conversation with the reader – and a big part of this is knowing what questions the reader is likely to ask.

Math. Students can ask questions before, during, and after solving a math problem. Have students think aloud or write in groups to generate questions to complete performance tasks related to mathematics.

Social Studies. Use before, during, and after questions when beginning a new chapter or unit of study in any social studies topic. Select a piece of text, and have students generate questions related to the topic. At the end of the unit of study, refer back to the questions and discuss how the questions helped students to understand the content.

Science. Use before, during, and after questions to review an article or science text. You can discuss articles related to a recent scientific discovery with students and then generate questions that would help them to focus their attention on important information.



What Is It? Summarizing is a reading strategy in which you put into your own words a shortened version of written or spoken material, stating the main points and leaving out everything that is not essential. Thus, it also involves the strategy of determining important ideas and details. Summarizing is more than retelling; it involves analyzing information, distinguishing important from unimportant elements and translating large chunks of information into a few short, cohesive sentences. Fiction and nonfiction texts, media, conversations, meetings, and events can all be summarized.

For example, to summarize the movie *Memento*, you might state: The movie *Memento* is a backward chronology of a man who tries to find his wife's killer, but has short-term memory loss. He keeps track of facts by taking pictures of events and tattooing facts onto himself.

Why Is It Important?

- Summarizing allows both students and teachers to monitor comprehension of material.
- Summarizing helps students understand the organizational structure of lessons or texts.
- Summarizing is a reading strategy which most adults need to be successful.

Summarizing and reviewing integrate and reinforce the learning of major points...these structuring elements not only facilitate memory for the information but allow for its apprehension as an integrative whole with recognition of the relationships between parts (J. E. Brophy and T. L. Good, 1986).

In a synthesis of the research on summarizing, Rosenshine and his colleagues found that strategies that emphasize the analytic aspect of summarizing have a powerful effect on how well students summarize (1996).

How Can You Make It Happen? Introduce summarizing to students by pointing out that they verbally summarize every day. Model a verbal summary by summarizing something you watched on television or a conversation that you had with a friend or another teacher. Point out that summaries don't (should not) include opinions.

For example:

"Last night, the San Francisco Giants beat the Atlanta Braves 3-1, to win the National League Division Series. Barry Bonds hit his third home run of the series in the fourth inning against pitcher Kevin Millwood. The Braves had a chance to win in the ninth inning, but Sheffield struck out with two men on base, and Jones grounded into a double play."

Explain how you decided what to recall to the class in your summary. The score, big hits, and the ending of the game were included in the summary. Each hit, who played each position, and the score at each inning's end were not included in the summary. The main idea was stated in the first sentence, or topic sentence. Point out that the summary doesn't include any opinions about the game.

Have students practice verbalizing summaries of familiar or interesting topics, such as "What I did last weekend" or "What do we do during a typical school day" before summarizing written texts.

To introduce the different strategies in summarizing fiction and nonfiction, review the essential ways in which fiction and nonfiction differ.

Fiction. To help students summarize fiction, introduce a story map or other graphic organizer, and ask them to fill in the information for a recent fictional text they read, or have them summarize a chapter of their favorite novel or story. They can also summarize the lyrics from a favorite song or poem. With younger students, read a story as a class, and then fill out a story map together.

Once students complete the graphic/pattern organizer, have them use it to help verbally summarize the fictional text to a partner. Then, have them use the graphic to write a paragraph that summarizes the text. Be sure that their summaries tell about the main characters, conflict, and conflict resolution.

Nonfiction. In summarizing nonfiction texts, introduce these steps:

- Skim the text to get a general idea of the topic.

- Delete unnecessary or redundant material.
- Find the main ideas in the text.
- Find or create a topic sentence.
- Substitute general or "umbrella" terms when appropriate (for example, *trees* instead of *oak, maple, and pine*).

Demonstrate how to use the steps above to summarize an informative article or nonfiction text. (Examples can be found in the sample lessons below.)

Have students use the steps to summarize something they read in their local newspaper or in a magazine, a part of the school handbook, or a passage from a textbook. If you are working with struggling students or ones without much practice in the summarization strategy, work together to summarize a biography or any factual material that you have displayed in your classroom.

1. Start by skimming the text to get an idea of what the text is about.
2. Cross out sentences that are not necessary or that are redundant to help them pull out what is crucial to the message of the piece.
3. Mark key words and phrases and jot down notes about the main idea. Instruct students to look for signal words such as *therefore*, *in conclusion*, or *in summary*.
4. Have them verbally summarize the nonfiction piece to a peer.
5. Then, have them reread the text and write a summary paragraph. In the summary, students should state the text's main idea in the first sentence and include the most important information. Be sure that students have not included any opinions of their own or sentences word-for-word from the original text.

How Can You Stretch Students' Thinking?

Here are some general questions for students to consider when summarizing either fiction or nonfiction:

- What happened?
- Who was involved?
- What was the outcome?
- Is the essential piece of information included?
- Are interesting but nonessential facts or details eliminated?
- Would someone who read my summary really understand the main points of the text?

When Can You Use It?

Reading/English. Have students summarize stories, a chapter from a novel, an act from a play, a poem, or an entire short story. Ask students to summarize the life of an author or a piece of science fiction or historical fiction.

Writing. Have students use a story map to summarize a work of fiction or nonfiction in a paragraph. Have them write a paragraph that summarizes a style of writing that their favorite author uses.

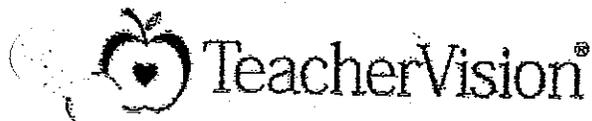
Math. Have students summarize an important theorem in geometry such as the Pythagorean theorem, the quadratic formula, or how to do long division. Have them summarize the life of an important mathematician such as Pythagoras.

Social Studies. Summarize the events leading up to an historical event such as the Civil War. Have students summarize an interesting case such as the Dred Scott case or the life of an important historical figure such as Martin Luther King, or Abigail Adams.

Science. Have students summarize the process of photosynthesis, a recent science experiment, or the life of an important scientist such as Marie Curie or Thomas Edison.

Sample Lessons. Summarizing an O. Henry Short Story (fiction) In this high school reading lesson, students will summarize, verbally and in writing, the short story "Confessions of a Humorist" by O. Henry.

Summarizing a John F. Kennedy Speech (nonfiction) In this high school reading lesson, students will summarize, verbally and in writing, a speech that John F. Kennedy gave about the need for America to land a man on the moon.



Inference

What Is It?

Making an inference involves using what you know to make a guess about what you don't know, or reading between the lines. Readers who make inferences use the clues in the text along with their own experiences to help them figure out what is not directly said, making the text personal and memorable. Helping students make texts memorable will help them gain more personal pleasure from reading, read the text more critically, and remember and apply what they have read.

Why Is It Important?

Researchers have confirmed that thoughtful, active, proficient readers are metacognitive; they think about their own thinking during reading. They can identify when and why the meaning of the text is unclear to them, and can use a variety of strategies to solve comprehension problems or deepen their understanding of a text (Duffy et al. 1987).

Proficient readers use their prior knowledge and textual information to draw conclusions, make critical judgments, and form unique interpretations from text. Inferences may occur in the form of conclusions, predictions, or new ideas (Anderson and Pearson, 1984).

How Can You Make It Happen?

Introduce this strategy by modeling it for students, starting with every day examples, moving to listening activities, and then to text examples. Tell students that good readers make inferences to understand what they are reading. Emphasize that they will bring their own knowledge of events to the text, so each inference may be unique. For example, you may want to introduce making inferences with an example such as the following.

You got to school this morning and you couldn't find a lesson plan. You were reading it over while having breakfast, so you probably left it on your kitchen table.

Point out that you are making an inference based upon the fact that you know you were working on your lesson plan at home. Discuss situations in which students don't have all of the information and have to make logical guesses, such as figuring out what someone is trying to say, figuring out what is happening in a movie, or figuring out who the singer is on the radio. They may need practice identifying the inferences they make in every day life.

Another way to introduce this strategy is to use pictures from a magazine or book cover, and cover a part of the picture. Ask about what is happening in the picture, what the picture is advertising, or what the story will be about. Think aloud as you make connections between the facts and your prior knowledge, using phrases such as, "The picture looks like...I know that..." Next, have students respond to questions about new pictures, citing their reasons for their inferences. Have them cite reasons that are facts along with reason that come from their prior knowledge.

Then, model how good readers make inferences while reading. They use ideas from the book and add their own ideas to them. Read this short passage to students:

The young woman walked a bit hesitantly towards the famous cozy Italian restaurant. She did not believe the excuse her parents gave her for having to meet her at the restaurant instead of at their house. To make matters worse, she was a bit grumpy because she was still catching up on the sleep that she lost during exam time. She noticed some cars that looked familiar in the parking lot. As soon as she walked through the door, she heard, "Surprise!"

Now read it again and when you make an inference, tell students about it and describe how you make the inferences. You / say something such as:

The text says: She did not believe the excuse her parents gave her.

I know: Sometimes if people play practical jokes, others don't believe everything they say. Maybe her parents played practical jokes.

The text says: She was a bit grumpy because she was still catching up on the sleep that she lost during exam time.

I know: I know exams are usually given in school, so she is probably in high school or college.

The text says: She noticed some cars that looked familiar in the parking lot. As soon as she walked through the door, she heard, "Surprise!"

I know: If the cars are familiar, that means people she knows are in the restaurant. This makes me change my inference. If her parents wanted to meet her at the restaurant, and other people she knows are there, maybe it's a surprise party.

By modeling your thought process, students can see how you took the information from the text, along with what you knew already and your own ideas, to make inferences. Point out which facts came from the text and which came from your background knowledge. Then put them all together to make the inference that it might be a surprise party.

To make the process more explicit, use a graphic organizer to record students' answers. Ask students to record the facts that are stated in the text, along with their background knowledge. Have students keep in mind that they can change or modify their inferences as they read. Point out that they were able to make an inference based on their knowledge of surprise parties. Have students practice this strategy and use a graphic organizer while reading text.

How Can You Stretch Students' Thinking?

Allow students to share a wide range of interpretations when reading fiction. Make sure the classroom is a safe and non-critical place for students to share their background knowledge, keeping in mind that there may be as many different interpretations as there are students.

Use a variety of genres to practice making inferences. When students read non-fiction, there are fewer inferences or interpretations that are usually made from the text. Discuss how the inferences and conclusions are different when reading science articles, poetry, novels, or historical documents. Have students practice justifying their interpretations, being explicit about which parts of the text they used to gain facts, and the background knowledge they used to make the inference.

Challenge students by having them write a paragraph including facts and inferred facts. Have them exchange their paragraphs and make inferences based on the information in the paragraphs. Ask each student to complete a graphic organizer for their peer's story, and have them discuss their inferences and how they arrived at them.

For younger students, you may generate some questions about a text as a group, place students in pairs, and have pairs work together to fill out the graphic organizer.

When Can You Use It?

Reading:

Have students read a newspaper editorial. Have them infer at least two things that were not explicitly stated by the author. Then have students draw a conclusion about the topic. Ask students to make inferences and draw conclusions from a particular novel you are reading in class.

Have students make inferences about where or when a photograph was taken. Provide photographs of unfamiliar geographic areas, buildings, or landscapes.

Writing:

Have students write a paragraph that describes something they are familiar with — an object, a situation, a place — without explicitly stating what it is. Pair students and have them exchange their papers and infer what their partner's paragraph is describing. Have them list the inferences that led them to their conclusion.

Synthesizing, Retelling, or Summarizing?

Here's a silly story I heard on the radio. I'm retelling it. The dictionary defines retelling as telling a story again in your own words.

There once was a squirrel who went into an ice cream shop and asked the clerk, "Do you have walnuts?"

"No. Sorry. We're out of walnuts today."

The squirrel went away, but came back an hour later and said, "Have you got any walnuts?"

The clerk looked at the squirrel angrily. "I told you. We don't have any walnuts now get out of here."

The squirrel went out the door, but in an hour came back again. "Have you got any walnuts?" he asked the clerk.

"I told you we don't have any walnuts. Listen here. If you come back here one more time I'm going to nail your paws to the counter. Now, get outta here!"

The squirrel went out again, but sure enough, an hour later he was back. "Have you got any nails?" he asked.

The clerk look surprised. "No. I don't have any nails."

"Great!" the squirrel said. "Have you got any walnuts?"

Summarizing is much different than retelling. When summarizing, students practice condensing the story to its most basic elements. It is short and more generalized than a retelling.

In the case of our squirrel story, I could summarize this way:

"A squirrel came into an ice cream store four times and irritated the clerk by asking him each time if he had walnuts."

Synthesizing is different from summarizing and retelling in that it requires students to stop and think often in order to process (synthesize) new information. They will use this time to find evidence, develop new ideas, form opinions and/or change perspectives to generate a personal understanding of the text.

Why synthesize? Synthesizing involves abstract thinking. Students must reflect on their reading, combine the ideas or information they gained from the text with their own knowledge, and create new ideas, perspectives or opinions, and a personal understanding of the text.

In the case of our squirrel story...

- Students might generalize: "Asking over and over for something will result in people becoming annoyed."

- Or, determine their opinion: *"I think the squirrel should have given up the first time."*
- They may see a pattern: *"In most jokes, things happen 3 times."*
- They may internalize a lesson: *"I think the author wrote this story to show that we should never give up."*
- They might predict: *"From this story I think the clerk will laugh and say, "Listen. Come back tomorrow and I'll be sure to have some walnuts for you."*
- Or, they may draw their own conclusions: *"This squirrel is obviously nuts."*

Encourage synthesis

When a student is working at the highest levels of synthesis, he defines his beliefs and defends his thinking with evidence, generating individual insights of texts and issues. Often, teachers require retelling and summarizing assignments, demanding only that students think at the lowest levels of synthesis. This is the time to examine the tasks you're assigning. Consider work that necessitates synthesizing such as...

- Training students to stop and collect their thoughts during reading, before they move on. They can do this by sharing with a partner or writing down their ideas.
- Use a double entry journal to sort big ideas from less important details. By examining a text in this way, students closely consider the importance of each detail.
- Summarize the main points after reading. Compare ideas to a partner's. Determine and synthesize a combined list the partners can agree on.
- After reading, write a generalization that states one's opinion, change in perspective or new question(s). Defend a pattern, explain new information you didn't know before, or create and explain a new idea.
- Debate.
- Annotate the text; students mark places where they thought of new ideas, where confusion was clarified, or where their thinking began to change.
- Read to find the main idea and themes.
- Find evidence to support opinions.
- Change perspectives.
- Develop new ideas.
- Understand text.
- Apply new information to our lives.
- Be willing to change our minds when confronted with facts.
- Change the world!

Retrieved from the World Wide Web at http://www.liketoread.com/read_strats_synthesize.php on May 31, 2010.

CHAPTER 8

Monitoring One's Own Comprehension

* * *

You want me to retell
what I just read?
But I wasn't listening!

Comprehension monitoring means being aware of our level of understanding as we read and then using this awareness to guide us (Keene & Zimmermann, 2007). Comprehension monitoring is an unseen "higher level" of reading, similar to the unseen director of a play, who keeps the show running smoothly and fixes the problems as they arise. This director is behind the scenes, managing the actors (comprehension habits) to produce the play (text meaning).

Teaching students to monitor their comprehension is difficult. As teachers, it helps to reflect on how we monitor our own comprehension when we read and then to figure out how to model this habit for our students. We must work hard and be creative to make our thinking processes visible to students. At the same time, we must also create opportunities for students to practice comprehension monitoring enough so that they gradually own the habit.

Basic elements of comprehension monitoring include the following:

- Establishing a purpose for reading, and keeping in mind whether or not the purpose is being met by checking to see whether each new piece of text fits, or changes, that purpose for reading.
- Combining new information with previously stored information in your brain.
- Realizing when a current part of the reading clashes with your evolving main idea or expectations.
- Controlling your attention, commitment, attitudes, and motivation during learning. Questions that help with this step include the following:

Can I keep other things out of my mind long enough to concentrate on this text?

Am I committed enough to read it all and go back over it, if necessary?

Do I believe I have the ability to understand this?

Am I motivated enough to expend the energy to understand this?

- Using "fix-up" strategies when comprehension breaks down. These are called strategies because they are more conscious and noticeable techniques (i.e., one can better remember using them) for overcoming comprehension problems than the automatic habits in other chapters. Fix-up strategies include the following:
 - Rereading the text
 - Reading further to see if things clear up
 - Sounding out words
 - Adjusting reading rate (slowing down or speeding up)
 - Noticing extra clues such as text structure, pictures, introductions, back cover, questions, and so on
 - Asking for help and using additional resources

Good readers do not just zoom in on the details at the expense of losing sight of the big picture that the author is trying to convey. Rather, good readers have the habit of frequently "zooming out" to think about the big picture—the main idea—in order to avoid getting lost. For example, as you read this book, you may focus on specific strategies that interest you while staying aware of the overall purpose—that of building good reading habits in all students in all content areas.

Effective comprehension monitoring involves making a split-second decision about whether the reader has comprehended the current sentence well enough to proceed to the next sentence. (You just did that if you are now reading this sentence.) We are constantly asking, Did the sentence fit well enough into my main idea for this text? If so, then we proceed. If not, we modify our comprehension. Many teachers, however, tell me that their students tend to vary—often drastically—in their criteria for attaining a satisfactory level of comprehension in order to continue forward in a reading. That is, students might not know when they are comprehending—or, even worse—when they are not. Some students, for example, may think that just saying all the words correctly is enough and that by doing so the text will magically sink in by the time they finish it. Others might get through an entire text without establishing any purpose for reading it.

Students need to acquire the habit of establishing an overall purpose for reading (e.g., plot, description, persuasion, etc.) and then must learn to frequently zoom out to see if that purpose is being met, or if it needs to be modified in some way as indicated by the text's details. The following checklist helps students to notice when they are not comprehending.

Six signs that you are stuck in the mud of not comprehending:

- The pictures inside your mind stop forming or moving.
- Your questions, predictions, and inferences are not getting answered.
- Your mind wanders from the text; you read it but are thinking about something else.
- The current page has nothing to do with what you thought the big picture or author's purpose was for the text.
- You cannot summarize the last few paragraphs or pages.
- Characters appear and you cannot remember who they are.