The Learning Cycle:
Teacher Scaffolded Social Constructivism

What Does Social Constructivism Look Like?

On a clear, crisp day just before Halloween, students from Soosan Rahimi’s sixth-grade class learned there’s more to cemeteries than cold gravestones and chilling ghost stories. The scene is Oaklands Cemetery, a venerable setting where young imaginations don’t require much outside prompting to take wing at this time of year. Ms. Rahimi has been escorting her students on field trips to Oaklands Cemetery for the past three autumns, always around Halloween; her students’ motivation to explore the graveyard, for some mysterious reason, seems to peak during this spooky season.

To prepare her students for what they would experience on this year’s trip, Ms. Rahimi showed them what she begins most social studies lessons with—items she calls “interest-grabbers.” In this instance, Ms. Rahimi’s interest-grabber was a bronze metal star with an American flag attached—the kind that decorates the graves of soldiers who died in battle. The star had the letters GAR (Grand Army of the Republic) on it. Along with the star and flag, Ms. Rahimi showed the students a crayon rubbing of a grave marker she had made from a local cemetery. The worn, very simple stone had only the name of the deceased: “J. R. McTavish, Co. B. 9th Pa. Inf.” Nothing else was written. The students were encouraged to examine the flag and grave marker. Initially, they didn’t know that these items were from the Civil War era, but Richard finally spoke up: “Grand Army of the Republic! That was they called the Union Army during the Civil War. I bet this is a soldier who died in the Civil War.”

“Yeah!” added Molly. “Look at the grave rubbing. It says the soldier was from the 9th Pa. Inf. He must have been a Union soldier from Pennsylvania.”
Persistent and eager observations eventually led them to the conclusion that the items on display had something to do with the Civil War. Ms. Rahimi operates with a conviction that connecting pre-trip, personalized experiences like these to the cemetery visit helps students more effectively attain valuable understandings and sensitivities.

Following the introductory experience, Ms. Rahimi presented a series of questions or tasks that her young social scientists would use to guide their actual cemetery investigation of Civil War era grave sites, always leaving open the opportunity for the students to add their own. Here is their joint list:

- Record the average age at death for any ten men and women who died during each of the following periods: 1800–1849, 1850–1899, 1900–1949, 1950–present. During which period did they live longest? Shortest? Think of some reasons why this happened.
- Look at the gravestones of soldiers who died during the Civil War. Record the longest, shortest, most interesting, most religious, and most informative.
- How did the epitaphs on the gravestones of the Civil War era express such sentiments as regret, gallantry, and love?
- How did the grave markers bring to mind the Civil War battles that forged our nation or immortalize our great leaders as well as our more ordinary soldiers?
- Examine the writing on the gravestones of soldiers who died during the Civil War. Do any of the words or letters seem peculiar to you? List the ones that do.
- How are the gravestones of the Civil War era like those of the present? How are they different? What changes can you predict for gravestones in the future?
- Make a list of the most popular names on the gravestones from the Civil War era. Are they fashionable names today? Why?

When the class arrived at the cemetery, they were greeted by Fred Hubbert, a caretaker who led them on a general walking tour past obelisks, shrines, sarcophagi, and ornate gravestones. Some were barely legible, worn away by the wind and rain. Others were cut deep enough into slabs of granite that even hundreds of years couldn’t take them away. Mr. Hubbert explained how several of these people had helped shape their community’s history. “That big old shrine over there belongs to Cyrus Hadfield. When he returned from fighting in the Civil War, he opened a carriage factory on Front Street. It became one of the country’s largest carriage manufacturers. Hadfield Street is named in honor of Cyrus Hadfield.” As they walked, Mr. Hubbert pointed out more of the cemetery’s interesting features: At one rather plain gravestone, Mr. Hubbert explained: “Jonathan Taylor was the village physician in the mid-1800s. He stopped riding his bicycle after he turned 90. He said the streets were getting too busy.”

As they continued their tour, Mr. Hubbert pointed out other interesting features. “Several grave markers in that section have lambs on them,” pointed out their knowledgeable guide. “Lambs were a familiar figure on the graves of young children at the time.” The students discovered that some grave markers simply recorded the basic in-
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formation about an individual: “In memory of Elijah Fahnestock. He was born September 15 AD 1801 and died on February 18 AD 1859.” Others immortalized people with glowing epitaths: “Honorably recognized for his gallant and meritorious conduct in the War with Mexico 1849.” A few included denials of death itself: “She is not gone. She is just gone away.”

The cemetery stroll revealed a wealth of information for those persistent enough to try to read between the lines. For instance, one simple grave marker was etched, “Sibyl—A little refugee from N.C. who died in 1865.” That marker brought out a series of questions. “What’s a refugee?” they asked Mr. Hubbert. After he explained that refugee is someone who seeks protection from something harmful, the students continued: “What kind of refugee would come to Pennsylvania from North Carolina in 1865? What kind of harm would this person face in North Carolina?”

Mr. Hubbert explained that Sibyl was a slave who was brought to southeastern Pennsylvania and granted her freedom by the Hastings family-members of the Society of Friends, a religious group strongly opposed to slavery. “You can see that she was buried along with several Hastings family members. This evidence shows that whites and blacks were buried together before it was commonly thought.”

“As you see, many of the earliest monuments in Oaklands Cemetery date back to the Civil War,” explained Mr. Linton. A bronze statue of a Union soldier sitting on his horse guarded the cemetery’s fenced-in Civil War section. The students counted 24 soldiers buried there. “Here's a Union soldier who was only 14 years old when he got killed,” Kendra said sadly. “That's not much older than us.”

“We used to plant tulips at the base of the statue guarding this section of the cemetery, but the deer and squirrels ate them all,” explains Mr. Linton. “We’re looking into something safer that could be planted.”

After this interesting introduction by Mr. Hubbert, each young historian was assigned a partner, and the dyads were sent off to different sections of the cemetery to carry out their study. The students carefully filled out their observation sheets with responses to the questions and tasks they talked about back in the classroom and made dozens of gravestone rubbings by placing large sheets of newsprint against the gravestones and carefully rubbing crayons over the paper. Everything on the gravestone (names, dates, epitaphs) transferred to the paper and provided excellent research material that could be taken back to the classroom.

Returning to the classroom, Ms. Rahimi’s young social scientists pulled together and analyzed their data. Perhaps the most heartwarming outcome of the entire experience happened when several students expressed concern about the tulip bulbs that were eaten by wildlife. “I wish there was something we could do,” lamented Bryce.

“Perhaps there is,” suggested Ms. Rahimi. “We can check with a nursery to see if they can recommend something that the animals won’t bother.”

The class checked with a local nursery that day and was informed that deer, squirrels, and other wildlife love to eat tulips, but that they abhor daffodil bulbs. The students mounted a fund-raising drive, earning enough money to buy 300 daffodil bulbs. Each member of the class planted 15 bulbs that year, and as a result the base of the Civil War monument is now awash with a flood of bright yellow flowers each spring.
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Ms. Rahimi doesn’t bother to quiz her children on these cemetery adventures. “That’s one story I’m sure they’ll remember,” she proclaims proudly.

In this classroom example, Soosan Rahimi used a variety of instructional strategies associated with constructivism, an educational approach frequently linked with the works of two leading authorities, Jean Piaget and Lev Vygotsky. Ms. Rahimi feels strongly about basing her classroom practices on time-honored authoritative support like this because she is convinced that social studies teachers cannot be effective unless their practices stand on a firm foundation of established pedagogical principles. This point of view has been supported by Piaget (1948/73) himself who wrote that a teacher “. . . should know not only his own science, but also be well versed in the details of the development of the child’s . . . mind” (pp. 16–17). Piaget liked to emphasize this point by drawing an analogy between medicine and education, nothing that just as a physician cannot treat a patient without deep knowledge of the body, the art of education cannot be practiced without profound knowledge of the child’s mind.

Dynamic constructivist teachers such as Ms. Rahimi reject the “toss-and-catch” approach to education where a teacher lets fly with the knowledge and waits for the students to grab hold of it and cram it into their memory cache. They also reject the premise that young children are basically “ignorant adults” and that the major purpose of education is to flood their empty or semi-empty minds with a reservoir of information. Instead, they embrace the principle that children’s minds are different from adult minds. Children’s minds develop through a series of stages that become progressively more complex as they move from infancy into adulthood. Intelligence develops in different ways throughout these stages, each stage having a particular set of characteristics that make only certain types of thinking possible. Throughout these stages, children develop intelligence not by being told about things, but by constructing their own understandings. Brooks and Brooks (1993) elaborate:

Constructivism stands in contrast to the more deeply rooted ways of teaching that have long typified American classrooms. Traditionally, learning has been thought to be a “mimetic” activity, a process that involves students repeating, or miming, newly presented information. . . . Constructivist teaching practices, on the other hand, help learners to internalize and reshape, or transform, new information. (p. 15)

**What Is Constructivism?**

When we address the topic of constructivism, therefore, we do not refer primarily to “what” children know, but to “how” they acquire and organize knowledge in their minds, the process by which they think and reason. We have discovered a great deal about how this happens from the work of Jean Piaget (1952), whose major contributions to our understanding of children’s thinking now spans 60
years. During those years, he and his followers observed children and systemati-

...cally detailed the manner by which they progressed through periods of intellectual
growth from birth to adolescence. During distinct developmental periods, Piaget
explained, children acquire specialized mental structures we often label mental
maps or concepts, but which he called schemata (the singular is schema). Think
of schemata as categories used to categorize similar people, events, or ideas. When
we talk about a particular schema or concept like “Puritan Society,” for example,
we refer to a group of people who are similar to one another. Its characteristics
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As children grow and develop, schemata gradually become more complex and
more differentiated in order to manage the information amassed from multifaceted
life experiences. This is accomplished through a process Piaget calls adaptation. To
understand the process of adaptation as it relates to mental functioning in social stud-
ies classrooms, we need to examine three essential components: assimilation, ac-
commodation, and equilibrium. Assimilation is the mental process that takes place
when individuals attempt to integrate new life experiences into an existing schema—
in other words, trying to link a new experience to something they already know. If a
meaningful connection is made equilibrium is sustained and the child is said to re-
main comfortably in a state of cognitive comfort, or “balance.” However, when a
child experiences something that cannot be matched to an existing schema, her or
his mental state turns into an “unbalanced” status. This unbalanced status is referred
to as disequilibrium. What happens when a child experiences disequilibrium? Fun-
damentally, students may opt for either of two paths: (1) they attempt to construct a
new schema into which the novel element can be located, or (2) they are driven to
modify an existing schema in such a way that the new element can fit into it.

Whenever a new schema has been constructed, or an existing schema modified,
we say accommodation has taken place. Therefore, when learners encounter expe-
riences inconsistent with what they already know, their cognitive harmony is dis-
turbed and they strive to bring it back in balance; that is, they will attempt to alter, or
accommodate, the existing schemata to fit in the new information.

When students adapt their schemata through the processes of assimilation and
accommodation, we say that they have constructed their own understanding of the
world. Students enter your classroom with knowledge and beliefs formed by their
own unique experiences and, as they encounter something new, strive to group it
with their previous understandings and experiences—maybe changing what they be-
lieve, maybe dumping the new information as extraneous, or maybe solving a capti-
vating problem. Individuals make choices about what new ideas to accept and how
to fit them into their established views of the world. The following paragraph de-
scribing one day in 1620 when an Indian walked into the Pilgrim settlement at Ply-
mouth may help illustrate this point (Penner, 1991):
. . . of course the Pilgrims couldn’t understand the Indian’s language.

But this Indian spoke English! Before the Pilgrims could shoot, he said in a loud voice, “Hello, Englishmen!” The Englishmen were astonished.

His name was Samoset. He acted like a friend. But was he one?

The Pilgrims gave Samoset some food to eat. They gave him a place to sleep. They watched him carefully.

The next day he returned to the forest. But soon he came again, and this time he brought with him another Indian named Squanto. He [too] could speak English well. (pp. 26–27)

To attach meaning to this paragraph, a student must already know something about the adventure of the Pilgrims when they came to America on the Mayflower. The Pilgrims wanted to pray in their own way; they decided to leave England and find a new home. They decided to sail across the Atlantic Ocean to America, but they were afraid of what they would find there. On September 6, 1620, the Mayflower raised anchor, and the Pilgrims sailed for 66 days across the Atlantic. America was a wild place; wolves howled fiercely during the dark nights. The Pilgrims encountered an out-of-the-ordinary, new civilization. The Pilgrims were afraid of an Indian attack, but the Indians approached them in a friendly manner.

However, if the students had little or none of this knowledge, the paragraph would be beyond their understanding and they would probably either lose interest in the topic or become terribly confused. Let us say, though, that the students had this basic knowledge of the Pilgrims and Indians of 1620 and that the content of the paragraph was easily assimilated into their existing schemata. Nothing in the selection presented a conflict with what they already knew about the topic. In that case, there would be no cognitive uneasiness and the students would comfortably move on through the rest of the reading selection. However, if the paragraph contained something that conflicted with what the students already knew, they would sense a problem and become energized to restructure, or accommodate, their understandings so the new knowledge can somehow fit in. When the challenge of the unknown lies close enough to what students already know, they become motivated to resolve the mental conflict by striving to build new meaning from the experience. What about you? As you read the paragraph, which of the descriptions best fit your reaction to the material: were you comfortable with all the information or did the paragraph contain something that conflicted with what you already knew about the arrival of the Mayflower?

When I gave this selection to a group of fourth graders, they asked this question at once: “How did the Indians learn to speak English before the Pilgrims came to Plymouth?” Mental conflict was created and the students were genuinely eager to reshuffle their schemata of the Pilgrims and Indians at Plymouth. Did you know that Samoset and Squanto spoke English? How did they learn to do that if this was their first contact with outsiders? Are you in the least bit interested in finding out how they did it? If so, you are experiencing a constructivist moment—truly determined to uncover real meaning about your world rather than simply receiving or storing knowledge. (FYI: Squanto had actually been to England twice prior to 1620. Earlier English explorers had brought him back to England, and he learned to speak English well.)
Constructivist learning is a strategic problem-solving process by which learners are intrinsically driven to construct meaning from a new learning challenge. The meaning a learner constructs does not come solely from the learning situation itself; it comes from her or his own experiences that are triggered or activated by the challenge of the new learning situation. Teachers facilitate the process of constructivist learning by creating opportunities for cognitive conflict, situations where learners are challenged to incorporate new information into existing schemata or to build new schemata. This linkage helps learners make better sense of new information. Students who can begin early in life to think of things as connected, revising their views with every succeeding year, have begun a pattern of lifelong learning.

Constructivists agree that learning takes place in this general way, but disagree on whether the process of construction occurs distinctly within each individual learner (cognitive constructivism) or whether it occurs as a result of people working together to make sense out of their world (social constructivism). To clarify these viewpoints, the social constructivist point of view will be discussed in this chapter and the next, while the cognitive constructivist point of view will be the focus of Chapter 8.

**WHAT IS SOCIAL CONSTRUCTIVISM?**

A major element of constructivist teaching is to make available absorbing materials and intriguing situations that appeal to the child’s spontaneous and real activity. To some constructivist devotees, however, this does not mean teachers should leave children alone with a supply of learning materials and expect them to learn on their own. Instead, some form of systematized intervention within an atmosphere of mutual help and understanding is needed to provide the conditions for effective learning. In general, the construction of new ideas is interactive and collaborative. Some methods, such as cooperative learning, stress the value of interactions among the students themselves, while others, such as classroom talk, place emphasis on interactions between teacher and students. Some call attention to the value of combining both. Therefore, with social constructivism, teachers are concerned not only with selecting the materials best suited for promoting exploration and thinking, but also with cementing positive adult-student and student-student relationships, with a specific focus on efforts that lead to initiative, experimentation, and collaboration.

Throughout the example at the beginning of this chapter, for example, Soosan Rahimi offered a type of assistance that bolstered children’s learning efforts by putting forward challenging projects; making available uninterrupted time to work; offering ample opportunities for cooperative and collaborative learning; arranging for an on-site experience where meaningful research could be carried out; and using a variety of questions, probes, prompts, reminders, and encouragement until students gained the confidence to do more and more on their own. In the most general sense, Ms. Rahimi based her social studies program on the belief that anything that is learned must be actively taught and that students construct ideas most effectively through social exchanges.
Educators like Ms. Rahimi have made use of Lev Vygotsky’s ideas to gain theoretical support for their social constructivist classroom practices. Basic to Vygotsky’s thinking is the idea that humans are fundamentally different from animals because they make and use tools. Tools make work less difficult and help people solve problems. Tools can be classified as physical tools (implements such as hammers, spears, or wheels that were invented to help master the environment) or mental tools (complex cognitive processes used to solve all kinds of problems). Because physical tools and mental tools are both critical for human survival, cultures have insisted that they be passed on from generation to generation. That is, skills, understandings, and beliefs critical to the survival of the culture must be taught to others by those who are more knowledgeable or skilled. Passing on valued skills and knowledge is where language enters Vygotsky’s thinking. According to Vygotsky, learning about one’s culture is most appreciably influenced by children’s verbal interactions with more capable members of the culture. Whether it’s learning that a red light signals one to stop at an intersection or that certain freedoms are protected by the Constitution of the United States, language is the primary tool that makes it possible for an individual to gain the knowledge essential to grow as an informed citizen. For Vygotsky, language and learning are indisputably entwined. Concepts and skills grow as children communicate with more capable members of the culture—family, friends, teachers, classmates, casual acquaintances, and all human beings. These people serve as guides and teachers, providing the opportunities for the child to grow intellectually.

**Zones of Development**

Since the essence of social constructivism involves recurrent classroom interactions between teacher and students or among the students themselves (learning with an “expert’s” assistance), we must address the issue of what kinds of interactions are considered most productive. According to Vygotsky, children at any age have a specific range, or zone, within which they can learn. One zone consists of the learning tasks that students can complete successfully with no help. Vygotsky calls this the zone of actual development (ZAD). When the teacher assigns a task and the children can accomplish it independently, the task is said to lie within their ZAD; they have already learned the information or mastered the skills associated with the task at hand. For example, if a teacher asks her students to identify the coordinates for five major cities on the globe and they can all carry out the task, we say the activity was within their zone of actual development.

At the other extreme are the learning tasks that students cannot complete successfully even with someone’s help. No amount of outside assistance, for example, can hope to result in much learning from a group of low-achieving first graders faced with the challenge of considering the consequences of increasing diversity on the economic, social, and cultural fabric of the United States. Such unreasonable expectations are sure to generate feelings of hopelessness and disappointment for the students and the teacher.
Somewhere in between these two extremes lies the most productive zone for learning. In this cognitive region students come close to completing learning tasks successfully, but they are unable to do so without the help of a teacher or more advanced peer. This cognitive region is known as the zone of proximal development (ZPD). The ZPD can be thought of as a construction zone where just the right amount of assisted support helps the student master a targeted skill and/or comprehend the planned content.

**Scaffolding**

To implement assisted learning within the ZPD, teachers must learn how to offer just the right amount of help for students as they attempt to bridge the gap between what they already know (or can do) and the intended learning outcome. This kind of adult assistance is called scaffolding. Adults or more competent/knowledgeable peers might provide this assistance to enable students to execute tasks within their ZPD. A flotation device for a child who cannot swim is a simple example of scaffolding. It is facilitative, supportive, but transitory, providing the novice with the support he or she needs only during the early stages of learning how to swim. Without an aid of this sort, the complex task of coordinating all the elements necessary to stay afloat would be practically impossible for many youngsters. The scaffold (flotation device) offers just the right amount of support until the “little guppies” are able to toss away their flotation devices and swim away on their own.
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An educational scaffold, much like a flotation device, provides temporary support as students work to bridge the gap between what they already know or can do and the intended instructional outcome. Wood, Bruner, and Ross (1976), who were the first to use the term *scaffolding* in an educational context, defined it as “a process that enables a child or novice to solve a problem, carry out a task, or achieve a goal which would be beyond his unassisted efforts” (p. 90). As children demonstrate increasing awareness of a problem situation, the adult gradually relinquishes the leadership role and eventually turns over full responsibility of the learning experience to the child. Scaffolding allows teachers to provide the cueing, questioning, coaching, and support needed to allow students to complete a task before they can complete it independently. It is based on a problem-solving approach to learning consistent with the Curriculum Standards for Social Studies (NCSS, 1994):

> Knowledge is constructed by learners as they attempt to fit new information, experiences, feelings, and relationships into their existing or emerging intellectual . . . constructs. . . . If we want our students to be better thinkers and better decision-makers, they must have contact with those accustomed to thinking with precision . . . and clarity. (p. 7)

**What Is the Teacher’s Role in a Social Constructivist Classroom?**

The primary role of teachers in social constructivist classrooms is to promote learning, and they have at their disposal a number of general strategies to help achieve that goal. You have read about many of these strategies throughout Chapters 3, 4, and 5. Now, in Chapters 6 and 7 we will inspect the theoretically based instructional models recommended to teachers responsible for student learning in social constructivist classrooms. Social constructivist teachers in dynamic social studies classrooms view students as active travelers on a journey to understanding. They enthusiastically assume the role of “tour guide” on this journey, bringing in as much of the world as they can to school, creating a climate in which children are actively involved in their learning, and escorting the students as they strive to accomplish more difficult tasks or progress toward increasingly complex understandings. Although several models of instruction are based on social constructivist theory, the one selected for dynamic social studies classrooms has been designed with the idea of making instruction most manageable for the beginning teacher. The instructional model is based on the idea that learning occurs in a social context; therefore, the classroom must be thought of as a community of learners who build knowledge together. For knowledge to be constructed, some form of positive social interaction must be present on either or both of two dimensions: (1) the teacher/student partnership and (2) the student/student partnership.

The learning cycle, an approach to instruction that relies on dynamic teacher/student partnerships will be described in this chapter. Cooperative learning, an approach that makes the most of supportive student/student partnerships will be described in Chapter 7.
How Does the Learning Cycle Contribute to Social Constructivism?

A commonly suggested teaching approach designed to facilitate learning through a teacher’s supportive assistance is called the learning cycle. The learning cycle is a student-centered teaching approach based in problem solving and intended to create conceptual change through interactions within the social environment. It takes into account the students’ developmental levels and helps them use their earlier experiences to construct new thought processes and develop more refined skills. In general, the learning cycle consists of three major elements, or phases, each requiring distinctive student and teacher actions and interactions: (1) exploration, (2) concept/skill development, and (3) concept/skill application. See Figure 6–1.

A learning cycle begins with the exploration phase during which the students become actively involved in trying out or experimenting with a new social studies idea or skill. Next, during the concept/skill development phase, the teacher assists the students as they attempt to construct their own meaning from the learning experiences. Finally, during the concept/skill application phase, the students transfer and apply freshly learned understandings or skills to new circumstances.

The Exploration Phase

The learning cycle begins with a high-quality exploration phase that connects with the students’ previous experiences and provides a common background that helps students relate to the new experience. This initial phase has three vital purposes: (1) activating the students’ prior knowledge, (2) drawing the students into the lesson, and (3) focusing the students’ attention on the instructional task by establishing a clear purpose for learning.

FIGURE 6–1
The Learning Cycle
learning. In planning this phase of the learning cycle, the teacher must address questions such as: What prior knowledge do my students have of the concept targeted for instruction? Is the material too difficult or too easy? What activities can I use to encourage them to connect to their previously established understandings? How might I motivate the students and focus their attention on the material? How can I relate the learning material to the students’ lives? Teachers can miss the mark in any individual lesson if they fail to pay attention to these matters.

**Activating Prior Knowledge**

A good learning cycle is launched when students are helped to establish a connection between what they already know or can do to the new information or skill to be learned. David Ausubel (1961) offers historically respected support of the importance of this viewpoint, stating, “If I had to reduce educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows” (p. 16). Ausubel used the term *advance organizer* to refer to the prompts employed by teachers as they assist students to retrieve past knowledge in order to connect it to the new material. In addition to Ausubel’s, other terms are commonly used to describe this process. You may have heard Madeline Hunter’s (1982) time-honored expression, *anticipatory set,* or Vygotsky’s *external mediator* (Bodrova & Leong, 1996). Since our social constructivist strategy is primarily grounded in the works of Vygotsky, we will use the term *external mediator* in this text. Consider the external mediator to be an initial prompt, task, or activity that provides a general overview of the new material and connects the new content to the students’ prior experiences (or to what they have already learned).

Teachers use a variety of external mediators with the learning cycle, but the most conventional are (1) class discussions that include thought-provoking questions, (2) provocative objects or events, and (3) graphic outlines of the material to be covered.

**Class Discussions** Perhaps the most extensively used advance organizer is making an introductory statement about the material to be learned, or asking a key question, followed by a general discussion that connects the students’ existing knowledge to the new material. To understand how this can be accomplished, let’s visit a social studies classroom where a teacher is introducing a lesson on different types of pumps used in the oil industry.

**Inside an Active Classroom**

Mercer Pember’s sixth graders had been involved in the study of the oil industry and are about to learn about the different ways oil is pumped from the ground. Mr. Pember begins the day’s lesson by making a short introductory statement connecting what has previously gone on to the new material to be covered: “Yesterday, we discovered where some of the Earth’s major oil fields are located. Today we will find
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out how the oil is drawn out from under the ground in those fields.” Instead of providing a general description of the kind of oil pump they were going to read about, Mr. Pember asked the students to think about anything they might associate with grasshoppers. Immediately, students began to talk about the familiar insect they all knew as denizens of the lush fields in and about their rural community. Some talked about its thin, powerful back legs and how far grasshoppers are able to leap; others mentioned the antennae, the oddly shaped head, the long, thin body, and the wings. Most volunteered something, whether they merely watched the grasshoppers jump in the barren fields or used them for something rather practical—fishing bait!

Mr. Pember displayed a large illustration of the insect and asked if the students would agree that this bug was the subject of their discussion. The students agreed that it was and went on to talk more about its unique characteristics. Next, Mr. Pember asked a question that raised a few eyebrows: “Here’s a question I want you to think deeply about... How do you suppose grasshoppers might be used in the oil industry?” The students glanced silently at one another and in due course giggled in disbelief.

“Are you serious, Mr. Pember?” they asked suspiciously.

“Of course I’m serious,” countered Mr. Pember. “I know it’s hard to believe, but grasshoppers actually are used in the oil industry. Turn to a partner and talk about how you think that could be.”

After a few minutes, Mr. Pember invited the students to list their predictions on the chalkboard:

• “The oil workers put them in small cages and walk around a field that might have oil in it. The grasshoppers have a special sense that causes them to jump around real fast if oil is underground.”

• “The brown ‘tobacco’ that they spit on your hand when you hold them can be collected and used to lubricate the machinery until the well begins to produce oil.”

• “You’ll find that more grasshoppers live in fields where there is oil underground.”

After writing each prediction on the chalkboard, Mr. Pember made a direct connection to the forthcoming learning experience: “Your ideas are very interesting. Please search through the resources in the classroom research center to determine which, if any, of your thoughts explain how grasshoppers are actually used in the oil industry.” The children quickly gathered at the center, using various books and the classroom computers to search for data to test their claims. Shortly, they returned to the discussion area and bellowed incredulously: “You tricked us, Mr. Pember! The oil industry doesn’t use the grasshopper insects, they use grasshopper pumps!”

The students discovered that oil industry “grasshoppers” were large low-pressure pumps shaped somewhat like the actual insect. Mr. Pember displayed a large illustration of a grasshopper pump, as well as a model pump, next to the insect illustration and invited the students to discuss the similarities and differences. Although the
oil “grasshoppers” weren’t of the insect variety, signs of learning were obvious as the students continued to talk about the oil industry grasshoppers during a lively and informative discussion.

Mercer Pember pursued this line of instruction because he knew it was important for students to connect their prior knowledge of grasshoppers to this new topic before they were asked to learn more about it. This approach creates the type of mental “conflict” that energizes students to want to learn. Compare Mr. Pember’s approach with another teacher who began his class discussion with the statement, “Yesterday, we read about where the major oil fields are located throughout the world. Today we’re going to keep on learning about the oil industry.” Then, “How many of you have ever seen a grasshopper? Today we’re going to learn about how oil is pumped from the ground with a special pump called a grasshopper. Read pages 78 to 81 to find out how this special pump works.”

Notice that the second teacher’s background development was loosely related to the main concept of the book, but the mystery and intrigue associated with Mr. Pember’s problem-based approach was missing. Mr. Pember’s strategy ended up to be much more productive because it created a puzzle in the children’s minds and challenged them to think. Disequilibrium brought the students’ existing knowledge to the forefront, offered the teacher some insight into the students’ current level of cognitive functioning, and furnished a base from which to construct new concepts.

The discussion-type external mediator is not intended to become an extended dialogue. Consider it only a quick connection to what the children already know, not something that takes so much time that it ends up being a separate lesson in itself. Five useful types of comments and questions can be used for connecting one’s background knowledge to the new learning task. I have written examples of questions or comments for each category that might be used in preparation for a lesson on the Wampanoag Indians. It would be helpful to try making up your own introductory experience (à la Mr. Pember) that would enliven each discussion starter. Try to be as creative as Mr. Pember.

1. **Existing knowledge.** “Tell me what you now know about the Wampanoag Indians.”

2. **Thought association.** “When you hear the names Massasoit and Hobbamock, what do you think of?”

3. **Rapid recognition.** Display key terms and ask the students to tell what they already know about them: wigwams, longhouses, deer stew, breeches, loincloths, and petticoats.

4. **Quick lesson review.** Ask questions that help connect the new learning experience to information that was learned in previous lessons: “Yesterday, we learned about a native people called the Wampanoags. Who were the Wampanoags? Describe daily life in a Wampanoag village.”
5. *Open discussion.* Sometimes an open-ended question will offer the best connection to past experiences: “We are going to read about the Wampanoag Indians. What do you know about the Wampanoags?”

**Drawing Students into the Lesson** Ideally, whatever children do in our social studies classrooms would grow from an inner drive to do it—to meet all coursework with complete interest, focus, and concentration. Although this is a best possible scenario in the social studies classroom, it is seldom realized. A child, like all of us, often needs to be drawn into experiences, and social studies is no exception. Teachers must provide motivational activities to arouse enthusiasm, a desire to discover what the social studies activity has to offer. These motivational activities should involve many kinds of hands-on experiences. Mr. Pember, for example, used a brain-teaser to motivate his students to read about the grasshoppers. But if he did that every time he wanted to offer an external organizer, the students would quickly tire of the routine. Therefore, for another lesson, he might select a hands-on experience to pique his students’ interests: Knowing they would be much more interested in viewing a video about coal mining in Appalachia if a few lumps of coal, a bandanna, and a miner’s helmet were placed in a prop box, he would encourage his students to examine the items and share what they brought to mind. Likewise, children would be spellbound as they handled a real Akua-ba doll from Ghana while you tell the story of how it is tucked into a skirt at the waist and carried by girls who hope to have children in the future. And what child wouldn’t enjoy twirling a cowboy lariat prior to studying America’s Old West? Real items inspire fascination for any social studies topic.

This is not meant to imply that teachers should never talk, only to stress that they enhance learning by presenting students an opportunity to interact with something real. Think about all the possibilities for bringing in *realia,* or real things, to introduce new ideas during any unit of study:

- Clothing (Indian sari, Japanese happi coat, fringed deerskin shirt of the Iroquois)
- Money (ruble, yen, mark, peso)
- Documents (wills, letters, newspapers, court records)
- Household items (colonial butter churn, Asian wok, African calabash)
- Musical instruments (Mexican guiro, Japanese den den, Zulu marimba)
- Tools (stethoscope, mortar and pestle, fishing net)
- Food (Pueblo Feast Day cookies, Mexican wedding cakes, Nigerian peanut soup)
- Toys (Chinese kites, Colonial “buzz saw,” Jewish dreidel)

Oftentimes, teachers make collections of objects related to a theme and store them in boxes so they are kept well organized from year to year. These “prop boxes” can represent countries, cultures, community helpers, or most any other
social studies topic. In selecting items for cultural boxes, be sure that you incorporate “present-day” samples whenever you include traditional items such as kimonos, kilts, or sombreros. If you want to put together a box containing only serapes, sombreros, and other traditional Mexican attire, for example, you will give an unfair picture of what people dress like in Mexico today unless you also include examples or photos of contemporary clothing.

To make a prop box, get a large, sturdy container that can be easily decorated (preferably by your students). Place real objects inside. Some can be bought, others might be donated by businesses, and parents are always willing to contribute items (if they’re returned in the condition you received them).

Inside an Active Classroom

Orpha Diller, a student in one of my social studies methods classes, was assigned by her fourth-grade field experience teacher to plan and teach a one-week mini-unit of her choice. After considering several topics, Orpha eventually picked “Cultures and Traditions of Kenya” as the topic for her unit. Convinced that the best way to learn about a culture is to examine ordinary objects used in daily life, Orpha obtained from fellow students, parents, relatives, friends, and local ethnic stores objects that would help her students learn more about Kenya and its people.

On the opening day of the unit, Orpha hauled in an antique-like trunk that she called “Grandma’s Trunk.” She told the students that her family is very close and everyone felt duty-bound to help her get this important unit ready for her first significant teaching project. She went on to explain that the trunk was a gift from her grandmother who was so very proud that Orpha was about to become a teacher. It was a special trunk, her grandmother explained, because whenever Orpha needed something special to use in her classroom, all she had to do was wish real hard, say the magic word (the children decided it should be “Diller-icious!”), open up the trunk, and look inside.

In anticipation, the students and Orpha chanted the magic word together, Orpha slowly opened up grandma’s trunk, and, feigning great surprise at finding each, Orpha removed the following objects one by one: shanga (beaded jewelry), batik fabric, a skatu (head scarf), a mkeka (straw mat), a kikapu (straw basket), pesa (Kenya shilling—money), stempu (stamps), and kinu na mchi (mortar and pestle). Orpha introduced the objects singly, inviting the students to examine each as she talked about them and fielded comments and questions from her students. Orpha arranged the objects on a table display and added large index cards labeling the objects. The items served as models as the students made their own masks, baskets, and beaded jewelry throughout the unit.

Another teacher, a frustrated thespian, used drama to motivate her students to learn about the globe.
Inside an Active Classroom

Entering the fifth-grade classroom appearing every bit a space alien in her metallic-type fabric shirt and pants, Betty Hunter introduced herself as Reter Nomis, a citizen of Zaxton, a planet 25 light years from Earth. “We Zaxtons have been tracking you Earthlings for some 300 years now. We have had a very difficult time understanding your language, but even more difficulty learning about you. In the six Earth years I’ve been observing your planet, I’ve had a chance only to learn a few things.” She continued, “My studies of geography have informed me about such primitive things as trees, dirt, and running water. These are things I’ve only read about or seen in pictures on my viewing screen. Such things are a pleasure to see because our planet became so polluted that Zaxton is now depleted of them.” Then, peering at the classroom globe, Ms. Hunter continued, “Because of what happened to Zaxton, my favorite kinds of lessons about Earth are lessons about geography. What can you Earthlings teach me about this planet you inhabit?” Ms. Hunter then went on to a unit that she called Geography 101, Life on Planet Earth.

Real experiences can serve as valuable external mediators as they raise questions in the students’ minds and help draw them into the learning task. When we make early learning experiences positive and pleasurable, we stand a good chance of producing students who will be enthusiastic about, and willing to become actively involved in, learning throughout their lives.

Graphic Organizers In addition to arousing attachment to the new content through carefully planned discussion strategies and motivational techniques, teachers often find it helpful to use attention-grabbing graphic organizers such as diagrams, charts, drawings, and other visual displays. Graphic displays of information help students consciously connect their past experiences to the targeted skills or concepts under study. In the Vygotskian framework, teachers must use these “tools of the mind” as a scaffolding device until their students eventually develop into self-regulated learners.

Bubble Trees One example of a graphic display that helps direct student attention to what is important in the coming material is called a bubble tree. Bubble trees work best when relevant information can be categorized beneath a key understanding. The top of the structure identifies the core understanding; in Figure 6–2, this is “The fall of Rome.” Content related to the key understanding should fall neatly into major idea categories: “barbarians” and “other causes.” The tree begins, therefore, as a top bubble containing the key understanding and branches labeled as major content categories. Finally, students go through the main instructional activity and use the bubble tree to help organize the facts they uncover within each of the major content categories, eventually constructing a complex structure of branching information.
Bubble trees can be used in a variety of ways in a dynamic social studies classroom: (1) completed by the teacher before a lesson, they can present an overview, or advance organizer, for the students; (2) presented only as blank bubbles, they can tap students’ prior knowledge before the lesson—as the lesson progresses, students add to, modify, and refine their suggestions; and (3) after a lesson, they can be used by students to review and organize content.

Prediction Charts Another example of a graphic outline is the prediction chart. Prediction charts contain a statement or series of statements related to the topic under study. Although one statement can be used, typically three to five statements are found on most prediction charts. Students are asked to individually respond to each statement by indicating their agreement or disagreement. Then a group discussion helps the students clarify their thoughts by eliciting reasons for each prediction.

A sample prediction chart is shown in Figure 6–3. Keep in mind that the purpose of the chart is to draw out students’ honest predictions, not “correct” answers. Therefore, you must be nonjudgmental, accepting students’ thoughts even if they conflict with your own. Students are quick to correct their prediction charts once they find new information in their reading. For example, their image of plantation owners living in huge, palace-type homes quickly reversed as they learned that some owners lived like that, but most lived on medium- and small-sized farms.

K-W-L Charts A final example of a highly useful graphic outline is the K-W-L chart. Each letter represents a different activity that guides learners prior to, during, and after the learning experience. K represents what the students already know about the topic. Before the learning experience actually takes place, students
**FIGURE 6–3**
Prediction Chart

<table>
<thead>
<tr>
<th></th>
<th>SLAVES</th>
<th>SMALL FARMERS</th>
<th>PLANTATION OWNERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HOMES</strong></td>
<td>ONE-ROOM CABINS WITH DIRT FLOORS. OFTEN, MORE THAN ONE FAMILY LIVED TOGETHER.</td>
<td>LOG CABINS USUALLY BUILT IN THE MOUNTAINS OR FOOTHILLS.</td>
<td>HUGE HOUSES WITH MANY ROOMS. YOU COULD COMPARE IT TO A PALACE.</td>
</tr>
<tr>
<td><strong>WORK</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CROPS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LIVING CONDITIONS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

discuss and brainstorm all the ideas they can associate with the topic and record their ideas on a chart, as shown in Figure 6–4. The teacher might elicit suggestions with a question such as, “Before we read this material on oceans, let’s take a few moments to jot down some of the things we already know about oceans.” You may need to model one or two suggestions so that students begin to see what you mean. $W$ represents what the students want to know. As the students reflect on what they already know about the topic, they form questions related to gaps in their understanding. Again, the teacher might need to model a personal question and write it down on the chart to give the children an idea of what they are expected to do. $L$ represents what students learned about the topic. After participating in the learning experience, students record what they discovered. They check their questions to see if each has been answered; if not, you may want to suggest other sources of information.

To illustrate, the following sequence of activities was used by Beatice Anderson to help her third graders understand how beach sand is created.
Chapter 6

FIGURE 6–4
K-W-L Chart

<table>
<thead>
<tr>
<th>K = What We Know</th>
<th>W = What We Want to Find Out</th>
<th>L = What We Learned</th>
</tr>
</thead>
<tbody>
<tr>
<td>waves</td>
<td>Where does sand come from?</td>
<td></td>
</tr>
<tr>
<td>salt water</td>
<td>Why do some beaches have</td>
<td></td>
</tr>
<tr>
<td></td>
<td>rocks instead of sand?</td>
<td></td>
</tr>
<tr>
<td>large bodies of</td>
<td>What animals live in the</td>
<td></td>
</tr>
<tr>
<td>water</td>
<td>oceans?</td>
<td></td>
</tr>
<tr>
<td>sandy beaches</td>
<td>What are the names of the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>oceans?</td>
<td></td>
</tr>
<tr>
<td>vacation spots</td>
<td>How many are there?</td>
<td></td>
</tr>
<tr>
<td>sea shells</td>
<td>Which ones border the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>United States?</td>
<td></td>
</tr>
<tr>
<td>Atlantic Ocean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacific Ocean</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Begin by calling the children’s attention to a study print of a typical seaside landscape. Discuss what the children see and encourage them to talk about the times they have visited the beach. Encourage them to consider the vastness of the beach. Ask, “Who would care to guess how many grains of sand are on the beach?”

2. Hold up a large plastic jar filled with sand. Ask, “How many grains of sand are in this jar?” Add, “We may never know the answers to these questions, but we do know one thing—how sand is made.”

3. Help students generate a list of all they know about how beach sand is made on a K-W-L chart. Write everything they know (or think they know) in the K column.

4. Have the students list what they want to know about the topic under the W column.

5. Read the book Oceans by Seymour Simon (Morrow). Invite the students to add questions to the W column if they wish.

6. Direct the students to record in the L column all they learned about how sand is made. In addition, any erroneous information listed in the first column should be corrected.

7. To bring closure, ask students to make an entry in their social studies journals summarizing what they have learned about beach sand.

The K-W-L strategy is a favored social studies activity because it helps students actively associate their previous knowledge and experiences while establishing personalized purposes for becoming involved in a new learning experience. This procedure effectively bridges direct instruction and more independent learning in social studies.
Establishing a Clear Purpose

“Why does my teacher want me to do this?” “What am I supposed to get out of it?” Students have asked questions like these in classrooms all around the country when given ambiguous reasons for taking part in a learning experience: “Read pages 43 to 45 in your textbook. Be prepared to answer my questions when you’re done.” Students who are on the receiving end of such insipid instructions often ask themselves questions like these: “Why?” “What’s in it for me?” They do not sense a clear purpose for the assignment and often consider textbook reading (or any other learning experience) impractical, unnecessary, or completely frustrating; they are confused by a lack of direction, so they do not push themselves into the learning experience with any degree of interest or importance. However, students who are informed about the reasons why they are to take on a learning experience are more likely to leap into the learning material actively, knowing what is expected at the end—to find out something they are vitally interested in knowing, to follow certain directions, to get a central idea, even to stimulate some personal thinking on a subject of deep interest. These are the students who will eagerly uncover new insights or knowledge, make discoveries, solve a challenging problem, experience an emotion, or simply look astonished.

As you consider this purpose-setting phase of the learning cycle, it must be emphasized that this responsibility does not stand alone; it must be linked to all that has

Constructivist teachers must be skilled not only in selecting the most useful graphic organizer for a particular topic, but also in stimulating the children’s thinking and reasoning.
gone on previously. The purpose generally comes last during the introductory sequence, serving as the launching pad that propels the students into the main learning experience. Therefore, after showing her children a ship’s bell, having them to handle it and ring it, and drawing out predictions about what it might be used for on a ship, a teacher directs her primary-grade students to watch a video “to find out why bells ring every half-hour on a ship.” After showing a large picture print of a mushroom cloud and holding a short class discussion of the horror of the atomic bomb, upper-grade students are directed to read the picture storybook *Hiroshima No Pika (The Flash of Hiroshima)* by Toshi Maruki. To introduce the book that vividly portrays in words and pictures the horror of an atomic attack in hope that it will never happen again, the teacher says, “Read the book to learn about the pain and suffering one family experiences when the flash interrupts their breakfast of sweet potatoes on August 6, 1945, at exactly 8:15 A.M.” These purpose statements focus students’ attention on what to look for as they proceed through the learning activity, directing them to a particular aspect or several aspects of importance. Sometimes these will simply be oral statements while, at other times, they could be written on a chalkboard, chart, or handout so students can periodically refer to them.

With just the right amount of scaffolding experiences, students will eventually learn to set their own purposes for learning. For example, they examine the photos in their textbook prior to reading and mull over, “I wonder why banana farmers cut the stalks while the fruit is still green.” They then read to find out. Students also set their own purpose when they check the heading in a newspaper, “India Arming Pakistan Border,” and turn it into a question, “Are these two countries close to war?”

**The Development Phase**

The *development phase* builds on the exploration phase by putting forward the main experience that will develop the concept or skill more fully. During this second phase of the learning cycle, the teacher’s role switches from that of “setting the table” to that of “partaking in the meal,” doing whatever it will take to assist the students in their quest to learn. During the second, or concept/skill development, phase of a learning cycle, the teacher uses a variety of learning activities to make the topic or skill meaningful to students.

It is important to address a number of key questions to carry out this second part of the learning cycle: What basic concepts or skills are to be taught? What learning materials should be used to explain and clarify ideas for the students? How can teachers assist children to construct key concepts and skills? What strategies could be used to make sure the students understand the concept or master the skill? Each question is complicated and writing the responses for each lesson can be a book in itself! This shows that teaching is hard work and that good teachers spend massive amounts of time preparing lessons that help students take in, process, and organize information. These behind-the-scenes responsibilities play a key role in determining what will actually go on in the classroom during this important phase of the learning cycle.
Basic Content
To use the learning cycle well, teachers must be tuned in to subject matter. They must have a profound background of information, for each concept targeted for instruction has its own body of subordinate facts; each has a precise set of data. Teachers must be in command of this knowledge and use it to help students process and organize the information. If teachers don’t know the content, how can they hope to assist students in their efforts to construct new, accurate understandings of the world? To appreciate how important it is for a teacher to fully understand the content, let us imagine that you are teaching about the native people of the past who lived in Far North and were commonly referred to as _Eskimos_. Furthermore, let us assume that you have already helped the students learn about the food of the Eskimos from the past. The cold waters of the Arctic provided Eskimos with seals, salmon, whales, and other sea life. On land, there were caribou and geese in the summer, and during the winter the Eskimos hunted bear, fox, and hare. Their favorite foods were seal and caribou meat, walrus liver, and the skin of whales. The purpose of today’s lesson is to help students understand the kind of homes the Eskimos lived in long ago. Focus for a minute on the first image of an Eskimo home that comes to your mind. If you are like most people, you have most likely fashioned a mental picture of an igloo, a dome-shaped snow house sitting on a frigid, treeless, barren blanket of snow and ice. A more detailed picture might include spear-wielding whale hunters nearby, dressed in heavy fur clothing and standing near a sled ready to be pulled by a team of huskies. If you are like most people, this conventional, time-honored image would most likely guide your instruction, perhaps to the point of concluding the study of Eskimo igloos with the construction of tabletop models from sugar cubes or marshmallows. With such keen, clear-cut insight into Eskimos and their igloos, there wouldn’t be any need to dig up much additional information, would there? You bet there would! If you had been methodical enough to do an information search, you would have found that the people from the Far North who we’ve been calling Eskimos do not use the word _Eskimo_ when speaking of themselves. They are offended by that expression, primarily because it was an unpleasant word that anthropologists borrowed from American Indians. It means _eaters of raw meat_. Instead, the people of the Far North prefer to use a name that simply means _the people_. In Canada, that name is _Inuit_. In Alaska it could be either _Inupiat_ or _Yupik_. The name _Yuit_ is used in Mongolia.

Furthermore, focusing solely on the dome-shaped snow houses you pictured as the primary shelter of the people of the Far North would have been both illogical and culturally insensitive. In the past, the people of the Far North lived in various types of shelters. Tents made of skin (seal or caribou) provided shelter during the summer months while in winter, most built semi-subterranean sod houses. Some permanent shelters were built from logs. Yes, a dome-shaped snow house consisting of blocks cut from snow and built upward in a spiral shape was built by some groups, but only as temporary shelter while traveling or hunting. Many people mistakenly think exclusively of these dome-shaped snow structures as the Eskimo’s primary igloos; actually, the people of the Far North call any place for living by that name, including the dormitory room, house, or apartment you are sitting in right now. In point of fact, _iglu_ is the Inuit word for _house_, and Inuit now live in modern houses, or split-level,
Theme: The Inuit

The cover of Mary Wallace’s *The Inuksuk Book* (Maple Tree Press) displays an image of a traditional Inuit stone structure, the inuksuk, silhouetted against an Arctic sky. The inuksuk is a popular Inuit symbol, yet, for many, its purpose is a mystery. Mary Wallace, in consultation with Inuit elders and other experts, gives an introduction in fascinating text and illustrations to the many forms of the inuksuk structure and its unique place in Inuit and culture.

Brittany Marceau-Chenkie’s story of Naya, *The Inuit Cinderella* (Raven Rock), was written when the author was 10 years old. Set in the High Arctic, it tells the tale of a young girl who chooses to live the traditional Inuit life with grandfather rather than move to town with the rest of her family.

James A. Houston’s *Tikta’liktak* (Harcourt Brace) tells the tale of a young Inuit hunter who drifts our to sea on an ice floe and never expects to see home again. He eventually reaches a remote and desolate island where he is convinced he will starve to death. The rest of this thrilling story tells of Tikta’liktak’s survival in this beautiful but rugged land.

Lydia Dabcovich’s *The Polar Bear Son: An Inuit Tale* (Clarion) tells of a woman who lived all alone in a little hut at the edge of an Inuit village. She had to depend on her neighbors for

colonial, condo, or apartment igluts, just like the ones in which you and I live. And, like you and me, they live in towns and villages, work at contemporary jobs, wear fashionable clothing, and eat food purchased in stores. Instead of kayaks and dogsleds, they use motorboats and snowmobiles.

What would children have learned about the Inuit if they were offered what we thought we knew about this fascinating culture? In this case, the result certainly would be unjust, stereotypical, and incorrect, abusing all the major responsibilities of a contemporary multicultural society. In any lesson, we must uncover and verify considerable information so that students acquire a genuine concept of the culture, period of time, or phenomenon being studied. Consider how one experienced teacher highlights the need for a spirit of continuous learning:

The biggest surprise of teaching, for me, was that I didn’t know my subject matter. That was the one thing I had been most confident about. I had almost an “A” average in my major and felt really on top of my field. When I began teaching and had to explain concepts, I found that I had only a very superficial understanding of them. I knew stuff in kind of a rote way and when I had to explain it to someone else I kind of just fell on my face. I learned more about my subject in my first four months of teaching than I did in my four years of college. (Ryan, Burkholder, & Phillips, 1983, p. 177)

As a teacher in a dynamic social constructivist classroom, this means that you must have much information at your fingertips and access to resources that supple-
ment your knowledge. The computer and a wide variety of print sources are the places to start. Check with your school or public librarian for references on a concept you wish to pursue. Constantly search for information to bolster what you already know. You should find yourself saying “I’ll look it up” many times a day. Books and the computer will provide most of the needed information, but you will also want additional resources. Consult specialists both in person and by telephone, visit museums and other sites, view films or filmstrips, listen to audiotapes, and seek other opportunities to broaden your background. You will need to spend a great deal of time uncovering and organizing information—and love doing it.

**Concept Analysis** In addition to knowing the content, teachers in social constructivist classrooms must understand how to organize it so that the content has the most meaning for their students. The most common way to organize the content is to classify it into concept categories. Do you recall what is meant by concept categories? Concepts can be thought of as a class of ideas that share one or more similar characteristics. It helps to think of concepts much as mental “file folders” into which we sort out and store the information we gather from our experiences throughout life.

Because concept development takes place over a lifetime, we say that it is a dynamic process; that is, our mental “file folders” keep growing and changing as we accumulate experiences and find new things to put in, alter, or take out throughout our lifetimes. For example, my mental file folder labeled *mound* contained very few items...
early in life. First, I inserted images of a small pile of earth because my parents constantly referred to the “mound of dirt” in the far reaches of our back yard where we loved to play. Next, as a Little League pitcher, I learned that the slightly elevated pitcher’s area in the center of a baseball diamond that I stood on was called a mound. So, my mental file folder grew a bit as I accumulated experiences throughout my early years of life. When I got older, I added to the growing mound mental file folder: I learned that any raised mass, such as a pile of hay could be referred to as a mound and even that a large artificial pile of earth or stones marking a burial site can be called a mound. I’m sure most of you have similar data in your mound concept file folders, and will use that folder throughout your lifetime to classify any new information you feel will be important enough to store there. Think about the following information as a possible addition: In A.D. 1200, the Mississippians, an American Indian culture living along the banks of the river that now bears their name, built the town of Cahokia around a huge, steep platform called a mound. Because it was so huge (1,000 feet long by 700 feet wide), historians estimate that the mound would have taken the Mississippians more than 200 years to complete. The mound was so colossal, in fact, that it would dwarf even the Great Pyramids of Egypt. What do you think? Will you expand your mound mental folder with that information? What factors do you feel would cause some to say, “Yes, I will!” or “Sorry, try again!”

Concepts are designated by a label, a word that helps us catalog incoming information conveniently. In the learning cycle model, learning depends a great deal on the teacher’s ability to identify the defining features of the concept being taught. Many concepts, such as mound, latitude, coin, flag, iceberg, fjord, merchant, or shelter, have well-defined characteristics and are relatively easy to analyze and teach. They are called concrete concepts because they are easily recognized by their physical appearance. Others, such as democracy, peace, freedom, justice, equal opportunity, liberty, and war have characteristics that are much less concrete and, therefore, are much more difficult to analyze and teach. These terms, called abstract concepts, are much more difficult to conceptualize because we cannot visibly observe their physical characteristics. That is why you will find concepts like family or home or firefighter taught at the first-grade level while democracy or freedom rarely find their way into the instructional program in a formal sense before the upper-elementary school grades or even middle school.

Concept analysis is the process of breaking down a concept by identifying its defining features. To better understand how this relates directly to dynamic social studies, take a minute and think about a concept many fifth graders learn about in their social studies classes—Buddhism. For sake of illustration, let us assume that Buddhism is the concept we are responsible to teach. Now that the concept label has been denoted, we must next put forward a brief definition of it: for example, “Buddhism: the teaching ascribed to Siddhartha Gautama holding that one can enter into nirvana by mental and moral self-purification.” Definitions are easily found in dictionaries, encyclopedias, textbooks, and other reference materials. The concept label and definition are important, but the process of concept analysis is not complete until we break down its defining characteristics, or subordinate details that help us
distinguish Buddhism from Christianity, Hinduism, Judaism, Confucianism, Islam, or any other religion. Think about Buddhism for a moment. What particulars come to your mind? Are you picturing a sculpture of the Buddha? Maybe you see an image of a Buddhist monk. Perhaps words like Siddhartha Gautama, the Buddha, India, religion, Four Noble Truths, or dharma pop into your head. We store information in our minds in a number of different ways; images and words are two of the most common. The images and symbols you associate with Buddhism are a result of your past experiences with Buddhism. The forms they take are determined by the way you sort, order, connect, and make sense of the details of those past experiences.

**Factstorming** The first step in expanding the concept, then, is a process of finding the relevant details associated with a concept, a process commonly called factstorming. Virtually any concept can be factstormed; all that is required is to create a graphic representation of what you already know about the concept. First, label your selected concept at the top of a large sheet of paper and draw a circle around it. Then, by asking probing questions (for example, “What are the teachings of Buddhism?”), list all the relevant details you can recall. Write them on the paper, draw a circle around each, and draw lines to connect them to the central concept. Repeat the process with each relevant detail. The chart is only the beginning. As we learned with the Eskimo illustration, most teachers do not know enough at this initial stage of the planning process to identify all the necessary content. They begin by brainstorming “starters,” or ideas to launch the planning process. You will need to exhaustively add to and refine the starter information, for the defining features of a concept must be complete and accurate if instruction is to succeed. An analysis of the defining characteristics of the concept of Buddhism as it was researched and organized by one teacher to serve as the content source for a mixed group of fifth and sixth graders is depicted in Figure 6–5.

Notice how the most general category (Buddhism) is at the top of the teacher’s paper. Under this concept label the teacher diagrammed relevant details. Taken together, these comprise the defining features that will be used to teach about Buddhism. If the teacher were to offer a narrative explanation of the hierarchy, it would include statements such as those that follow:

- Buddhism is one of the world’s great religions.
- Buddhism was started in India somewhere between 563 and 483 B.C.
- Siddhartha Gautama established Buddhism.
- Siddhartha was called “the Buddha,” or “enlightened one.”
- Buddhist laws and teachings are called the dharma.
- The Four Noble Truths explain the Buddha’s beliefs about suffering.
- Buddhists believe that the Eightfold Path leads to enlightenment. The deeds a person performs during his or her lifetime are called karma.
- Buddhists believe in a process called reincarnation.
- The good or bad karma travels with a person to the next life.
BUDDHISM

LIFE OF THE BUDDHA
- SIDDHARTHA GAUTAMA
  - Lived in India
  - Established Buddhism
  - 563–483 B.C.
  - One of world's major religions

SIDDHARTHA'S SEARCH
- More yellow robe
- Owned small bowl
- Searched but found none
- Looked within
- Ate rice that people offered
- Religious teachers from people
- Meditated
- 49th day - found truth
- Came in like bright light
- From then on was called 'the Buddha'
- Dharma meant 'the enlightened one'

TEACHINGS OF BUDDHISM
- The Middle Way
- The Four Noble Truths
  - Truth
  - Moderation
  - The Buddha
  - Sangha
  - Dharma
  - Karma
  - Reincarnation
  - The eightfold path
  - The rebirth

LIFESTYLE
- Owned small bowl
- Sangha
- Nuns
- Dharmas

REINCARNATION
- Until he died at age 80

THE THREE JEWELS
- The Buddha
- Sangha
- Dharma

MODERATION
- Everyone could find peace

FIGURE 6–5
Concept Map for Buddhism
The Buddhist tradition is made up of three parts, called the Three Jewels: (1) the Buddha, (2) the dharma, and (3) the sangha (religious community, including nuns and monks).

Although they have been abused by overly excessive rote, drill, or practice exercises, facts are highly essential ingredients of concept development. They help learners distinguish continents from countries, glaciers from icebergs, and Buddhism from Hinduism. Concepts grow from facts; facts are what give concepts their defining features. Facts serve as building blocks, furnishing the details necessary to develop concepts. Concepts do not materialize magically out of the thin air; students gradually construct them as knowledge accumulates through varied learning experiences. Without a system of organizing the wealth of information about our world, though, each fact becomes isolated and students have few options other than to memorize it—and to complain that “social studies is boring!”

A word of caution about the defining characteristics of concepts must be given here: Although facts provide the defining features that make a concept what it is, they must be selected carefully. For example, details of George Washington’s $60-a-set dentures (made from ivory, wild animal teeth, or lead covered with gold), as interesting as they may be, would contribute little to enriching the concept of our presidency. However, they could provide interesting content to help construct an understanding of health care during colonial times. Concepts are superb organizational devices, but they can be constructed accurately only when learners gather meaningful information through sound, developmentally appropriate activities. Concept learning is a process of learning what key features (defining characteristics) are essential components of a concept and what other features (irrelevant characteristics) are nonessential. Learning to differentiate defining features from irrelevant features takes time and experience; this process only takes longer and becomes more difficult to master when teachers present students with unclear examples.

**Basic Skills (Task Analysis)**

In addition to building concepts, another major goal of social studies instruction is helping children acquire specific skills such as constructing and interpreting charts and graphs, using the computer, composing a meaningful written report, making a timeline, reading a map, creating a model, outlining information from reference books, planning an interview, making a mural, learning the steps of an ethnic dance, reading maps, comprehending textbook material, or testing hypotheses. Skills are mental or physical operations having a specific set of actions that are developed through practice. Those who support the social constructivist philosophy claim that students cannot learn skills without a teacher’s help; these necessary skills are best taught and reinforced as separate lessons with clear assistance from the teacher followed by numerous opportunities for practice. This process begins by carefully breaking down the skill into a number of separate components, each of which provides the foundation for the next. The process through which the component parts of the skill
are identified and sequenced is referred to as task analysis. In learning to read maps, for example, understanding what a map is would certainly come before a lesson requiring students to locate their state capital. In other words, instruction is sequenced so that more complex processes grow from less complex ones.

Many social constructivist teachers believe that social studies skills can be best acquired through the process of modeling—that is, observing someone more highly skilled and attempting to copy her or his behaviors. These teachers emphasize, for example, that it is no coincidence that better readers come from homes where parents read frequently. If children see their parents reading the morning newspaper or a book, they will be inspired to follow their lead. Nadya Luca models a set of skills that have functional value in the social studies curriculum in the following scenario.

Inside an Active Classroom

Nadya Luca felt it was important to model certain reading skills from their social studies text so that her fourth-grade students could best develop subject area literacy. The question, “What must my students be able to do in order to learn effectively from their social studies text?” served as the basis for analyzing the specific skills that would be necessary for developing subject area literacy. Look carefully at the following list Ms. Luca assembled. It served as the basis for subsequent instruction in her classroom.

Students must be able to:

1. identify what they already know about the topic
2. raise questions about what they do not know
3. predict what the text will be about
4. predict what information will be found in the passage
5. relate new information to previous knowledge
6. focus their attention on the reading task

First, Ms. Luca wanted her fourth graders to relate their personal experiences to the textbook topic, so she began the social studies lesson by displaying a photograph of a small rural community and the rich, lush farmland that surrounded it. She used the photograph as a springboard for discussion of the ways people interact with and adapt to their environment, focusing especially on the need to protect natural resources: “How do people and animals rely on the fertile topsoil? How do they rely on trees. Water?” Ms. Luca and the class discussed wasteful practices such as overwatering lawns and using paper unwisely. She then asked the class how they might protect the Earth’s topsoil, trees, and water supply. Following this short discussion, Ms. Luca directed her students to turn to a specific page in their social studies text. She pointed to and read aloud the chapter title, “Saving Our Land.” Ms. Luca explained that when she sees a new chapter title, she always thinks for a moment about what it might mean. “It seems to me that the chapter could be about ways of pro-
tecting our natural resources like water and topsoil and trees,” she suggested. “What
do you suppose gave me that idea?” After they discussed Ms. Luca’s idea for a short
while, she asked the class to talk with a partner and produce an original ideas about
the chapter title. Then, as the pairs shared their original ideas, Ms. Luca wrote their
suggestions on the chalkboard. Next, she asked the students to look at the text pho-
tos and the first major heading, “The Need to Protect Our Land.” She said to the class,
“I find that examining the illustrations and headings before I read raises questions in
my mind about what might be ahead. For example, one question I had about the
photo at the top of the page is, ‘Why is conserving topsoil so important?’ What are
some other questions I might have asked myself about the heading and the photos?”
Ms. Luca went through the next section, “Conservation Efforts,” the same way and
continued with the succeeding sections, writing each set of comments and questions
on the chalkboard.

Although modeling is recognized as a highly effective and efficient method of
helping students learn a specific skill or behavior, it must be emphasized that not just
any model will do. Students have a greater tendency to accept their teachers as high-
quality models if they perceive them as competent and capable professionals. I’m
sure, for example, that you would have much more faith in a golf pro teaching you
the nuances of golf than in a friend whose experiences were limited to miniature golf.
Likewise, children learning how to use the Internet as a research tool are more likely
to place their faith in a teacher who exhibits technological savvy rather than in one
who calls in sick with a computer virus.

In addition to a quality model, students are more likely to become engaged in cer-
tain tasks when they are convinced they can succeed—that is, when they have a high
degree of self-efficacy. For example, you may have a high degree of self-efficacy for
teaching social studies to elementary school children. In other words, you are quite ca-
capable of taking the information from this course and using it to carry out effectual class-
room practices. On the other hand, your self-efficacy for filling the cracks on Mount
Rushmore might be slightly less advanced. Likewise, not all of your students will ex-
perience an equal degree of self-efficacy for everything you want them to learn. Some
will have high efficacy for learning the Blackfoot Buffalo Dance while others are more
comfortable dancing the polka. Students tend to select tasks they think they will do
well and avoid those where they think they might fall short. They tend to apply greater
effort to the tasks they feel they can accomplish and less effort to those at which they
feel mediocre or substandard. It is important to provide just the right amount of assis-
tance to students. More assistance than the student needs sends the implied message,
“I don’t really think you can ever do this on your own.” Not enough assistance has a
high probability of resulting in failure and weakened self-confidence. Verbal encour-
gagement with little or no further assistance such as, “If at first you don’t succeed, try
and try again!” or “I know you can do it—don’t give up” is questionable in providing
a boost in self-efficacy. The key is to find the point at which your students can succeed
at a task with your assistance (ZPD). At this point, they will have greater confidence in their ability to succeed and apply greater effort and determination to the task.

**Materials for Instruction**

Selecting learning materials and activities must be consistent with the ways children learn. For example, Jerome Bruner (1966) identified three levels of learning children move through as they encounter new information—enactive, iconic, and symbolic (see Figure 6–6). The *enactive level* includes objects, people, places, trips, visitors, and real-life classroom experiences. Within this level children represent and understand the world with authentic materials and individual actions on those objects. For example, suppose your goal for today is to help students learn about the emergence of cotton as an important cash crop in the Southeast during the late 1700s. Your enactive level possibilities include bringing in cotton bolls for the children to handle as they examine the soft fibers, observe the tiny seeds, and touch the prickly shell. By handling the real item, the students can appreciate the agony slaves experienced as they were forced to spend immeasurable hours picking out the little seeds from within the boll to free the attached fibers.

The *iconic level* offers representations of real objects when the actual objects or places themselves cannot be directly experienced. For example, there is no way your students could watch slaves picking cotton in the hot fields and emptying their sacks until they built up a huge heap of cotton. You cannot have your students observe the next 8 to 10 hours when the slaves would clean the fiber out of the cotton bolls. Moment-

**FIGURE 6–6**

Bruner’s Three Modes of Knowing

![Bruner’s Three Modes of Knowing](https://example.com/figure6-6.png)
in-time limitations make this impossible. A well-produced video documentary or possibly a set of study prints with clear explanations would then be a useful substitute for the real experience. Representations of reality help children construct concepts when real things are not available. Although pictures and models are not always as motivating as the real thing, these learning resources are much more effective than trying to connect new learning to words alone. Good pictures, especially large poster-size photographs and prints, will deepen children’s concepts of people and places. Dynamic social studies teachers build substantial picture files by searching hard for just the right pictures to furnish experiences that students can connect to new ideas. Models, too, bring valuable stimulation to the classroom. A good social studies classroom contains models that mirror displays found in our best museums—not a hands-off place where students simply stand and gawk, but one that invites handling and touching.

The symbolic level involves using abstract ideas, symbols, language, and logic to represent the world. For example, good information books and other sources of children’s literature can enliven and deepen the children’s knowledge of how cotton is grown and processed and how the Southeast became an important cotton growing region.

Understanding Bruner’s three levels of learning is important for planning and organizing the development phase of the learning cycle. They help you recognize the need for balance among the activities you choose, so that there is not too much symbolism (workbooks, practice sheets, talking, reading) and too little realia—or vice versa—in your program. As a rule of thumb, you should remember that all students thrive on a balance of solid learning experiences, but younger students need direct contact and real experiences (a visit to an orchard) and visual representations (a videotape of apple-growing procedures). Older students still require concrete experiences but are increasingly able to gain knowledge from abstract sources (listening to a well-planned lecture).

Assisting Students as They Construct Key Concepts

According to social constructivists, the act of constructing concepts cannot happen merely by exposing children to learning materials and expecting them to draw out the important understandings all by themselves. Piaget (1964) writes, “Experience is . . . necessary for intellectual development . . . but I fear that we may fall into the illusion that being submitted to an experience . . . is sufficient . . . But more than this is required . . .” (p. 4). Piaget stressed the something “more” is crucial role of the teacher. Teachers must be effective organizers who select rich materials and create intriguing situations that arouse interest in learning, and they must be thought-provoking guides who encourage students to use language to organize their thinking. Under their leadership, social constructivist classrooms become communities of learners working together to organize knowledge and construct learning, and this goal cannot be accomplished unless there is talk. That is because language is basic to the learning process and serves as the primary tool of intellectual growth.

If teachers expect the concept development phase of the learning cycle to play a major role in knowledge construction, they must encourage students to use
language—to think and talk about what they have been trying to accomplish. These language-based strategies not only help students organize and explain what they have been learning, but they also give teachers an idea of where students need supportive assistance or additional experience. Two familiar language-based strategies that help teachers build scaffolds for the construction of new knowledge include general instructional conversations, small-group instructional conversations, and graphic organizers. Using either or both of these two language-based strategies completes the crucial development phase of the learning cycle.

**Instructional Conversations**  Scaffolding as a process of assisting students to construct knowledge occurs most effectively in classrooms where students come together to talk, listen, and learn from one another. Conversation is the system by which they share knowledge with one another and the primary method for developing higher-order thinking. One particular form of classroom conversation, called instructional conversations, has received a great deal of attention for its potential value in social constructivist classrooms (Gallimore and Tharp, 1990). Instructional conversations are instructional because they help assist learning; they are conversations because they involve substantive talk about concepts that were introduced and developed throughout the earlier phases of the learning cycle.

Instructional conversations, conversations between teacher and students or among students, take place in a classroom environment where students can converse freely, presenting their ideas and opinions in whole-class or small-group situations. Teachers set off instructional conversations with well-planned questions and prompts that provoke students to think and reason about the content. Then, as the students respond, teachers listen and react to their ideas in a supportive, considerate manner.

If instructional conversations are to be productive, we must force from our minds any thoughts of traditional classroom dialogue where teachers use questions as tools of “interrogation” rather than as prompts to help students search for meaning. “Interrogations” can best be described as peppering students with closed-ended questions that require them to simply retrieve from memory any piece of specific information that was a part of the learning experience. For example, a question such as, “On what date did Congress vote to accept the Declaration of Independence?” is considered to be closed-ended because there is only one possible answer. And, once a student responds, all further dialogue stops—discussion is closed. Monotonously, closed-ended question after closed-ended question flow in a steady stream until all the facts are recited. Through this type of fruitless interface, students learn very early in their schooling that their role in classroom discussions is to send back what the teacher wants to hear rather than talk about what is truly important to them. One study reported on the wasteful nature of restrictive, traditional classroom interrogations: “When students . . . respond, typically they provide only simple information recall statements. This pattern of teacher/student interaction not only limits a student’s opportunity to create and manipulate language, but also limits the student’s ability to engage in more complex learning.” (Ramirez, Yuen, & Ramey, 1991, p. 8)
Instructional conversations are an alternative to restrictive, traditional teacher-centered classroom interrogations. The teacher is viewed more as a guide than as an interrogator, using language to help students think deeply about a learning experience. Although teachers may use closed-ended questions during instructional conversations, the purpose for asking these questions is to ensure that students have adequate prior knowledge about a topic to wisely discuss it rather than as an end in themselves. Conversely, open-ended questions like, “What culture other than your own do you admire most and why?” lead to more complex thinking. They challenge students to go beyond the content by engaging higher-order thought processes such as critical and analytical thinking. Students are usually more involved in class discussions when open-ended question are asked because those kinds of questions are much more thought provoking. Check your ability to distinguish open-ended from closed-ended questions by categorizing each of the following examples as one or the other:

1. What was the name of the ship that brought the Pilgrims to Plymouth Colony in 1621?
2. The Pilgrims at Plymouth Colony had very strong religious beliefs. How do you think these beliefs affected their ability to survive the hardships of the first winter?
3. When spring came, many Indians visited the Pilgrims. What questions do you suppose the Indians wanted to ask the Pilgrims? What questions do you suppose the Pilgrims wanted to ask the Indians?
4. What was the name of the Indian tribe that visited the Pilgrims at Plymouth Colony that first spring?
5. Squanto showed the Pilgrims how to plant corn. What did he teach them to use as fertilizer?

I trust you selected questions 2 and 3 as open-ended or divergent questions. Those two questions are considered to be open-ended because they are thought-provoking and intended to pull out more than a single factual response. Discussion usually is extended because students will enjoy the challenge of using the content to support their own beliefs and to question the beliefs of their classmates. Questions 1, 4, and 5 are closed-ended questions because they converge on a single, correct response. Unfortunately, when one student gives the correct response, discussion swiftly comes to a halt because there is nothing more one can think or talk about.

Using Instructional Conversations—Patterning and Framing Questions Asking good questions, as important as the process is, represents only one critical concern in leading instructional conversations. Teachers must also be skilled at sequencing or patterning the questions so that students can be systematically guided toward intended learning outcomes. Questions should never be randomly selected; it is important that they have a focus because discussions happen for different reasons. Perhaps you want your students to organize and elaborate on what they’ve learned. Maybe you would like them to critique a controversial issue. Whatever the reason for
designing a questioning plan, the purpose must be kept foremost in mind so that you are able to maintain focus throughout the instructional conversation. So, as you begin to think about the kinds of questions to ask during this phase of learning cycle, ask yourself these questions: “What do I want my students to gain from this discussion?” “How will the questions contribute to the overall purpose of the lesson?” Your replies will assist you to design worthwhile questions and help guide your students to deeper understanding of the targeted concept or skill.

To illustrate, let us examine the questioning patterns of two teachers, both of whom shared the same instructional purpose: to help the students understand how the migration of white settlers changed the lives of the Plains Indians. Paul Resuta decided to launch his instructional conversation by asking an open-ended question intended to draw out personal feelings: “The Plains Indians had deep respect for nature and the land. Do you think the settlers shared this point of view?” The students enthusiastically offered several different viewpoints, and Mr. Resuta challenged them to support each of their beliefs with suitable information: “What evidence do you have to support your position?” So, even though Mr. Resuta began the instructional conversation with an open-ended question, students were required to use relevant information to back up their arguments.

Grace Chacho, by contrast, preferred to set her instructional conversation in motion with a question that called for her students to summarize the content: “In what ways did the settlers upset the Plains Indians’ way of life?” As the students volunteered a number of responses, Ms. Chacho transcribed each fact on an information summary chart. At the point when her students were unable to add further information, Ms. Chacho suggested, “Let’s examine what you’ve come up with. What does this
information tell you about how the Plains Indians and the settlers felt about the land? Do you think Americans of today have attitudes similar to the settlers at that time?”

Mr. Resuta asked an open-ended question to start the instructional conversation and then challenged the students to support their views with relevant details. Ms. Chacho did just the opposite; she started by asking the students to recall details with closed-ended questions and then encouraged them to draw their own conclusions from the data. Which approach is best for elementary school social studies instruction? Both are acceptable; each sequence was driven by a logical purpose, was patterned to address that purpose, and helped students cite evidence to support critical thinking. Rather than worrying about whether your sequence begins with an open- or closed-ended question, it is more important to become skilled at applying John Dewey’s (1933) yet helpful “art of questioning,” as proposed over 60 years ago:

- Questions should not elicit fact upon fact, but should be asked in such a way as to delve deeply into the subject; that is, to develop an overall concept of the selection.
- Questions should emphasize personal interpretations rather than literal and direct responses.
- Questions should not be asked randomly so that each is an end in itself, but should be planned so that one leads into the next throughout a continuous discussion.
- Teachers should periodically review important points so that old, previously discussed material can be placed into perspective with that which is presently being studied.
- Teachers should bring closure to the experience by guiding students to summarize the main points. This is a way of helping students understand what was important, or what should be remembered from the discussion.

Interrogations, employed simply to quiz the students about facts associated with a learning experience, gives the illusion of teaching to the uninitiated. First-rate teachers, however, know that questions must be planned so that one leads to the other throughout a logical sequence, deliberately provoking deeper thought or creating new understandings. If teachers are able to effectively guide instructional conversations, students will discover that questions can serve as a useful tool of the mind that help organize their thinking now and throughout their lifetimes.

In addition to patterning questions, it is equally important to know how to frame questions; that is, to provide students enough time to think of a response and to transform their thoughts into a comment that they could share with their classmates. The fundamental system for framing questions is: (1) ask the question, (2) pause for 3 to 5 seconds (wait time I), (3) call on a student to respond, and (4) pause again for 3 to 5 seconds to give the student some time to think about and share a response (wait time II). There are a number of positive outcomes when teachers give students plenty of time to think. First, a larger number of students willingly volunteer responses. Second, their responses tend to be longer, more complex, and more precise. Third, a pause provides the teacher with time to study their students’ body language. With experience, you will
be able to pick up their satisfaction, delight, concern, or boredom. Fourth, teachers who pause after asking questions become more patient while waiting for answers and the students become more comfortable while sharing their thoughts. In all, then, when teachers allow at least 3 seconds to pass after asking a question, we find that students will make longer responses, offer more complex answers, interact more with each other, and gain more confidence in their ability to contribute to instructional conversations.

Small-Group Instructional Conversations One of the best ways to incorporate language-based instruction into the learning cycle is to offer opportunities for cooperative and collaborative learning through small-group instructional conversations. Small-group instructional conversations have become increasingly popular in social studies classrooms because, of all school subjects, social studies seems to be most fitting for group discussions. Students meet to talk about a field trip they had just taken, to respond to a biography their teacher just read to them, to plan a mural project, to compare the actions of two historical figures, to explore the ramifications of harvesting the world’s rainforests, or to summarize information presented in a video.

Typically, small-group instructional conversations are sparked by a meaningful question or problem offered by the teacher or another student. The subsequent talk allows for the exchange of observations, explanations, clarifying comments, and differing points of view. Although students do most of the talking in small-group instructional conversations, teachers nonetheless have vital responsibilities. To begin, they must make sure students have a sound background of information necessary to intelligently discuss the topic. They must model good dialogic behaviors and work to create a climate of mutual respect in the classroom. And, social studies teachers must communicate expectancies like these to guide small-group instructional conversations:

- Everyone should take part in the conversation.
- Think before you speak.
- Speak honestly and openly about your thoughts and feelings.
- Listen carefully and politely to what others are saying, even if you disagree.
- Feel free to extend and expand another student’s ideas.
- Ask clarifying questions if you do not understand something.
- Criticize ideas, not other students.

After the ground rules are well established and understood by all, teachers find it useful to use strategies like these to initiate good small-group instructional conversations:

- Select a topic with multiple perspectives.
  
  Example: “Who should take care of the elderly when they are no longer able to care for themselves?”

- Clarify the time frame.
  
  Example: “We’ll meet together for 15 minutes and then come back together as a whole class.”

- Explain the procedures in manageable steps.
Example: “Each group will be made up of four students. Each group of four will subdivide into two pairs. Each pair of students will discuss the issue and present its position to the other two students. The group of four will hold an open discussion on the issue, making sure each student has an opportunity to voice her or his viewpoint. The group of four will then attempt to reach consensus on the issue in a way that incorporates everyone’s reasoning and explanations.”

- After the small groups have talked about the topic for the specified time, or if they have thoroughly explored the topic before the time expires, the class can be brought back together and each group can share its results. The teacher should write key points on the board, and the final conclusion can then be examined by the entire class for common themes.

Example: “What did you learn from the conversation?,” “What did you find you had in common with other members of the group?,” and “Are there any ways in which the conversation could be improved?”

Small-group instructional conversations seem to be more effective when they are structured in ways similar to those illustrated in the strategy outlined above. Additional examples of useful small-group conversation arrangements can be found in Chapter 7, Cooperative Learning.

To summarize, it is possible to provide language-based instructional scaffolding by involving students in general instructional conversations based on Dewey’s “art of questioning” or by engaging them in small-group instructional conversations. These opportunities for constructive classroom talk provide the scaffolding needed to move a student from dependent to independent learner. Another widespread language-based scaffolding technique involves the use of graphic organizers. Graphic organizers provide students framework for processing information, whether recognizing relationships, outlining processes, or identifying needed information.

**Graphic Organizers**  Most of us learned to outline information when we were in school, so when we hear or read the term “graphic organizer” the idea of an outline or summary paragraph often pops into our heads. If you find this happening, clear your mind and think instead of replacing outlines or summary paragraphs with visual representations called graphic organizers. Graphic organizers are sketches or illustrations that help students represent key ideas and organize information. Often, graphic organizers are called concept maps because they help teachers and students pictorially “map out” their ideas. Graphic organizers help students detect helpful patterns and relationships within the content. They are able to see how ideas are connected and how information can be stored in an orderly fashion.

Graphic organizers, like instructional conversations, are considered to be language-based scaffolding experiences because students need not only draw and write in order to complete an organizer, they must also talk, listen, and think. Let’s consider some of the most well-known varieties of graphic organizers of graphic organizers. There are four basic patterns, with endless variations, that appear to have the greatest utility in social studies classrooms: conceptual, sequential, cyclical, and hierarchical.
Conceptual Graphic Organizers  Conceptual graphic organizers (also known as concept maps) are simple diagrams that spotlight a central topic or concept and show the relationship between the supporting details and the spotlighted topic or concept. A favorite concept map of social studies teachers is the semantic web. Semantic webs are graphic organizers that look much like a spider’s web when complete—hence their name. Semantic webs are comprised of three basic elements—core concept, web strands, and strand supports.

The core concept, or concept of central importance to the learning experience, serves as the focus of the web. An example of a core concept associated with the study of the New England Colonies might be “Daily Life.” Place the core concept in the center of a growing matrix (see Figure 6–7) and initiate an instructional conver-

**FIGURE 6–7**
Web: Daily Life in Colonial America
sation with a prompt like this: “As you think about the video, try to recall the different kinds of activities that made up daily life of the New England colonists.”

The students then brainstorm details about the daily activities of early New England colonists. Their ideas are listed randomly on the chalkboard or a chart; the teacher probes and extends the students’ suggestions as she or he finds it reasonable to do so. When the students have no more information to offer, the teacher asks them to organize the details into meaningful categories such as jobs, school, food, furniture, entertainment, religion, games, or any other label they suggest. The students’ suggestions are placed at various points around the core to represent different categories of information. These points are referred to as web strands.

The details used by the students to support each web strand are called strand supports. The strand supports surround each web strand, organizing the important information. The students continue to classify and categorize ideas until a graphic representation similar to Figure 6–7 emerges. The map construction phase involves active scaffolding encounters as students are must talk together in order to create and interpret the classification and categorization systems.

**Sequential Graphic Organizers** The name of this graphic organizer is self explanatory; it arranges processes or events in steps or chronological order. Sequential graphic organizers are usually formed as a straight line; timelines, as discussed in Chapter 3, are good examples. Figure 6–8 shows a sequential graphic organizer similar to one drawn by a group of fifth graders to illustrate the steps its community follows to treat its water so it is safe to drink.

**Cyclical Graphic Organizers** This variety of graphic organizer helps students visualize a series of connected events that occur in sequence but produce a repeated result. The months and seasons of a year, for example, demonstrate a cyclical process, as do the water cycle and the metamorphosis of a caterpillar. One cyclical process taught in most dynamic social studies classrooms is the practice of recycling. Help your students understand this process by first writing the word “recycling” on the

**FIGURE 6–8**
Sequential Graphic Organizer
Kathy Nguyen’s example of using a graphic organizer can be useful as you plan to introduce them to your students. Please see the following case study.

Hierarchical Graphic Organizers  This organizational pattern centers on a main concept or process and the subcategories under it. For example, students in one fifth-grade classroom were learning about the three branches of the U.S. Government—the legislative, executive, and judicial. Their hierarchical diagram of the branches is shown in Figure 6–10.

Graphic organizers are elemental to knowledge construction. Clearly, you should offer opportunities to develop and use graphic organizers whenever you assist children in developing relationships among ideas.

chalkboard. Then have the students complete a cyclic graphic organizer as they learn about recycling. See Figure 6–9 for a sample.

**FIGURE 6–9**
Cycle Graphic Organizer
Inside an Active Classroom

After Ms. Nguyen’s students finished reading The Tongue-Cut Sparrow, a Japanese folktale, she held a general discussion of the story and offered the following directions: “Your job today is going to be to organize the events of the story on a sheet of drawing paper. This is called a story map. A story map is a drawing that shows your personal version of the story. There are many ways you might make your story map. Some people like to draw pictures. Others prefer to use words or special charts and diagrams. Here are some samples.”

Ms. Nguyen displayed story maps of simple, familiar stories the children should know, such as Little Red Riding Hood and Three Billy Goats Gruff. She shared the samples for only a short time, because she wanted students to refresh their understanding of what maps look like without developing the idea that their maps should look like the samples. She continued, “A story map can look any way you want it to look. Now, take some time to plan your own map with ideas you remembered from the story. But, please don’t look back at the story right now.”

After the students completed their story maps, Ms. Nguyen invited them to hold them up to share with each other. As the maps were shared, she used prompts to encourage the students to think more deeply about story characters, events, and story plot. For example, “Why did you decide to put an arrow pointing from the old man to the small chest?”
In general, there are two major ways teachers use graphic organizers in social constructivist classrooms:

- **Before instruction**—When introducing a new topic, teachers may use a graphic organizer to make visually clear the important concepts and ideas that will be covered. Teachers can also use a graphic organizer to get a good idea of the background knowledge the students have about the topic. K-W-L charts, as described earlier in this chapter, are good examples.

- **After instruction**—students construct individual or group organizers to organize knowledge and construct key concepts.

When introducing students to any graphic organizer, be sure to describe its purpose, model its use, and provide students with opportunities for guided practice. Then, when students become comfortable with the organizer, independent practice is suitable. In the end, you should encourage and assist students to create their own organizers. Figure 6–11 shows a variation of a sequential graphic organizer Jean Linton contrived when she and her fourth-grade classmates were given the assignment to write about a special talent or skill which might cause others to call them an “expert.” Instead of using a single sheet of paper to build her sequential graphic organizer, Jean recalled the story of a unique hula she had created, jotted the major elements of the experience on a number of index cards, and arranged the index cards in order. Using the cards as “organizational handles,” Jean then expanded on each and wrote her story. Figure 6–11 illustrates the steps of Jean’s writing project. You can readily see how the graphic organizer helped Jean write a clear, descriptive account of the steps involved in creating her original hula.

Traditionally, graphic organizers like the ones described in this section have been drawn as large wall charts or illustrated in a student’s notebook. Revisions were difficult; they could be made mainly by crossing out, erasing, or redrawing the graphic organizer. Now, with computer products such as Kidspiration and Microsoft Word, graphic organizers are no longer restricted by space and editing limitations. What’s more, a number of web sites also offer teachers and students a variety of graphic organizer generators. You might be interesting in checking the possibilities found at www.teachnology.com/web_tools/graphic_org/.

**The Concept/Skill Application Phase**

Concept/skill application is the final phase of the learning cycle. During this phase, students have the opportunity to apply and practice a new skill or concept through special projects or independent activities. Because application experiences often tend to focus on creativity and choice, they may include such things as group murals, story writing, construction projects, drama, puppetry, and music. In all of these activities, students will be asked to use what they have learned while constructing deeper meaning. The key to success in this phase of the learning cycle reflects that for all of social studies teaching—variety. Vary your activities to keep interest and motivation
Because social studies topics differ in their complexity, some strategies will be more useful than others for enriching, reinforcing, or extending the targeted concepts or skills. Some examples of concept/skills application strategies follow.

- Dramatize the firing of the “shot heard around the world.”
- Bake and enjoy Harry S. Truman’s favorite food, brownies.
- Give first-person accounts of famous historical events as if the students were the actual characters.
• Select geographic locations about which students would like to “cheer.” Then design paper pennants with colors and illustrations that have some meaning to the location.

• Choose a favorite scene from a historical era to recreate in a three-dimensional model, or diorama.

• Write a historical period news magazine. Students write their articles in the style of popular news magazines using headlines, drawings, and eyewitness statements.

To illustrate, Bonnie Sullivan asked her students to design postage stamps to honor the various presidents they had been studying. One student submitted the design shown in Figure 6–12 to the president she had been researching, Abraham Lincoln. Another time, Ms. Sullivan and her students organized an “Inventor’s Hall of Fame” to culminate their study of inventors and inventions. Figure 6–13 shows one of the plaques on display at the Hall of Fame.

By reading professional journals and organizing an idea file, you will begin to accumulate ideas for functional application experiences. Remember, though, that these experiences must be an integral part of the total direct instruction lesson, not extra

FIGURE 6–12
Postage Stamp Design as a Culminating Activity
“busy work” or a cutesy “icing on the cake” activity tacked on at the end. This final activity uses the concepts constructed by the students to discover potential relevance or usefulness. The following example shows how Gary Nicewinter used a creative application of written reports to culminate a class study of breads commonly associated with different cultures.

Written reports have wide acceptance as a culminating activity at all grade levels in social studies programs around the country. However, you cannot expect students to compose good written reports simply by announcing, “Write a report on Sitting Bull for next Tuesday,” or handing out a list of topics related to the Civil War and assigning students to pick one and write a report about it. Assigning such tasks only frustrates many students and encourages them to copy every bit of information from a written resource or Internet site. Report writing itself isn’t the problem, however. The real problem with social studies reports lies in our methods of assigning them. We need to show students how to investigate questions and communicate their findings, how to go beyond plagiarism to genuine communication. That’s where scaf-

FIGURE 6–13
“Hall of Fame” Plaque as a Culminating Activity
folding comes in. Good teachers know that all writing must be supported by models to imitate, so they offer their students quality children’s literature as they develop into more mature writers. No matter what point they want to demonstrate about writing, there are good books to help make it clear. Good models produce good results. Gary Nicewinter understood this point, so he included a good book as he organized a learning sequence that culminated in a report-writing experience.

Inside an Active Classroom

When Mr. Nicewinter began his unit on bread, he showed his students an assortment of real bread, as well as pictures of bread and plastic models of bread: bagels, pita, baguette, paska, challah, tortillas, rye bread, cornbread, croissants, fry bread, injera, and chapatti, to name a few. Mr. Nicewinter did this not only to provide his students with a direct experience, but also to generate enthusiasm and interest, to prime the pump for the flurry of activity that naturally followed.

Mr. Nicewinter invited the children to taste the real breads and, as a class activity, had the children mark the country of origin of each on a large map. Mr. Nicewinter added another hands-on experience by giving the children small balls of prepared bread dough (available in supermarkets) and asked them to place the dough balls on sheets of aluminum foil labeled with their names. Before they put their dough into the oven, the children were encouraged to shape the balls any way they wished. The bread was baked according to directions, and the children discussed their sensory experiences as well as the physical changes they observed from start to finish. Everyone responded to this activity with enthusiasm and interest; a wealth of questions and comments followed the activity.

To begin the actual writing phase, Mr. Nicewinter formed committees around common topics of interest, which, after much discussion, were narrowed down to four: bread bakers and bakeries, bread from around the world, what bread is eaten with (condiments), and homemade bread. The children wrote on a piece of paper the two topics they would most like to pursue. Mr. Nicewinter then formed interest committees that would meet the next day.

The next day, Mr. Nicewinter assigned to each committee the task of writing its own information booklet on its chosen topic. He specified the form the writing would take, but the children would eventually determine the content. To familiarize the children with the form that their booklets were to take, Mr. Nicewinter brought to class a model of informational writing, Bread, Bread, Bread by Ann Morris (Lothrop, Lee, & Shepard). The book contains dazzling photographs and short descriptions of various breads being made around the world. As the class and Mr. Nicewinter surveyed the book together, they paid particular attention to the way the photographs and text were presented on each page. Mr. Nicewinter and the students agreed that their information pages would include a drawing and a sentence or two with some information about the drawing, just like the literature model.
The children worked on their bread books for about 3 days during social studies period. Most of the committees decided that their books should be about five pages long (one page for each child), but a few committees wrote more. To help the committees find information about bread, Mr. Nicewinter located suitable trade books and inserted bookmarks at the proper places. He could find no useful Internet sites for his young researchers. At the end of the first day, Mr. Nicewinter and the children sat in a circle with their papers and the books they had used to uncover information. They shared what they had done and how things had gone for them. Most had gotten as far as locating something they wanted to write about and starting their illustration. The second day was spent completing the illustrations and the associated text.

On the third day, Mr. Nicewinter talked to the children about book titles and discussed how the covers of several of the books the children had been reading contained illustrations that represented the main idea of the text. The children illustrated the covers of their own books, added titles, listed their names as authors, put the pages in order, and stapled them together. The committees shared their books with one another, and the final copies were ceremoniously added to the classroom library.

The “Bread From Around the World” committee compiled this book, along with appropriate illustrations, which they proudly titled *The Bread Book*:

- **Page 1**: Navajos eat fry bread almost every day. It is fried in shortening, not baked.
- **Page 2**: People from France eat baguettes. They are long loaves of bread with a thin golden crust.
- **Page 3**: Paska is a traditional round Easter bread decorated with fancy dough. It is very special bread from Ukraine.
- **Page 4**: Mexican people like to eat a flat bread called tortilla. Tortillas can be made from flour or corn. Some tortillas are spiced and flavored.
- **Page 5**: Chapatti is bread from India. It is flat and round like a pancake. It is made without yeast.

The main thing about report writing is that, like all other culminating events, reports help bring about a sensible conclusion to a well-planned sequence of instructional events.

**AFTERWORD**

Children learn through a combination of physical and mental activity. They “mess about” and naturally want to get into or try out everything. They may come to elementary school knowing a little bit about a lot of things, but one quality they all share is a thirst for experiences that will help them find out more. When these enthusiastic, energetic youngsters come to school, they expect to learn about all that interests
them in much the same way, through activity and involvement. They are not greatly interested in memorizing information or in confining activities such as completing ditto sheets or workbook pages. They want to try things out.

Helping elementary school students construct meaningful concepts is one of the foremost challenges confronting social studies teachers. A major part of this challenge is to help learners attach their backgrounds to the learning experience and to organize new information into appropriate schemata. As Piaget and Vygotsky emphasize, meaningful learning takes place only when learners are able to bridge the gap between the unknown and the known. To that end, this chapter has described the learning cycle as a system of instruction through which the teachers are able to effectively direct their students through the process of concept construction.

Developing a teaching plan is a complex professional responsibility involving a great deal of knowledge, hard work, and skill. As a new teacher, you may wonder whether the results are worth the effort. In effect, you may say, “Why bother? After all, the textbook and teacher’s manual were written by experts in the field who really know social studies.” To an extent, you are correct. Manuals can be helpful, especially for student or beginning teachers. As guides, though, they must be viewed as suggestions, not as prescriptions. You will probably want to start your career by using the teacher’s guide closely, but as you gain experience, you will adapt it to the changing needs of the different groups of children you teach each year. The constructivist approach described in this chapter allows you the flexibility to constantly change your teaching approach within a framework of sound planning.

REFERENCES


