

## Chapter 2: Best Practice

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## Introduction

The information in this section provides some starting points for examining instructional practice, with the understanding that professional development, along with research, are crucial to implementing instructional reform. It is not intended to prescribe but to broaden instructional practice, nor is it a thorough review of all best practice.

We hope this chapter will help you implement best practice in your classroom. It has several goals:

- To briefly explain the thirteen principles of best practice learning.
- To suggest several recommendations for teaching best practice in a social studies classroom.
- To provide a variety of effective learning strategies that are applicable to a range of students.
- To offer suggestions on how to reach the needs of all learners in a classroom.
- To furnish a list of references for further research.

The chapter is organized as follows:

*Part 1: Principles of Best Practice Learning*

Student-Centered, Experiential, Holistic, Authentic, Expressive, Reflective, Social, Collaborative, Democratic, Cognitive, Developmental, Constructivist, Challenging

*Part 2: Recommendations for a Social Studies Classroom*

Depth vs. Breadth, Student Choice, Active Participation, Independent Inquiry and Cooperative Learning, Prior Knowledge, Exploration of Different Cultures, Evaluation, Critical Thinking

*Part 3: Learning Strategies*

Reading From Different Perspectives, Magnet Summaries, Carousel Brainstorming, Inner Circle/ Outer Circle/ Fishbowl, Brainstorming, K-W-L, Semantic Mapping, Problem-Solving, Journals and Logs, Student Research Projects, Service-Learning

*Part 4: Reaching All Learners*

Differentiated Classrooms, Getting Started, Organization, Classroom Examples, System Considerations

*Part 5: References*

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*Best Practice  
Introduction*

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## Principles of Best Practice Learning

In an effort to help teachers with their classroom instruction and decision-making, the education profession has, over the last decade, become increasingly research-based. It is essential to have a research-based rationale for best instructional practices if we are to counter the popular, but faulty, idea that teaching requires no specialized knowledge (Clough, 1992).

The term *best practice* is not an expression that education professionals coined, nor is the definition unique to the education profession. The term was borrowed from the professions of medicine and law, where “good practice” and “best practice” are everyday phrases used to describe solid, reputable, state-of-the-art work in a field. If a practitioner is following best practice standards, he or she is aware of current research and consistently offers clients the full benefits of the latest knowledge, technology, and procedures (Zemelman, Daniels, & Hyde, 1998).

Yet some may argue that education does not enjoy the clear-cut evolution of medicine and law. However, if educators believe in inquiry, take ideas seriously, and subscribe to the belief that all students can learn, “then our professional language must label and respect practice that is at the leading edge of the field” (Zemelman et al., 1998, p. viii). Consequently, these authors define best practice as “serious, thoughtful, informed, responsible, state-of-the-art teaching” (p. viii).

While the government and media have dabbled with the logistics of education, another reform movement has been growing. Professional associations, classroom teachers, national curriculum research centers, and individual researchers have been trying “to determine ‘what works’ in the different school subjects and to clearly define ‘best educational practice’ in each teaching field” (Zemelman et al., 1998, pp. 3-4). This reform movement focuses on curriculum. The individuals and groups in this movement believe that if true reform is to occur, two components must be met: a clearly defined definition of the content of the curriculum, and activities that enhance student comprehension of that content (Zemelman et al., 1998).

One might expect that, given the contrasts between different educational disciplines, there would be little consensus on “what works” and what is “best educational practice” in the field of education. However, that has not been the case. The recommendations from many diverse organizations are unanimous on numerous key issues regarding the fundamental aspects of teaching and learning (Zemelman et al., 1998).

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Zemelman, Daniels, and Hyde (1998) have taken these recommendations and identified “thirteen interlocking principles, assumptions, or theories that characterize this model of education.” The following information provides a brief description of each of these thirteen principles:

1. *Student-centered*. Student-centered education involves listening to students questions and focusing on their interests and concerns. The curriculum takes into consideration students’ past and present experiences instead of focusing on arbitrarily selected content. Student-centered education also provides a balance between teacher-led activities and student-led activities.
2. *Experiential*. Experiential learning involves students being immersed in subject content through active, hands-on experiences. In a social studies classroom, experiential learning can take on many facets including dramatizations, conducting opinion surveys, attending a city council meeting, field study, or holding mock elections or trials.
3. *Holistic*. Holistic learning is based on the principle that children learn best when they are exposed to curriculum in purposeful contexts, not when it is presented in isolated segments. Information and ideas in the traditional American curriculum are often presented to children in small pieces. In this format children frequently do not understand why they are doing the work. “It also deprives children of an essential condition for learning-encountering material in its full, lifelike context” (pp. 9-10).
4. *Authentic*. Authentic learning provides students with real, in-depth areas of study, and opportunities to investigate topics in which they have a vested interest. The activities simulate a way information is handled in the world outside of school. Teachers need to take steps to create purposeful activities that challenge and engage the learner.
5. *Expressive*. In order to deeply engage in ideas, students need to practice various forms of expression such as writing, dance, music, drawing, and drama. However, in too many classrooms today, teachers are doing the expressing and students are doing the receiving. Therefore, students are not being given the opportunity to translate an idea from one educational medium to another. It is through this translation that students can demonstrate the level at which they comprehend the information.

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*Principles of Best Practice*

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6. *Reflective*. Students must have opportunities in the classroom to reflect on what they felt, thought, and learned. This allows students time to organize their thoughts, digest what they have learned, and understand how they have surmounted obstacles. Incorporating reflection into the classroom is one of the easiest of all instructional strategies. Teachers can often accomplish this by simply setting aside time and providing writing prompts for the students.
7. *Social*. Research has shown that social interaction is one way to promote learning. By students working together, becoming involved in their learning, constructing opinions, and testing their hypotheses students begin to acquire the tools and strategies necessary to support and extend their learning.
8. *Collaborative*. Collaborative learning focuses on children learning with one another instead of competing against each other. It provides an outlet for social learning and endows students with the opportunity to receive feedback from fellow students. In order for collaborative learning to be successful, teachers must provide meaningful activities and training for their students. Collaborative learning is worth the time and effort, because cooperation is a valuable life skill.
9. *Democratic*. When procedures are democratic, classrooms can become more productive and inspiring. In the classroom, a democratic process occurs when children exercise choice: in the books they read, the topics they investigate, and the activities they engage in. However, educators must teach students how to make good choices. "When children learn to make good choices, they are not only more committed to the work they do, they also acquire habits that make them lifelong learners" and involved citizens (p. 12). But democracy is more than just freedom of choice. It also includes teaching students to work through conflicts so that they can learn to value and respect one another's differences.
10. *Cognitive*. Students learn best when they use higher-order thinking skills to truly understand the nature of what they are learning. How students think and what they think are closely related. Educators must help students develop skills that our civilization values. These skills include "analytical reasoning, interpretation, metaphorical

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thinking, creative design, categorization, hypothesizing, drawing inferences, and synthesis” (p. 13). Along with what students think and how they think is metacognition, “the notion that children can become increasingly aware of their own thinking and concepts” (p. 13). This awareness helps students develop strategies “for accomplishing tasks, making decisions, and reviewing their own work” (p. 13).

11. *Developmental*. Teachers need to understand and respect each student’s developing capabilities—not label or teach their students according to some fixed notion of a student’s developmental stage. Teachers must provide age-appropriate activities that allow for individual differences among students. In developmental schooling, how children actually advance in different subjects is researched and programs are built around this knowledge, rather than marching students through arbitrary curriculum and assignments. Students undertake tasks when they are actually ready—not when a hierarchical, external guide says it is time.

12. *Constructivist*. Constructivist teachers believe that all children should be involved in experiences in which they are given the opportunity to create their own meaning. They see their most helpful role not as a giver of information, but instead fostering an environment that allows students to make decisions about their work that determine meaning for their learning. When teachers provide a healthy and dynamic environment, a child’s desire to understand the world ignites his or her own learning.

13. *Challenging*. A challenging school focuses on best practice techniques. Contrary to public opinion that student choice, experiential learning, and collaboration are easier for students, teachers who embrace best practice techniques know the opposite to be true. These educators see their goal in education as teaching and assessing students’ ability to be self-directed learners—skills that will follow them into adulthood.

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*Principles of Best Practice*

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## Recommendations for a Social Studies Classroom

Research on teachers' best practice has led to techniques and approaches that have resulted in improved student performance. This section can help social studies teachers choose which instructional strategies are most appropriate for improving their students' interest and learning. Since the following instructional strategies are interrelated, skilled social studies teachers can collate and adapt them to accommodate their students' interests, abilities, and prior experiences. While we have tried to focus on instructional strategies supported by published research, social studies teachers, by studying and analyzing their own daily practices, can gather their own data in order to improve the practice of teaching.

### **Students should have opportunities to investigate topics in depth in their social studies courses.**

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*Best Practice—  
Student-centered  
Authentic*

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*Rationale.* The phrase “a mile wide and an inch deep” describes many current social studies curricula. Since social studies includes so many separate social science disciplines (e.g., anthropology, civics, economics, geography, history, psychology, sociology) teachers must accept the fact that we cannot teach it all, and students cannot learn it all. Trying to cover everything in social studies results in shallow teaching and only gives students a bird’s-eye view. By covering less content in more depth in areas of student interest, we are increasing the likelihood that students will later pursue study in the social sciences on their own when they are confronted with issues about themselves and their world.

*Research.* After much debate, the National Council for the Social Studies (NCSS) *Curriculum Standards for Social Studies* recommends a balance between the teaching of broad themes and significant content. The content could include events, movements, persons, and documents within these broad themes. To be most effective, social studies teachers should not cover too many topics superficially. Instruction should be designed around student interests and what students must know for their lives outside of school.

*In the social studies classroom.* By focusing on major themes and turning points, students can construct their own understanding of specific issues under study. Having students brainstorm with teachers about areas to be studied ensures that students are interested in those topics. Teachers can develop activities around locally mandated areas of interest and curricula. This may especially help high school students whose days are divided into short, disconnected periods of time, which can result in incoherent learning. And, if school is going to work, it must make sense to students every day, all day long. This approach offers students the choice, continuity, order, and responsibility essential for them to enjoy school and remain involved in their own learning.

**By selecting their own topics to study, students will have occasions to practice and improve choice and responsibility.**

*Rationale.* A primary mission of social studies is to prepare students for democratic citizenship through active engagement. Therefore, classroom instruction should provide models of the democratic process.

*Research.* The concept that children learn by doing is not new. The Committee of Ten recommendations on American education in 1892 called for more active learning. Research supports the need for schools to provide regular times for students to practice decision-making, inquiry, and evaluation skills.

*In the classroom.* The classroom as a workshop is a relatively new teaching and learning strategy for the social studies classroom. The strategy reaches back to old crafts-places where master artisans coached apprentices while they were actually making the product. In the classroom workshop model, blocks of time are set aside on a regular basis for students to “work.” Choice is an integral component of a true classroom workshop. Students choose their own projects from lists of significant topics laid out by the teacher. Next, students schedule their workshop time in order to complete the project. Their schedule includes time for reading, writing, and completing research necessary for

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*Best Practice—  
Democratic  
Experiential  
Holistic*

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the project. Not only is student engagement increased, but important academic skills needed for doing research are practiced. As students are working, the teacher has time to meet with the student, to guide and review progress, identify problems, set goals, make plans, and reflect on their work. The active engagement of students in the classroom workshop provides students with opportunities to demonstrate and practice democratic citizenship skills.

### **Students should be actively involved in the classroom.**

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*Best Practice—  
Experiential  
Constructivist*

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*Rationale.* By relating what they are learning to their prior knowledge and beliefs, students can develop new knowledge or modify some of their inaccurate beliefs. This is most effective when students are actively involved in authentic tasks that require them to use the knowledge in a way that is similar to how it is used in the world outside the classroom. Many concepts in social studies are represented in our school sites. Issues such as personal freedom versus the good of the school community can be debated. Students can present proposals for policy changes to such decision-making bodies as the student council or school board. Service-learning is a teaching and learning strategy that combines meaningful public, community, or school service with academic improvement and the development of civic skills.

*Research.* Research utilizing service-learning pedagogy reveals specific effects on personal and social/civic development. Providing students with opportunities to apply academic skills and knowledge in real life situations to meet real community needs also affects their intellectual development by directly employing higher-order thinking skills.

*In the classroom.* By providing opportunities for students to apply what they have learned to real-life situations, social studies teachers are laying the foundation for future learning about how to live in a democratic society. Service-learning is most effective when it is highly integrated into a particular course content, when it lasts for a significant period of time, and when students are given time to reflect on their experience (Conrad, 1991; Leming, 1985; Newmann, 1975; Schug & Beery, 1984). Many social studies concepts (e.g., ques-

tions about governance and decision-making) are demonstrated in individual school site issues. Through debates, letter writing, membership on student councils, and so forth, students of all ages can advocate for change through participation while applying specific social studies content knowledge. Individuals who represent community and government organizations as well as citizen volunteers can visit classrooms and provide primary source information while modeling civic skills.

**By being involved in both independent inquiry and cooperative learning, students build skills and routines needed for lifelong, responsible learning.**

*Rationale.* Businesses increasingly will expect employees to be working in teams and groups to solve problems and make decisions. Cooperative learning provides an alternative to the traditional approach of frontal teaching for rote memorization. When students have opportunities to work together gathering information to solve problems, these skills will more likely be carried into the workplace. Groups work most effectively when they have a meaningful group goal and all members are working to achieve that goal. Group success results from the individual learning acquired by each of the members of the group (Slavin, 1991).

*Research.* Recent research suggests the use of heterogeneous cooperative groups as the most effective method for students to master tasks and for modeling positive interactions toward each other. Cooperative learning boosts achievement, expands social skills, and places accountability for learning with the student.

*In the classroom.* Cooperative learning is one way to improve social relationships because it allows students with different abilities and interests to learn together by working together. Group membership could be varied by mixing racial and ethnic origins, levels of achievement, and by having male and female members. For cooperative learning to be successful, each group's goal must be meaningful and the individual learning of each member must contribute to the goal. After teaching group skills, students can be organized into teams with different characteristics. In the

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*Best Practice—  
Collaborative  
Social*

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social studies classroom, group investigations could begin by observing or identifying a real issue, problem, event, or place for study. Class discussions can highlight prior knowledge and generate questions students are interested in investigating. After students gather specific information on the issue, problem, event, or place, they can share their research with their group and class. Cooperative learning strategies allow students to demonstrate skills needed for lifelong, responsible learning.

### **Learning in social studies should build on students' prior knowledge.**

*Rationale.* The social studies classroom should center on actual experiences students can delve into—not just names, dates, and events to be memorized and forgotten. By helping students recognize how social studies concepts are close to and applicable to their lives, learning will be more meaningful and undistorted.

*Research.* Using a constructivist approach in social studies follows the teachings of John Dewey. Meaning, knowledge, and ideas cannot simply be transferred to students through lectures or reading a textbook. Students must have time to explore ideas; to develop, share, and test their deductions; and to apply diverse interpretations to issues, problems, events, and places they observe or identify for study. All of this may lead them to alter their original thinking.

*In the classroom.* Because out-of-school or noncontextual learning represents more knowledge than is usually evident in a classroom, teachers must consider students' prior knowledge before deciding which basic ideas, knowledge, and skills to address. Construction of new meaning occurs over time with multiple occasions to seriously consider the topic. Teachers must present the issue, problem, event, or place under study accurately and relate it to students' prior experiences. Students may find that their thinking is erroneous or inconsistent. Students are then capable of suggesting alternative methods for making decisions about the issue, problem, event, or place in ways that are meaningful to them. Tasks that call for analysis and synthesis, not just the restating of information, further the construction process.

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*Best Practice—  
Constructivist*

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## Students should explore a variety of cultures.

*Rationale.* By stressing accurate knowledge about other groups and applying reasoning skills to derive just conclusions about group differences, we not only reduce prejudice but also increase students' cognitive abilities. After students acquire accurate knowledge about others, they then can use this knowledge to deal directly with prejudice. Evaluating statements made by others, as well as examining their own beliefs for prejudice, are skills students can use in their understanding of democracy. This cognitive approach works well in the social studies classroom.

*Research.* The *National Standards for Civics and Government* as well as the social studies national standards stress the importance of students understanding our basic democratic principles, the importance of diversity in our democratic society, and the necessity of eliminating all forms of discrimination. Students who do not possess cognitive sophistication are more likely to be prejudiced.

*In the classroom.* Cooperative learning strategies and simulated experiences where prejudice is evoked create effective learning environments to encourage acceptance of those who are different. Encouraging students to recognize variations in their actions toward those who are different helps them develop more positive attitudes. Applying a cognitive approach to reduce prejudice will also assist in the development of skills needed when evaluating evidence and making rational judgments. For example, social studies teachers could have students become "pen-pals" with other students. Rural and urban students, male and female students, US and Russian students, and so forth could communicate over a period of time to identify similarities and differences in their physical and cultural environments. Students who increase their knowledge about those who are different avoid stereotypical thinking and are less likely to be prejudiced. Interactive technology could be used to facilitate the communication between students but is not required.

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*Best Practice—  
Cognitive  
Reflective*

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**Evaluation should reflect students' thinking and prepare them to be lifelong responsible citizens.**

*Rationale.* If a major goal of social studies curricula is to prepare and engage students in democratic citizenship, it seems obvious that the evaluation of a curriculum should reflect this statement rather than reward how well students have memorized facts. Opportunities to develop evaluation as a collaborative process in the classroom could take the form of reflective questioning between teachers and students to link new learning and student achievement.

*Research.* The type, quality, and frequency of teacher-generated questions to measure student achievement is the subject of a solid body of research conducted by Brophy and Good (1986) and Wilen and White (1991).

*In the classroom.* The *quality* of this dialogue with students is more important than the *quantity*. Every student should be given the opportunity to discuss his or her work with a teacher on a regular basis. During each evaluation, there should be questions concerning how the student actually learned about an issue, problem, event, or place; questions concerning what the student considers to be good criteria for evaluating the issue, problem, event, or place; and questions about the importance of the information acquired about the issue, problem, event, or place. The social studies classroom can reflect democratic practice by having students participate in setting the standards for student evidence used in the evaluation process. Dialogue centered around criteria for what makes a good essay, research paper, or project can help students understand democracy by applying such basic values as equality and freedom of speech during the conference.

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Best Practice—  
Reflective

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## **Social studies should involve students in critical thinking.**

*Rationale.* Students will learn and apply critical thinking skills better if these skills and strategies are taught and applied in conjunction with the specific social studies content under study. Students can mimic democratic principles while conversing about what qualifies as a good paper, answer, or project. A pedagogical approach called *jurisprudence* helps students acquire skills in analyzing current issues using reflective dialogue.

*Research.* A growing body of knowledge supports the importance of teaching critical thinking skills according to the Mid-continent Regional Educational Laboratory (McREL, 1992). The effectiveness of using metacognition—thinking about one’s own thinking—in learning is well grounded. The national standards in civics and government, geography, history, and social studies support the development of intellectual skills necessary to analyze public issues. Students gain social studies content knowledge and historical knowledge when issues are studied both in the regular curriculum as well as a part of an issues unit.

*In the classroom.* Direct instruction of critical thinking skills and strategies must take place before students can effectively apply them to problems and issues being studied in the social studies curriculum. For instance, identification and analysis of ethical issues is usually not part of direct instruction in social studies. However, it is important for students to probe ethical issues under consideration in order to prepare them for democratic citizenship. As the workplace increasingly requires employees to assume a major role in solving problems and making decisions, one of our major goals should be to help students become independent thinkers and learners. Providing opportunities for students to apply metacognition to issues under study in the social studies classroom will help them recognize specific skills they need as citizens in a rapidly changing world. In jurisprudential teaching, public policy issues as well as issues of individual citizenship behavior are scrutinized by students. This pedagogical approach brings teachers and students together through intensive dialogue referencing specific cases to develop public policy. Eventually students realize that controversy surrounding public policies is inevitable and that individual values contribute to these controversies.

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*Best Practice—  
Challenging  
Expressive*

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## Learning Strategies

This section focuses on learning strategies. “An effective learning strategy is applicable to a range of grade levels, student needs, and content areas. Demonstrations, activities, or instructional experiences become strategies when the learners assume ownership and adapt the experiences to meet their individual needs” (*A Resource Guide: Learning Strategies*, Minnesota Department of Children, Families and Learning, p. ii). When students begin to understand how and when to change, adapt, blend, and test individual strategies against their knowledge and experiences they begin to demonstrate the characteristics of a strategic learner (*A Resource Guide: Learning Strategies*).

The learning strategies presented in this section are not social studies specific, but instead provide strategies that can be used throughout the K-12 curriculum.

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Learning Strategies include:

- Reading from Different Perspectives/Different Perspectives Graphic Outline
  - Magnet Summaries
  - Carousel Brainstorming
  - Inner Circle/Outer Circle/ Fishbowl
  - Brainstorming
  - K-W-L
  - Semantic Mapping
  - Problem-Solving
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## Reading From Different Perspectives

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### What

A teaching strategy called *Reading from Different Perspectives* (McNeil, 1984) guides students through multiple readings of material in a way that makes them consider ways of thinking other than their own.

### Why

Because students are who they are—individuals with different background experiences, beliefs, and understandings about the world—no two students will read and comprehend a passage in just the same way. Strategies that help students broaden their perspective about a topic will help them read with a greater depth of comprehension and appreciation.

### How

1. Have students read through the story, article, or selection for the first time.
2. Have students identify a number of perspectives that could be connected to the important ideas or concepts of the passage. For example, the different perspectives in a history textbook passage about the building of transcontinental railroads might include that of a Native American, a fur trapper, a homesteader, and perhaps even a buffalo. With fictional material, students may be assigned the perspective of characters in the story other than the narrator. Students reading Harper Lee's novel *To Kill a Mockingbird* experience the story through the eyes of the young girl, Scout. Other perspectives from that book for students to consider could be her brother, Jem; the family cook, Calpurnia; the elderly neighbor, Mrs. Dubose; and the phantom neighbor, Boo Radley.
3. Divide the class into cooperative groups of three or four people and assign each group a different perspective.
4. To help students identify how someone with their assigned perspective would react, have each group list (a) the concerns someone with their perspective might have about the topic, and (b) the needs a person of that perspective would have that could be affected by the topic. Use the Different Perspective Graphic Outline to provide structure for this activity.

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*Learning Strategies—  
Reading From Different  
Perspectives*

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For students working on different perspectives on the transcontinental railroad, ask: “What about the railroads would concern a Native American? A fur trapper? How would the railroads affect what buffalo would need? Homesteaders?” Have the students fill in the needs for their perspective and the concerns on the graphic outline. Students might decide that American Indians would need their land, their food supply (the buffalo), and peace. American Indians would be concerned about too many settlers arriving on the railroads, the loss of the buffalo, and increasing conflicts. Settlers would need supplies, markets for their products, and protection from the Indians. They would be concerned about railroad monopolies and high prices.

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*Learning Strategies—  
Reading From Different  
Perspectives*

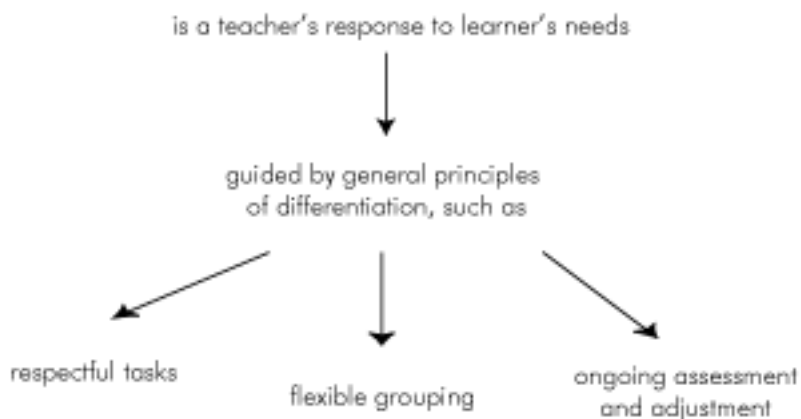
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5. Next, have students reread the material to look for specific statements or information that would be of special interest to their perspective. This information is written on the graphic outline, along with comments from the student’s assigned perspective. For example, students rereading from the point of view of a buffalo would react to the statement “The railroad would obtain as much as 20 square miles of land for every mile of track” by noting that the buffalo would soon run out of grazing land. A passage describing the slaughter of the species by Buffalo Bill Cody and other hunters might elicit reactions about genocide from the students reading from the buffalo’s perspective.
6. Discuss with students the insights they have gained through looking at the material from a variety of viewpoints. As a way of bringing their thoughts together, ask the students to write a position statement summarizing how someone of that perspective might feel.

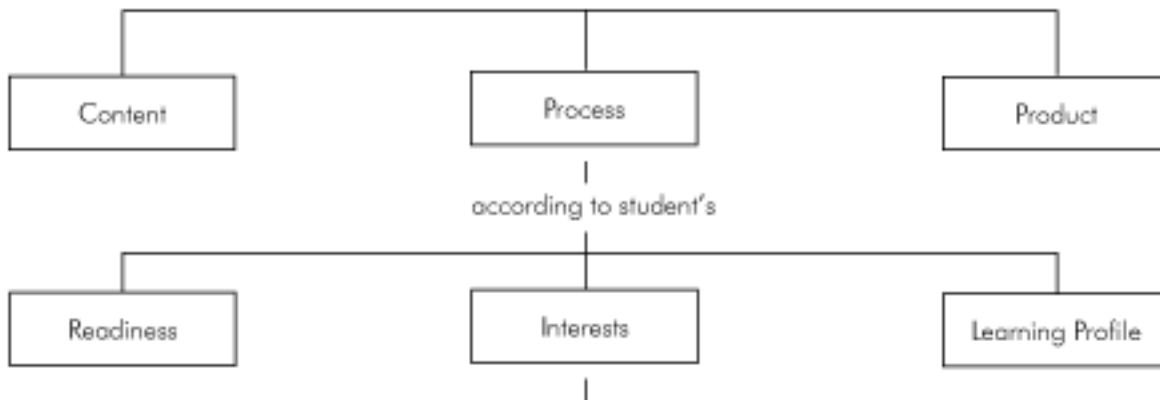
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## Different Perspectives Graphic Outline

Your Perspective on \_\_\_\_\_  
 Your Role \_\_\_\_\_



### Teachers can differentiate



through a range of instructional and management strategies such as

multiple intelligences jigsaw taped material anchor activities varying organizers varied texts varied supplementary materials literature circles	tiered lessons tiered centers tiered products learning contracts small-group instruction group investigation orbitals independent study	4MAT varied questioning strategies interest centers interest groups varied homework compacting varied journal prompts complex instruction
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## Magnet Summaries

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### What

The “Magnet Summary” (Buehl, 1993) is a strategy that helps students rise above the details and construct meaningful summaries in their own words.

### Why

Summarization skills are critical for students, many of whom find it very difficult to reduce information into its essential ideas in order to learn it. Magnet Summaries involve the identification of key terms or concepts—magnet words—from a reading. Students then use these magnet words to organize important information that should be included in a summary.

### How

These six steps show how to lead students through the process of learning through Magnet Summaries.

1. Introduce the idea of “magnet words” to the students. Begin by inquiring what effect a magnet has on metal. Just as magnets attract metal to them, magnet words attract information to them. Instruct students to read a short portion of their text assignment, looking for a key term or concept that the details in the passage seems to “stick” to. When they have finished reading, solicit possible magnet words from the students. Note that magnet words frequently appear in titles or headings or may be highlighted in the text in bold or italic print.
2. Write the magnet word on the chalkboard or overhead transparency. Ask the students to recall some of the important details from the passage that are connected to the magnet word. As you write these items around the magnet word, have the students follow the same procedure on a 3" x 5" card. Allow the students a second look at the passage to include any important details that may have been missed.
3. Students are now ready to complete their reading of the entire text passage. Distribute three to four additional 3" x 5" cards to each student for recording the magnet words from the remaining material. For younger students, indicate that they should identify a magnet word for each paragraph or section following a heading.

4. In cooperative groups, have the students decide upon the best magnet words for the remaining cards. Then have them generate the important details for each magnet word. When the groups are finished, each student will have four to five cards, each with a magnet word and key related information.
5. Model for the students how the information on one of the cards can be organized and combined into a sentence that sums up that passage of the text. The magnet word should occupy a central place in the sentence. Have students return to their cooperative groups and construct a sentence that summarizes each of their remaining cards. Urge students to try to combine the information into one sentence, although on occasion it may be necessary to come up with two sentences for a particular card. Have them work out their Strategies for Interactive Learning sentences on scratch paper first. Then the final version of each sentence is written on the back of the appropriate card, and the magnet words are underlined.
6. Direct the students to arrange the sentences in the order they wish their summary to read. At this point, the sentences will need to be altered so they flow smoothly from one to the other. Model inserting connectives and other language that integrates the sentences into a summary. At this point students should also judge whether all important ideas are included, and whether anything further can be deleted. Students then test their summaries by listening to how they sound when they are read aloud.

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*Learning Strategies—  
Magnet Summaries*

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## Carousel Brainstorming

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### What

The strategy is used in lengthier sessions to make learning active by involving group members in free association of questions and concepts.

### Why

Brainstorming is a way to assess and value prior knowledge and experience. It may be used to review and evaluate learning. Group members work together to explore concepts and relationships. This strategy gives a physical energy boost to a session.

### How

1. Place large sheets of newsprint or chart paper, each with a different question or topic related to the subject under consideration, at various points around the room.
2. Divide the group into teams of four to six participants and give each team a different colored marking pen.
3. Have each team choose a recorder, a facilitator, and a timekeeper.
4. Have teams quickly brainstorm responses to the question or topic listed on their sheet of paper and ask the recorder to write down their ideas on the paper.
5. After two or three minutes, signal the teams to rotate to the next set of newsprint/chart paper. The markers remain with the team as it travels around the carousel. This shows the group's progress and builds in accountability.
6. After each group rotates, they read over what is already written on the newsprint or chart paper and add ideas of their own. The rotations continue until each group has contributed to every chart.
7. When teams return to their original chart, they should review items written there.
8. Teams categorize items on their original chart and report to the entire group.

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## Optional tasks

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The following ideas can be used when rotating from question to question.

1. Share examples or personal connections to the question.
2. Ask questions that probe the original question or that clarify existing responses.
3. List any resources that may be helpful in seeking more information needed to answer the question.
4. Draw a line across the bottom of the chart. Summarize in a single sentence what the previous groups have written.
5. Write down the big idea that summarizes *all* the responses in three words—no more, no less.

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*Learning Strategies—  
Carousel Brainstorming*

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## **Inner Circle/Outer Circle/Fishbowl**

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### **What**

A method to facilitate classroom discussion.

### **Why**

The strategy is an effective method for feedback, reflection, and discussion.

### **How**

1. Students form the inner circle and talk about an experience, event, or issue based in questions by inner circle students/faculty/staff member/site supervisor/community group.
2. Students on the outer circle are asked to listen to student responses from the inner circle.
3. Reverse the inner and outer circles so everyone participates.

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*Learning Strategies—  
Inner Circle/Outer Circle/  
Fishbowl*

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## Brainstorming

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### What

Brainstorming is an exercise that involves groups of students in free association of concepts. All responses are accepted.

### Why

Brainstorming is a way to assess and value prior knowledge and experience. It can also be used to review and evaluate learning. Group members work together to explore concepts and relationships.

### How

Brainstorming comprises five steps.

1. Choose a topic or concept to brainstorm. Topics for brainstorming can include symbols, words, phrases, questions, or statements. In the social studies, ideas can be generated by observing or identifying real issues, problems, events, and places.
2. Group members call out concepts that they associate with the topic. All associations and terms are accepted and recorded on paper or a transparency.
3. Members of the group review the display of written responses and think about how they might fit into categories or groups that have similarities. The leader asks how terms are similar or different.
4. The leader may summarize or add some concepts or suggest names for categories.
5. The experience is related to semantic mapping (see page 2-27), and the individuals or group members may draw a semantic map to organize ideas for further study.

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*Learning Strategies—  
Brainstorming*

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## K-W-L

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### What

K-W-L is a strategy that models active thinking. The letters K, W, L stand for three activities students engage in when reading to learn: recalling what they KNOW, determining what they WANT to learn, and identifying what they LEARN as they read.

### Why

The strategy was developed to translate current research findings about the active, constructive nature of learning into an instructional lesson format. In classroom testing, K-W-L has been shown to be an effective tool to help students become more active thinkers. It has also been useful in helping teachers better communicate the active nature of learning in group settings.

### How

The strategy is designed for group instruction and can be used with either whole classes or smaller groups. It can be used in all curricular areas and at all grades.

1. Have students individually or in groups list under the “K” (know) column everything they know, or think they know, about the topic, issue, problem, event, or place.
2. Have students discuss in small groups items listed in their “K” (know) column.
3. As a group have students generate a list on what they want to know about the topic, issue, problem, event, or place in the “W” column.

After the students have completed their study of the topic, issue, problem, event, or place, have the students reflect in the “L” column about what they learned.

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## Semantic Mapping

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### What

Semantic maps or webs are diagrams that help students see how words or topics are related to one another. Semantic mapping is not a new instructional strategy. For a number of years it has been known as “semantic webbing,” “plot mapping,” and “semantic networking.”

### Why

The procedure activates and builds on students’ prior knowledge and generally involves brainstorming and discussion of how new information links to this prior knowledge. The maps can be used for vocabulary and comprehension development, or as a prereading or postreading activity.

### How

While there are a number of variations to semantic mapping, the usual steps involved follow:

1. Write the chosen vocabulary word or topic on the blackboard. Draw a box or circle around the word or topic.
2. Encourage students to think of as many words or ideas as they can that relate to the selected word or topic.
3. Students can write their ideas individually or brainstorm ideas in a small group to generate a class semantic map.
4. Students’ ideas are listed on the semantic map in categories that organize the words in a reasonable and related manner. These details or related words or ideas are written around the main word or topic.
5. Discussion of the semantic map is perhaps the most important part of the activity. Here students see how words or ideas are related, learn new words, and find new meanings for words they already know. During discussion, focus on the ideas most appropriate to the lesson being taught, add new related ideas to the map, and help students identify those ideas that do not appropriately fit the map.

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*Learning Strategies—  
Semantic Mapping*

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## Problem-Solving

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### What

Problem-solving is a method of inquiry and is a means of using “thinking processes to resolve a known or defined difficulty” in any curricular area (Cohen, 1972, p. 5). Teachers nurture problem-finding and problem-solving by encouraging students to ask questions.

### Why

Development of students’ capacities for problem-solving in all areas of learning is necessary to achieve the goal of helping students become more effective, critical thinkers.

### How

Problem-solving is often viewed as a series of steps that include defining or describing a problem, determining a desired outcome, selecting possible solutions, choosing strategies to use, trying out solutions, evaluating the outcomes, and revising where necessary.

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#### *Learning Strategies— Problem-Solving*

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#### The *IDEAL* Approach to Problem-Solving

A simplified version of problem-solving (Bransford, 1984) includes the following:

I—Identifying the problem.

D—Defining the problem.

E—Exploring strategies.

A—Acting on ideas.

L—Looking for effects.

1. Have participants form groups. Consistent with the *IDEAL* approach to problem-solving, the participants work together—first identifying the problem, then defining it more clearly, exploring strategies, acting on ideas, and looking at the effects.
2. Have groups share their collaborative results and their thinking processes.

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## Examples for Exploring Problem-Solving Strategies

*Using objects.* There are two major ways of using objects, materials, or manipulatives in problem-solving. First, objects can be used to represent various aspects of a problem or situation. A second method of using manipulatives is particularly related to geometry, which requires physical models for real understanding. Whether studying computational concepts such as angular measure or area or considering perceptual ideas such as symmetry, students must experience tangible realities.

*Acting out problems.* Many problems are based on actions. Accurate modeling of the problem requires students to carry out these actions to discover a solution. Unfortunately, textbooks often suggest pictorial representations when concrete actions would be more appropriate for students' level of thinking. By taking an active role in finding the solution, students are more likely to remember the process they used and be able to use it again for solving similar problems.

*Using or making a table.* A table is an orderly arrangement of data, such as numbers. Problem-solvers find that making tables helps them keep track of data, spot missing data, and identify data that are asked for in the problem. Because patterns often become obvious when data are organized in a table, this strategy is often used in conjunction with other strategies. The table is used to keep track of data and could also be used for identifying a number pattern.

*Making an organized list.* Making an organized list helps problem-solvers organize their thinking about a problem. Recording work in an organized list makes it easy to review what has been done and to identify important steps that must yet be completed. It also provides a systematic way of recording computations made with given data or recording combinations of given items.

*Making a picture or diagram.* For some students, it may be helpful to use an available picture or make one when trying to solve a problem. Pictures and diagrams must be compatible with the schemata that students have in their mind. It is important that they help the problem-solver understand and visualize the data in the problem.

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*Problem Solving Strategies—  
Examples*

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*Making a guess and checking the result.* When problem-solvers use this strategy, they guess the answer, test to see if it is correct, and make another guess if the previous one was incorrect. In this way, they gradually come closer and closer to a solution by making increasingly more reasonable guesses. Problem-solvers can also use this strategy to get started and may then find another strategy that can be used. Guessing and checking is particularly helpful when a problem presents so many pieces of data that making an organized list becomes a major task.

*Using or looking for a pattern.* A pattern is a regular, systematic repetition. A pattern may be numerical, visual, or behavioral. By identifying the pattern, the problem-solver can predict what will come next and what will happen again and again in the same way. Looking for patterns is a very important strategy for problem-solving and is used to solve many different kinds of problems. Sometimes students can solve a problem just by recognizing a pattern, but often they will have to extend a pattern to find a solution. Making a number table often reveals patterns, and for this reason, is frequently used in conjunction with the “look for a pattern” strategy.

*Working backwards.* To solve certain problems, the solver must make a series of computations, starting with data presented at the end of the problem and ending with data presented at the beginning of the problem. This strategy is used when the answer is given but a reconstruction of the parts that made up this answer is needed.

*Using logical reasoning.* Logical reasoning is really used for all problem-solving. However, there are types of problems that include or imply various conditional statements such as “if ... then ... else,” or “if something is true, then ...,” or “if something is not true, then....” The data given in the problems can often be displayed in a chart or matrix. This kind of problem requires formal logical reasoning as the problem-solver uses deductive reasoning to attack the problem.

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*Problem Solving Strategies—  
Examples*

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*Simplifying the problem.* Students will find it helpful to be able to make problems simpler, especially when they begin to solve complex problems. Making a problem simpler may mean reducing large numbers to small numbers or reducing the number of items given in a problem. The simpler representation of the problem may then suggest what operation or process can be used to solve the more complex problem. The simpler representation may even reveal a pattern that can be used to solve the problem.

*Adapted from*

Hyde, A.A., & Hyde, P.R. (1991). *Mathwise, teaching mathematical thinking and problem solving*. Portsmouth, NH: Heinemann.

Hoogeboom, S., & Goodnow, J. (1987). *The problem solver 1: Activities for learning problem-solving strategies*. Sunnyvale, CA: Creative Publications.

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*Problem Solving Strategies—  
Examples*

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## Journals and Logs

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### What

Journals and logs are records of thinking and give students the chance to use writing as a way of discovering what they know. Keeping a journal or a log is a way to preserve one's personal thoughts, feelings, opinions, ideas for exploration, and questions for future consideration.

### Why

Journals and logs are often used for making connections, sharing insights, and collecting data to document learning.

### How

1. Journal and log entries may be kept in manila folders, spiral notebooks, or three-ring binders or on plain sheets of paper stapled together.
2. Ask the students to take some time to write.
3. When everyone has finished, ask students to form small groups to reflect on the experience. Have each group choose a discussion leader and a recorder for sharing. Discuss the experience of putting personal thoughts on paper. Realizing writing is a way of knowing, ask students, "What did you learn about yourself?"

Try a variety of journals to see what works best.

- *Personal journals* are used like diaries to record personal thoughts and feelings, interesting ideas to explore, or perplexing questions. The writer and reader are the same person, and the contents are not necessarily shared with anyone else.
- *Dialogue journals* are used for writing ideas, responses, feelings, insights, and questions to share with others. Many students dialogue with their teacher, which gives the teacher the opportunity to note the interests and abilities of individual students. The teacher can demonstrate the use of dialogue format while using conventional forms of language. Dialogue journals are another form of written conversation and are not graded for spelling, punctuation, or any other conventions of language. However, they may be used as an assessment tool to observe how a student uses language.

- *Traveling journals* are used to record group responses to particular texts. When groups of students are working together on a project, book, story, topic, question, or common theme, the individuals write to each other, similar to written conversation, in a traveling journal. Entries may include comments on the progress or the lack of it that each person is experiencing. The journal may travel from person to person in the group on a rotation schedule or it may be kept in a central location for individuals to make regular entries. The teacher reads and responds to the group effort to encourage progress, to provide new invitations for extending understanding, or to suggest ways of locating assistance.
- *Reading logs* provide opportunities for students to record their thoughts and questions about what they are reading. Teachers need to demonstrate that they are readers by sharing their reading log entries with students. Reading response logs are variations of journals with a particular focus. Literature response logs can be specific components of literature discussion groups where students share their written responses to initiate and continue discussion in the group. Teachers may incorporate reading or literature logs as documentation for evaluations.
- *Learning logs* are another variation of writing as a way of knowing. They may include responses to a variety of content materials and concepts, theme cycles, or they may be focused on one particular lesson or concept. They may take the form of science logs or math logs if subject areas are not integrated. Students keep track of what they have learned about a particular topic or lesson in the learning logs and use them for reflection and self-evaluation. Entries may include summaries, insights, and questions to extend learning.

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*Problem Solving Strategies—  
Journals and Logs*

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## Student Research Projects

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### What

Student research projects are based on student inquiry. Individual choice is important to fully engage students in research investigations. Research may focus on current curricula and may integrate curricular content areas. Many of the questions or topics that students want to research are not confined to a specific content area but rather cut across disciplines. A curriculum based on inquiry includes the examination of various perspectives.

### Why

Research projects involve students and teachers in acquiring knowledge, skills, and strategies using many learning processes. Extensive reading and writing are incorporated in project preparation, along with problem-solving and decision-making to support the research that expands meaning.

### How

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*Problem Solving Strategies—  
Student Research Projects*

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1. Initiate a discussion about research by brainstorming what students know about it. Suggest that everyone can be a researcher and share the ideas about the components of a research project.
2. Select a topic. Ask individuals to think about something that would be a good topic or question to explore.
3. List the criteria for a topic. Help students to narrow a topic for a focused study. Using semantic mapping, K-W-L, and so forth, determine which subtopics are manageable.
4. Determine the purpose of the research project. Invite students to think about the reasons they have for choosing a particular question or topic. What do they want to find out, and why?
5. Identify available resources. Where will students look for information? Suggest that they do a library search and make a list of other sources for information.
6. Develop research procedures. Elicit ideas from the group for ways to gain and organize information for the research project.

7. Write a proposal for a research project. The teacher demonstrates the process of developing a proposal. A research proposal is an outline that structures the project and gives direction to the research.
8. Implement the project proposal. After the proposal has been approved, students work individually or in groups to carry out the activities and methods included in the research plan. There will be ongoing assessment and revision as the research progresses.
9. Culminate the activities. Students need the opportunity to share their discoveries and new knowledge with others. They may demonstrate their learning in a variety of ways. The teacher may suggest some alternatives and then ask students to think of other possibilities. Some suggestions may be biographical sketches or journals, timelines, dramatic scripts, field guides for scientific subjects, posters, displays, models, murals, mobiles, topic-oriented alphabet books, skinny books, how-to books, games, puzzles, computer programs, videotapes and audiotapes, articles for class magazines, newsletters, or newspapers.

*Adapted from*

Flores, B. (1988). *Whole language: A pedagogy of resistance*. San Bernadino, CA: CSU-School of Education.

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*Problem Solving Strategies—  
Student Research Projects*

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## Service-Learning

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### What

Service-learning is a method by which young people learn and develop through active participation in thoughtfully organized service experiences that:

- meet community needs;
- are coordinated in collaboration with the school and community;
- are integrated into each young person's academic curriculum;
- provide structured time for a young person to think, talk, and write about what he or she did and saw during the actual service activity;
- provide young people with opportunities to use newly acquired academic skills and knowledge in real life situations in their own communities;
- enhance what is taught in the school by extending student learning beyond the classroom; and
- help to foster the development of a sense of caring for others.

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*Problem Solving Strategies—  
Service Learning*

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*Adapted from*

The alliance for service-learning in education reform (1993).

### Why

The purposes for using service-learning include positive community and public impact; academic improvement; enhanced understanding of social issues; civic participation and citizenship development; and personal growth.

## How

Integrating service-learning into a standards-based curriculum can be accomplished in two ways.

1. Examining the standard specifications and deciding what students need to know and be able to do.

Standard Specifications	Service -Learning Project	Actions
Constructing a history of a local community to illustrate a continuum of change.	Community history booklet.	Interview local senior citizens.
Interact with an actual governmental process.	Assist immigrants with the registration process.	Register voters.

2. Focusing on the actual service project and identifying which specifications of the standard can be taught using service-learning.

Service-Learning Project	Standard Specifications	Actions
Produce maps for parks, libraries, and local organizations.	Interpret and communicate geographic information through maps.	Research major physical and cultural features of a community.
Community recycling project.	Suggest, apply, and evaluate strategies designed to improve the community through direct service.	Research impact of recycling.

To identify opportunities for integrating service-learning into an existing curriculum, explore possible connections by asking:

- (a) Could the skills or knowledge students have learned be taught to others?
- (b) Could the student evidence be contributed to, dedicated to, or performed for someone or something?
- (c) Could the new or increased student knowledge be applied to solve a real issue in the school, community, state, nation, or world?

The following example illustrates the use of service-learning to implement the intermediate content standard Geography and Citizenship, specification (4c): participating in an activity that contributes to the improvement of the student's community.

1. Brainstorm civic/nonprofit organizations in your community to determine how they make contributions to the improvement of your community.
2. Have students gather information about these organizations through, for example, interviews with or literature produced by the organization, their previous experience with an organization, and so forth.
3. Students can develop criteria for determining which organization(s) in their community they should partner with for their service project. Examples of this criteria could be the degree of need, numbers served, willingness to work with students and resources available, etcetera.
4. After selecting an organization(s), students should develop an action plan detailing actions to be taken, individual responsibilities, resources needed to complete the project, and deadline dates.
5. As students are involved in the actual service, structured reflection ties the service experience to the standard specification and engages students in higher-order thinking skills.
6. Students are highly motivated when there is an audience beyond the teacher. By recognizing student participation in an activity that contributed to the improvement of the community we are encouraging future civic participation. Recognition may come through a community event, presentations to boards, or media exposure.

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*Problem Solving Strategies—  
Service Learning*

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## Reaching All Learners

In order to provide all children with the opportunities to achieve at their highest level, we need to shift our belief that it is students who must adapt to *our* teaching methods, materials, and assessments. Instead, teachers must understand where students are and accommodate *their* needs.

Typically, we can find many reasons why children struggle with learning: they do not know English; they are hands-on learners; they are visual learners; they have cultural differences; they have physical or mental disabilities—the list is endless, and often students who cannot adapt are placed in programs that offer inferior, overly simplified outcomes, and undemanding work. Teachers must ensure that the struggling learner is focusing on essential outcomes and skills. At the same time advanced learners must be challenged with complex applications rather than repeating work they already know or understand.

The students in our schools are indeed varied, and classroom teachers must be trained to honor, respect, and recognize each student's needs, culture, abilities, learning styles, strengths, and potential to be a resource to one another. Central to this is the belief that all children can learn, and that a wide variety of strategies and best practices must be employed by teachers to adapt to student needs. To give teachers the chance to develop the confidence needed to deliver education in this new way, more time must be devoted to staff development, modeling, and practice with feedback. In addition, assessments must be used to inform instruction and improve learning rather than sifting and sorting kids in a culmination activity. They should be ongoing, woven into the instruction rather than reserved for the end of an activity or course. Assessments must be as varied as the needs of the student being assessed. As a result the classroom becomes teacher coordinated—but student centered.

## Differentiated Classrooms

Previous sections described a variety of teaching strategies called Best Practice. This section shows how to use those strategies to differentiate instruction.

Carol Ann Tomlinson (1999) describes the differentiated classroom as one in which the teacher strives to do whatever it takes to ensure that struggling students, advanced learners, students with varied cultural heritages, and children with different background experiences all grow as much as they possibly can each day, each week, and throughout the year. Howard Gardner (1997) suggests that differentiation is about high quality performance for *all* individuals and giving the students the opportunity to develop their particular strengths.

Qualities of a differentiated classroom may include the following:

- Teachers begin where students are, not where the text says to start.
- Teachers use time flexibly.
- Teachers focus on essentials.
- Teachers hold each student to high standards.
- Teachers know each student's road map for learning looks different.
- Teachers are diagnostic.
- Teachers know that assessment and instruction are inseparable.
- Teachers emphasize competition against oneself rather than others.
- Teachers are "in touch" with their students and approach teaching as an art.
- Teachers have a very clear idea of the curriculum, standards, good assessment, and appropriately engaging activities.
- Teachers constantly ask what kinds of changes need to be made so that each learner "gets it."
- Teachers adapt content, process, and products to match needs.

We know that to be an empowered student, the learner must go beyond knowing (facts) to reach understanding (concepts and principles) and be able to relate and demonstrate how that understanding translates into action (skills) used in situations far removed from work in school (Tomlinson, 1999).

Based on what we know about brain-based learning, constructivism, and Best Practice strategies, a healthy classroom climate could be described as one that is personal and meaningful to students by being connected to things that are familiar. For example, when young learners begin to map, they use their classroom as a model. They eventually progress to school, then home, the neighborhood, community, and so forth. Older learners do not need to spend time plotting imaginary trips when they can use real maps to plan for real trips taken as a class. A healthy classroom would provide information for students to better understand their world now and as they mature. The information would be able to be used immediately

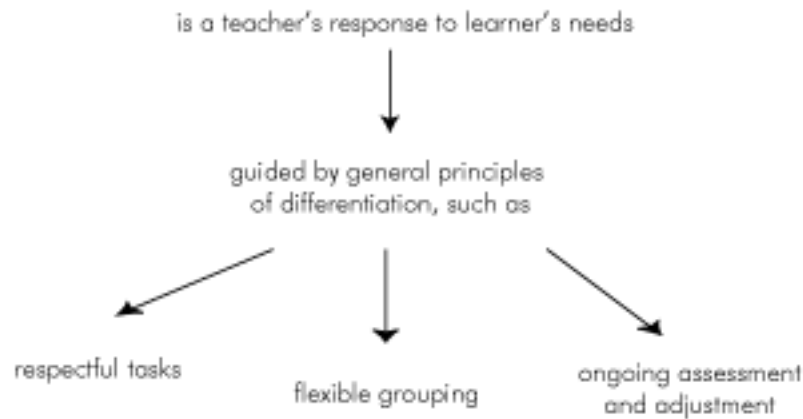
in ways that really work. The activities would be as authentic as possible so as to be doing “real life” work rather than exercises to “get ready” for the real thing. A healthy classroom is empowering, giving opportunities to try, fail, master skills, and draw conclusions that build self-confidence.

Following are two organizers for thinking about differentiation. Figure 2.1 assumes that the teacher is responsive to learner needs and is then guided by principles of differentiation such as respectful tasks, flexible grouping, and ongoing assessment and instruction. The teacher can then decide whether to differentiate one or all of the content, process, or product in light of the student’s readiness, interests, and learning profile. In order to do that, he or she relies on a variety of instructional and management strategies such as those listed in the boxes at the bottom. It is important to note that the teacher selects times during the lesson or unit to differentiate so that the sense of wholeness is not destroyed and organization stays intact. The options that the teacher provides will dictate whether children work alone or in a group and will be open-ended enough so that learners with different strengths can use them to construct learning in a meaningful way.

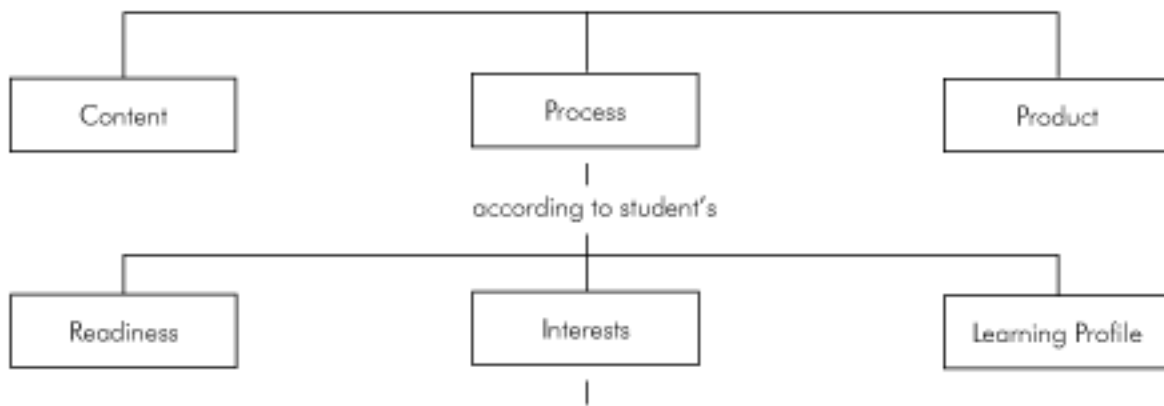
Figure 2.2 takes a look at some of the differences between a traditional and differentiated classroom. As in all comparisons, there are lots of degrees or gray areas between the two categories. It might be helpful to target a few areas at a time and explore ways to move closer to meeting the needs of all learners in a classroom.

*Figure 2.2 is from “The Differentiated Classroom Responding to the Needs of All Learners,” by C. A. Tomlinson. Alexandria, VA: Association for Supervision and Curriculum Development (p. 15). Copyright 1999, ASCD. Reprinted by permission. All rights reserved.*

Figure 2.1. Differentiation of Instruction



**Teachers can differentiate**



through a range of instructional and management strategies such as

multiple intelligences jigsaw taped material anchor activities varying organizers varied texts varied supplementary materials literature circles	tiered lessons tiered centers tiered products learning contracts small-group instruction group investigation orbitals independent study	4MAT varied questioning strategies interest centers interest groups varied homework compacting varied journal prompts complex instruction
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## Figure 2.2. Comparing Classrooms

### Traditional Classroom

- Student differences are masked or acted upon when problematic
- Assessment is most common at the end of learning to see “who got it”
- A relatively narrow sense of intelligence prevails
- A single definition of excellence exists
- Student interest is infrequently tapped
- Relatively few learning profile options are taken into account
- Whole-class instruction dominates
- Coverage of texts and curriculum guides drives instruction
- Mastery of facts and skills out of context are the focus of learning
- Single option assignments are the norm
- Time is relatively inflexible
- A single text prevails
- Single interpretations of ideas and events may be sought
- The teacher directs student behavior
- The teacher solves problems
- The teacher provides whole-class standards for grading
- A single form of assessment is often used

### Differentiated Classroom

- Student differences are studied as a basis for planning
- Assessment is ongoing and diagnostic to understand how to make instruction more responsive to learner need
- Focus on multiple forms of intelligence is evident
- Excellence is defined in large measure by individual growth from a starting point
- Students are frequently guided in making interest-based learning choices
- Many learning profile options are provided
- Many instructional arrangements are used
- Student readiness, interest, and learning profile shape instruction
- Use of essential skills to make sense of and understand key concepts and principles is the focus of learning
- Multi-option assignments are frequently used
- Time is used flexibly in accordance with student need
- Multiple materials are provided
- Multiple perspectives on ideas and events are routinely sought
- The teacher facilitates students’ skills at becoming more self-reliant learners
- Students help other students and the teacher solve problems
- Students work with the teacher to establish both whole-class and individual learning goals
- Students are assessed in multiple ways

## Getting Started

Start small by teaching kids to be successful with many different kinds of independent activities, such as reading or research, and working in a cooperative group, so that when they are given choices, they have developed a repertoire of ways to learn. These would be anchor-type activities that could be used often and will help children gain a feeling of independence and control over how they are learning. They could include using the available technology in the classroom, knowing how to form a small work group, and doing self-guided tasks. By becoming independent at using stations that feature a topic or learning area and have a wide variety and level of materials, students gain some control over meeting their own needs. Teachers can then gain some time to work with individuals and small groups free from interruption.

Begin to differentiate for small blocks of time in a variety of content areas. For example, start a history or social studies class with a discussion and then use one kind of graphic organizer to compare two time periods. At the end of the discussion ask students to respond in their journals to a *choice* of prompts to summarize their understanding. Allow for different types of expression—narrative, pictorial, comparisons, and so forth. Giving these kinds of choices respects differences in interest and learning styles. The simple act of choosing the prompt will increase engagement, which results in increased achievement.

Another level of differentiation would be a social studies period in which some children are listening to a taped anthology that reinforces a concept or event discussed in a previous lesson. This group will use a Venn diagram to compare the two. A second group might use the Internet to learn more about the geography or culture of the region featured. A third group may recreate the event by writing a skit based on the points of view of the various groups or individuals involved. This type of differentiation uses the teacher's diagnosis of readiness and learning style to vary content, process, and product.

Another way to differentiate is to assess students prior to beginning a unit of study. Using K-W-L charts or a carousel activity will allow teachers to see the levels of understanding already evident. This information, together with student interest inventories and previously held class discussions about students' goals, can be used to differentiate the instruction by:

- a. finding multiple resources for key parts of the lesson;
- b. allowing for a variety of products as evidence of learning rather than a one-size-fits-all project;

- c. giving students a choice in how to do the work, such as small group, partner, individual; and
- d. engaging in contracts with individuals that detail how each person will meet the appropriate criteria.

Sharing the goals for the quarter or class with the students and then having the students define the learning that will need to take place, along with ways to acquire that knowledge and skills, also sets the stage for differentiating instruction.

## Organization

Differentiation may cause the teacher to feel a sense of not being in control of what is happening in the classroom. Actually, the awareness level of what is happening with each student, when using differentiation, is more, not less. It is likely that changes will be needed so that the teacher stays on top of what is going on. The following methods help organize this kind of learning environment. As mentioned before, routines and anchor activities should be established along with acceptable ways of getting help when needed. As in any situation where students are working more independently, developmentally appropriate listening skills, collaboration skills, ability to stay on task, and so forth need to have been practiced and discussed as a part of the ongoing work in the classroom. Remember to start simply and increase differentiating as the class is ready.

The first step might be to get kids able to routinely start their work in the room so that the teacher can give directions to one small group at a time. Tape-recorded directions could be available. A simpler method is to have directions for certain activities on task cards to be pulled out and given to a group or individual as needed, such as how to use the search station, samples of note-taking methods, steps in writing something, or preparing for an experiment. These activities could also be in folders or on an overhead or chart placed in the room.

An agreement must be worked out on how students will let the teacher know they need help. A student can write his or her name on the board in an ordered list so that as teachers have a moment, they can move on to the next group or person. Using this method, the teacher can also send help in the form of another student or, in the event that too many people need help, call the group together to do problem-solving.

Having “home base” seating makes start-up activities such as attendance and handing out work folders more expedient. Using student work folders to contain all work in progress with a record-keeping sheet is one way to give constant feedback and

hold the student responsible for a running record of work done or conferences with the teacher or peer group. Using checklists, skill lists, competency lists, or a syllabus to help students stay on track can help provide a ready review of student progress. Establish carefully organized and coded places where students place their assignments along with clearly stated times for review and feedback.

Let go of the need to check or grade everything. While this varies greatly depending on the developmental level of the classroom, whenever possible allow students to take responsibility for completing work and asking for feedback when they deem it necessary. Keep anecdotal notes or check-off lists on a clipboard and do quick work of record keeping so that work time can be flexible and gathering in and checking work at a time when no feedback can be given is avoided. Other methods could include taking notes on post-it pads and transferring them to a cumulative record folder or notebook, frequent self-evaluations from students to update the teacher on progress, and wrapping up the period with group and individual feedback that allows for a quick reorganization and setting up a plan for the next day. This should only take minutes and can simply be a show of hands in response to task specific questions.

Other considerations for organization could include looking at time and grouping restrictions within the system. Block scheduling, departmentalization, looping, multi-age grouping, and so forth need to be considered in light of how they effect opportunities for differentiating instruction.

## Classroom Example

### **Grade 5 - Historical Events**

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In Mrs. Anderson's fifth grade classroom the students are working on an assignment for the Historical Events standard in the learning area of People and Cultures. Part of the task involves investigating a decade in the 20th century for which they will identify key people, events, and places and then describe them in terms of cause/effect, conflict, cooperation, and interdependence. The students will use materials at a variety of reading levels that cover many different time periods and interests. They may use real people, audio, and video resources. They may gather the necessary information in a variety of appropriate ways using a method that they are comfortable with, such as webbing, outlining, dictating information, and so forth. Students must document the resources they use.

Part of this task requires that the student reconstruct a timeline accompanied with a description that reconstructs the decade and shows the interdependence of the key people, places, and events within the time featured. The teacher will provide models and brainstorm ideas about how this might be carried out. The students' variety of projects may range from pictorial timelines using copies of magazine or newspaper photos of real events along with a narration to a more traditional timeline accompanied by a summary. Since the decades chosen were based on interest, there will not be one right answer, and the resulting variety of products will add a richness and wealth of information from which all of the students can benefit.

Even though this assignment and task has been differentiated in order to accommodate a variety of interests and needs, all students' work will be checked to see that the following criteria are met.

### **The Timeline**

- Accurately shows the order of major events of the chosen decade.
- Accurately reflects key people and their contribution(s) in the decade.
- Shows the cause and effect relationship of events and people.

### **Conference, Summary, Narration**

- Explanation of conflict, cooperation, and/or interdependence is accurate and reasonable.

### **Reconstruction and Documentation**

- Reconstruction is thorough and accurate.
- The use of sources is documented.

In this assignment, the teacher has responded to the reading level needs of the learner by the variety of reading, listening, and viewing materials available to use as resources. Accommodations have also been made to allow for varied interests, learning profiles, processes used in note-taking, and in the different styles of presentation used to demonstrate understanding. It may be necessary to assist students who have language needs or learning disabilities.

## System Considerations

Differentiation must be replicated in the system as well as in the classroom. What's good for kids is also good for teachers! Therefore, opportunities must also be available for teachers and administrators to learn in a personal, meaningful way that allows for time to practice and revise.

Some system-wide considerations that would enhance differentiation include:

- Model differentiation by allowing teachers a variety of ways, timelines, and differing amounts of assistance to get there.
- Start small with groups of interested teachers who are willing to work collegially to share ideas and materials and provide feedback.
- Look at outdated policies and procedures and be open to allow for the new methods being implemented.
- Re-think the use of one text for a given subject.
- Re-examine what report cards are saying about individual growth versus comparison to a group.
- Enhance differentiation with reduced class size, more classroom help, and a re-evaluation of the physical plant to provide for more space or equipment necessary to accommodate the variety of ways students are able to show us what they know.
- Effective administrators apply pressure but offer support while insisting on progress.
- Allow for sufficient staff development time so that new pedagogy and strategies can become internalized.

In summary, an analogy from Al Shanker, past president of the American Federation of Teachers (AFT), shows how the business community values staff development. Employees at Saturn received 92 hours a year of training. Shanker noted that if General Motors is willing to put that amount of work into building a better car, we must value staff development time at least as much as does General Motors in order to create better schools.

The ideas that have been presented are challenging and create a picture of the kind of classroom that we envision as the best environment for all learners. Each of us, like the students we

teach, is in a different stage of developing our skills in the art of differentiating instruction. It is our goal “neither to mourn what we have not done nor to rest on our victories, but to look at all the reasons we have to show up again tomorrow at the classroom door, ready to join our students—all of our students—in learning” (Tomlinson, 1999, p.119).

## References

- Bird, L. (1991). Supporting real research. In K. Goodman, L. Bird, & Y. Goodman (Eds.), *The whole language catalog* (p. 296). Santa Rosa, CA: American School Publishers.
- Bransford, J. D., & Stein, B. S. (1984). *The ideal problem solver: A guide for improving thinking, learning, and creativity*. New York: Freeman.
- Buehl, D. (1995). *Classroom strategies for interactive learning*. Schofield, WS: Wisconsin State Reading Association.
- Caine, R., & Caine, G. (1997). *Education on the edge of possibility*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Caine, R., & Caine, G. (1994). *Making connections: Teaching and the human brain* (Rev. ed.). Menlo Park, CA: Addison-Wesley.
- Canter & associates. (1996). *Teaching strategies that promote organization and mastery of content*. [From the Developing Lifelong Learners Video Series.] Santa Monica, CA: Author.
- Clough, M. (1992, October). Research is required reading. *The Science Teacher*, pp.36-39.
- Cohen, J. (1972). *Thinking*. Chicago: Rand McNally and Co.
- Cole, R. W. (Ed.). (1995). *Educating everybody's children: Diverse teaching strategies for diverse learners*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Danielson, C. (1996). *Enhancing professional practice: A framework for teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York: Basic Books.
- Garmston, R. J., & Wellman, B. W. (1992). *How to make presentations that teach and transform*. Alexandria, VA: Association for Supervision and Curriculum Development.

- Glaser, W. (1990). *The quality school*. New York: Harper and Row.
- Godt, P.T., Jensen, D., & Ehlmann, M. (1991). *Reading assessment: How do we measure understanding? (Workshop leader's guide)*. Indianapolis, IN: PRC, Inc.(formerly Advanced Technology, Inc.)
- Grennon Brooks, J., & Brooks, M. G. (1993). *The case for the constructivist classroom*. Alexandria, VA: ASCD.
- Hanf, M. A. (1971). Mapping: A technique for translating reading into thinking. *Journal of Reading*.
- Heimlich, J. E., & Pittelman, S. D. (1986). *Semantic mapping: Classroom applications*. Newark, DE: Reading Aids Series, IRA Service Bulletin.
- Kiernan, L. (producer) (1997). *Differentiating instruction: A video staff development set*. Alexandria, VA: ASCD
- Laughlin, M. A. (1995). *Challenges of social studies instruction in middle and high schools: Developing enlightened citizens*. Fort Worth, TX: Harcourt Brace College Publishers.
- Learning strategies. (n.d.). Research and Training Associates, Inc. Author.
- Levin, H. M. (1994). *Accelerated schools: Video journal of education*. Salt Lake City, UT: The Video Journal of Education
- Ogle, D. M. (1986). K-W-L: A teaching model that develops active reading of expository text. *The Reading Teacher*, 39(6), 564-570.
- Shaver, J. P. (1995). In Cawelti, G. (ed.), *Handbook of research on improving student achievement*. (pp. 145-161). Arlington, VA: Educational Research Service
- Shulman, L .S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4-14.
- The research road. (1997). *Generator: Journal of Service Learning and Service Leadership*, 17(1).
- Tomlinson, C. A. (1999). *The differentiated classroom*. Alexandria, VA: ASCD.
- Zemelman, S., Daniels, H., & Hyde, A. (1998). *Best practice: New standards for teaching and learning in America's schools*. (2<sup>nd</sup> ed.). Portsmouth, NH: Heinemann.

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## References For Further Research

- Adams, J. L. (1986). *Conceptual block busting*. Reading, MA: Addison-Wesley Publishing Company, Inc.
- Anderson, R. C. (1977). The notion of schemata and the educational enterprise. In R. C. Anderson, R. J. Spiro, & W. E. Montague (Eds.), *Schooling and the acquisition of knowledge*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Anderson, C. W., & Smith, E. L. (1984). Children's preconceptions and content-area textbooks. In G. Duffy, L. Roehler, & J. Mason (Eds.), *Comprehension instruction: Perspectives and suggestions*. New York: Longman.
- Banks, J. A., & Banks, C. M. Banks. (1989). *Multicultural education: Issues and perspectives*. Boston: Allyn and Bacon.
- Blyth, Dale., and Rebecca N. Saito (1996). *The national service-learning initiative: Finding from the learning through service survey set*. Minneapolis: Search Institute.
- Buehl, D. (December, 1989). Magnetized: Students are drawn to technique that identifies key words. *WEAC News & Views*, 13.
- Conrad, D. & Hedin, D. (1981). National assessment of experiential education: Summary and implications. *Journal of Experiential Education*, 4(2), 6-20.
- Cook, D. (Ed.). (1989). *Strategic learning in the content areas*. Madison, WI: Department of Public Instruction.
- Crafton, L. (1991). *Whole language: Getting started...moving forward* (see pp. 163-168). Katonah, NY: Richard C. Owen.
- Dewsbury-Shite, K. E. (1993). *The relationship of service-learning project models to the subject-matter achievement of middle school students*. Doctoral dissertation, Michigan State University.
- Fulwiler, T. (Ed.). (1987). *The journal book*. Portsmouth, NH: Boynton/Cook.
- Galt, M. F. (1992). *The story in history: Writing your way into the American experience*. New York: Teachers and Writers Collaborative.
- Geography Education Standards Project. (1994). *Geography for life: National geography standards*. Washington, DC: Geography Education Standards Project.

- Harste, J., Short, K., & Burke, C. (1988). *Creating classrooms for authors* (see pp. 280-285). Portsmouth, NH: Heinemann.
- Hayes, D. (November, 1989). Helping students GRASP the knack of writing summaries. *Journal of Reading*, 96-101.
- Marks, H. M. (1995). *Student engagement in the classrooms of restructured schools*. Madison, WI: Center on Organization and Restructuring of Schools, Wisconsin Center for Educational Research.
- McNeil, J. (1984). *Reading comprehension: New directions for classroom practice*. Glenview, IL: Scott, Foresman, and Company.
- National Center for History in the Schools. (1994). *National standards for world history*. Los Angeles: National Center for History in the Schools.
- O'Connell, B. E. (1983). *Long-term effects of school-community service projects*. Doctoral dissertation, State University of New York at Buffalo.
- Patterson, E. W. (1987). The effects of participation in required and not required community service programs on the process of self-actualization in high school students. Doctoral dissertation, University of Florida.
- Roberts, L. P., & Moon, R. A. (1995). *Community service-learning methodology and academic growth in secondary school content disciplines: An action research study*. Unpublished manuscript, East Lansing, MI: Michigan State University.
- Sleeter, C. E. (Ed.). (1991). *Empowerment through multicultural education*. Albany, NY: State University of New York Press.
- Southeastern Educational Improvement Laboratory. (1990). *Teacher's aspirations for school improvement*. Research Triangle Park, NC: Author.
- Tunnell, M. O., & Ammon, R. (1993). *The story of ourselves: Teaching history through children's literature*. Portsmouth, NH: Heinemann.
- Vacca, R., & Vacca, J. (1993). *Content area reading* (4th ed.). New York, NY: Harper Collins College Publishers.
- Young, K. (1994). *Construction buildings, bridges, and minds: Building an integrated curriculum through social studies*. Portsmouth, NH: Heinemann.



