EDU 145 Art#4 Mod 5

Weaving the Tapestry

A First Grade Teacher Integrates Teaching and Learning

Bonnie Hurless and Susan B. Gittings

With the present emphasis on standards and testing, early childhood teachers are challenged to teach more and more information in the same amount of time. Integrating the curriculum reflects our knowledge of how the brain functions in the early years (Shonkoff & Phillips 2000). It also supports learning in all developmental domains and content areas. According to Hinde (2005), while "there are times when teaching the subjects separately may be more appropriate than integrating them, it is also true that when teachers are knowledgeable about content areas and integrate them effectively, students' achievement increases" (p. 108).

What is an integrated curriculum?

Integrated curriculum has a long history in education movements: "The idea that curriculum should be taught from a holistic perspective with a child-centered approach had been proposed by some of the pioneers in early childhood education. The original advocate in the United States was John Dewey" (Wortham 1996, 328). Dewey encouraged active learning and meaningful, authentic activities and articulated the many benefits of considering activities and subject matter equally (Wolfe 2000). This approach made sense then and continues to be relevant today.

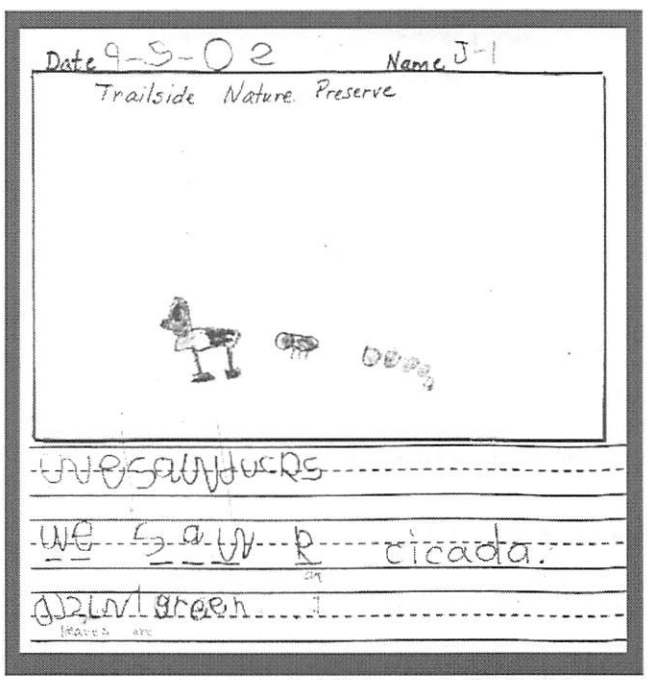
Bonnie R. Hurless, PhD, is an instructor at the University of Montana Western. Bonnie and Susan Gittings have collaborated for the past 10 years, while Bonnie was on the faculty at Dominican University and Concordia University in River Forest, Illinois. bonniehurless@yahoo.com

Susan B. Gittings, MA, CAS, is a retired first grade teacher (some 18 years) from the River Forest Public Schools in River Forest, Illinois. Susan tutors and does workshops and consulting for educators. sbgfp@comcast.net

This is an expanded version of the article appearing in the March 2008 issue of *Young Children*.

Typically, the term *integrated curriculum* refers to an approach to teaching that ties multiple subject areas (for example, math, literacy, the arts) to a central theme. The teacher implements the approach with careful planning, including the outcomes toward which the children work. The approach usually starts with teacher direction but offers many opportunities for children to follow their own interests. Teachers offer authentic, meaningful learning experiences for all children. The children can work at their own levels and pursue individual interests in depth.

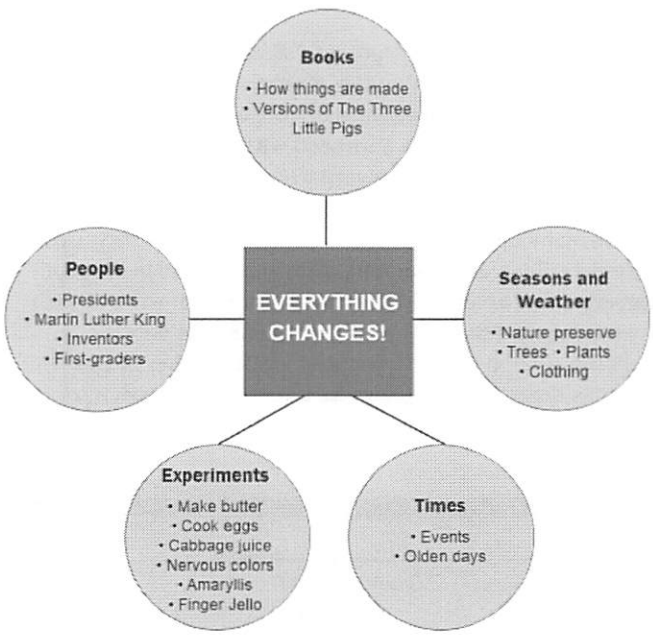
In the section that follows, first grade teacher Susan Gittings describes her use of an integrated approach to teaching in her classroom.



Implementing an integrated curriculum

Today the first-graders and I (Susan) are off on a walk to the nature preserve. This frequent event lets the children observe and document changes in their neighborhood. As usual, several parents join us. Sometimes, Bonnie Hurless (one of the article's authors) and her early childhood education students join us as well. I remind the children to note the changes in the plants, animals, pond, and weather.

In our first grade, I use an integrated approach to teach reading, writing, math, science, and social studies skills and to instill beliefs about care for the environment, animals, ourselves, and one another. Everything Changes is an overarching theme we explore all year long (see web below), including observing nature changes on our walks.



On our return to the classroom, the children record their observations about change through drawings and writing, each working at his or her own level. When they finish, I meet with individuals to confer about their written observations. Writing is integrated into every activity, whether it is a walk in the nature preserve or a science experiment. It is not just for recall, but to encourage children to think. Following children's writing development throughout the year is an excellent way to document their growth and learning.

Learning around themes

We begin the year with a theme designed to grab the children's interest and one in which all can experience success in an early reading activity. An engaging and enjoyable theme makes for a successful transition to first grade.

Writing is integrated into every activity, whether it is a walk in the nature preserve or a science experiment. It is not just for recall, but to encourage children to think.

Continuing themes are often based on calendar events (winter holiday traditions around the world, presidents, seasons). In choosing themes, I also look at the school district's first grade curriculum topics (Water Creatures and Their Environment, Animal Families, Care of the Earth, and more). Learning through themes responds to children's interests and provides opportunities to integrate multiple content areas.

Meaningful learning experiences

What are the key components for the successful use of an integrated curriculum? The most important component is creating meaningful, authentic learning experiences for the children. According to current brain research (Shonkoff & Phillips 2000), children need to connect new information to existing knowledge in order for it to have meaning and be stored for later retrieval. Connecting the new to existing knowledge builds complex connections in the brain. When the first-graders read about a fox or a hawk in class, they recall the real one they've seen on their walks to the nature preserve. The children have a common, concrete experience to which they can connect new information.

The brain and the connections within it are built through individual experiences. Many children have had plenty of interesting experiences to which they can add new knowledge, but others may lack these kinds of experiences. Because learning is most effective when building on children's existing knowledge, I make sure that all the children have relevant experiences by planning activities that give them a common background, like participation in a cooking project, conversations with a visiting expert, or listening to a story. All the children can reference these shared experiences as they continue to make sense of their world.

Active learning

The first grade classroom is always full of activity. I introduce many of the themes through books, science experiments, riddles, or cooking activities. For example, for the theme on change, we conducted a Nervous Colors science experiment (Maynard 2001): I carefully added drops of food coloring to room-temperature milk in a glass pie pan, then touched the dots of color with a toothpick dipped in liquid dishwashing detergent. The detergent broke the surface

Children gradually become more independent, taking more responsibility for their own learning and behavior.

tension of the milk, causing the colors to swirl dramatically and create new colors. The children's *oohs* and *aahs* led to predictions, discussions, and explanations about what they had observed. The children were thrilled when I gave them the "recipe" to try at home with their families.

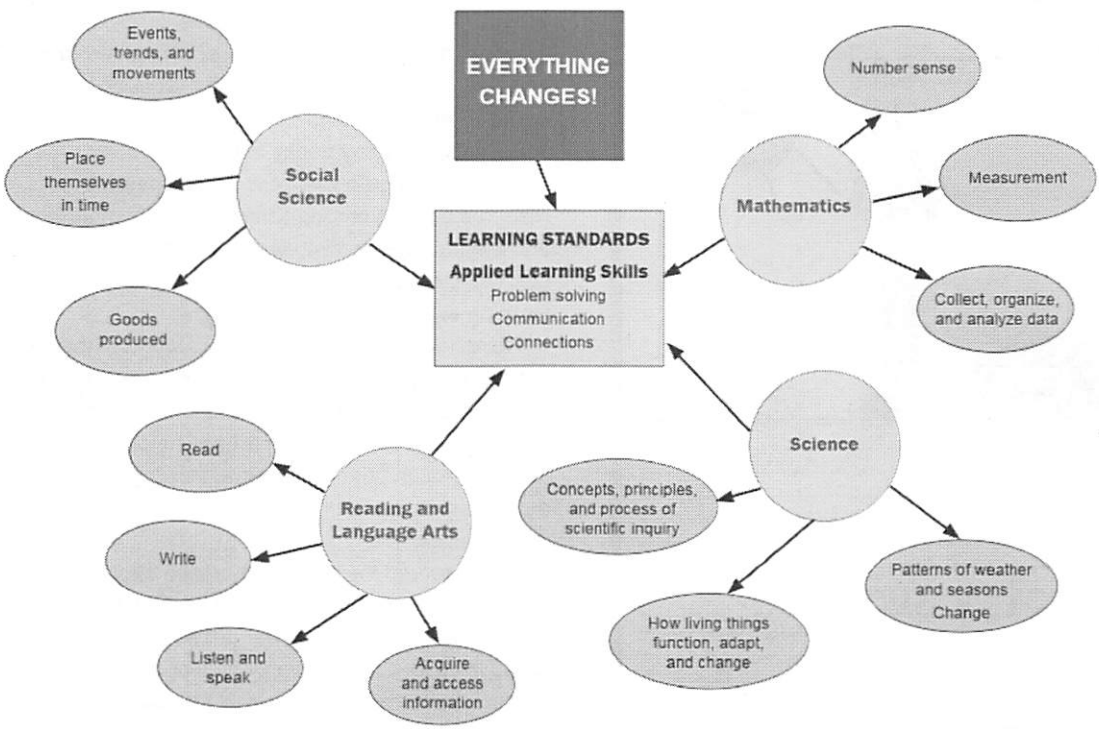
Experiments such as Nervous Colors and one using cabbage juice, baking soda, and vinegar to show chemical change are part of the large unit on changes. Study and activities around this theme meet standards from many subject areas, as the children use the scientific process, make predictions, collect and analyze data, measure and document their observations with drawings and writing, read books, wonder, and ask many questions. (The web below lists the applied learning skills as well as the Illinois learning standards met through the changes theme.)

The learning environment

The classroom setup and schedule encourage children's autonomy and a sense of community. Because this work style is especially hard for children to undertake at the beginning of the year, I start by introducing structure, routines, and expectations. For example, children learn where to find classroom materials (crayons, scissors, dice, game markers, resource books, and so on), how to use them carefully, and the importance of putting them away when done. From the beginning of the school year until the last day, I stress kindness, considering differences as opportunities to learn, and not to compare individuals. I model learning from mistakes and taking risks. Children gradually become more independent, taking more responsibility for their own learning and behavior. After all, autonomy is one goal of education.

Books and more books

Fiction and nonfiction books are essential components of an integrated curriculum. I read aloud two or three books a day, sometimes more, always encouraging children to reread them themselves. Some we read for information, others we read for pure enjoyment. Through the years I have added books to fit with themes. By the end of the school



year, the children have listened to and discussed more than 600 books. For each theme, the children write about their favorite book, including the reasons they liked it. (For a sample bibliography, see "Bibliography for the Theme 'Everything Changes'," p. 5.)

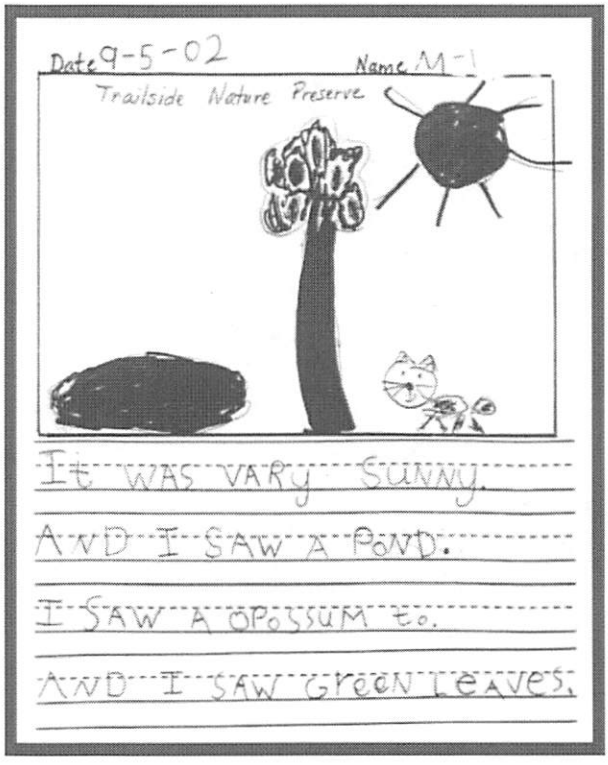
Including families

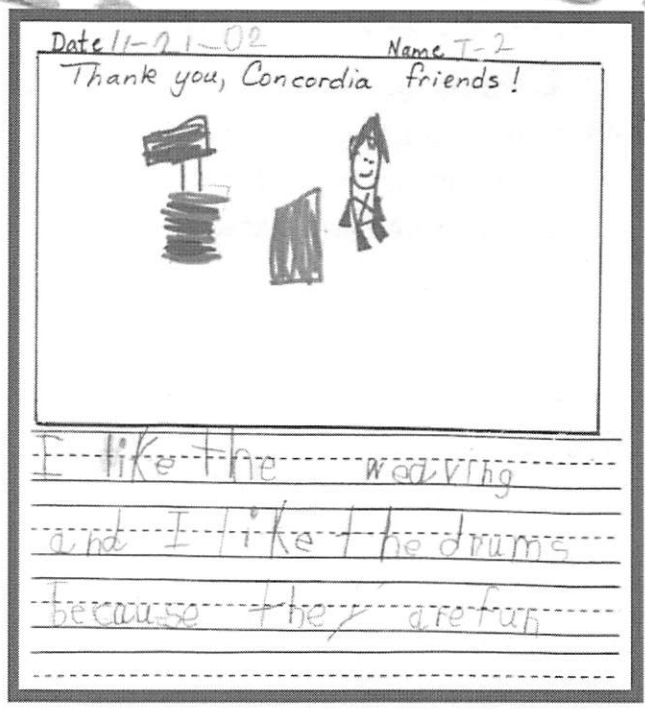
Another component is weekly communication with and involvement of families. I send home a weekly newsletter to share what the children are doing in class (see "The Gittings Group News", p. 7).

I encourage parents to be part of the classroom and their child's learning by offering a range of family involvement options. Families can provide information about their home culture and traditions, share resources and stories, or come to the classroom to help with a cooking project, science experiment, or art activity. Involvement is flexible so that families can help in the ways in which they are most comfortable.

Documenting children's learning

Each child has a binder that holds his or her drawings and written work. The children write about field trips, nature walks, assemblies, and weekend news. These collections document their growth. I share the binders with families at conferences in November and March, so they can see what their children have learned.





Children's Individual Research

In the spring, when the children were comfortable working more independently, during the theme Water Habitats and Their Critters, the first-graders researched their favorite water animals. Each child chose a critter to study. I gave the children specific information to research, in the form of questions: Where does it live? How does it move? How does it breathe? Are its babies born alive or hatched from eggs? To what animal family does it belong? What does it eat? Who are its enemies, and how does it protect itself?

Besides the many books in our classroom, the children used child-related online resources, encyclopedias, and other resource books from the library. They got input from family and friends. Bonnie's students, studying to become teachers, came to help the first-graders do their research. It was a learning experience for both groups!

There were options on ways to document their learning: the children could create games, dioramas, videos, models, or books or use other documentation methods they came up with. Families contributed, perhaps helping to find answers to the research questions or interviewing their child on videotape about the animal or aiding in the creation of a papier-mâché model.

As I observed the children's presentations, I was impressed by the knowledge they demonstrated. This approach is appropriate when the teacher provides structure and support for each child. Children truly enjoy one another's projects, and they remember their animal for years!

Bibliography for the Theme "Everything Changes"

These are the books I use during the Everything Changes theme. Some are read to gather information and others are read for enjoyment. They are available for children to look at throughout the study.

Allen, M., & S. Rotner, *Changes* (1995, Demco Media)
Amery, H., *What's the Difference? Then and Now* (1986, Edc Publishers)
Bartone, E., *Peppe the Lamplighter* (1993, HarperCollins)
Benchley, N., *Sam the Minuteman* (1987, HarperCollins)
Berger, G., *Grandfather Twilight* (1984, Philomel Books)
Brown, R., *If at First You Do Not See* (1983, Henry Holt)
Browne, A., *Changes* (1993, Walker)
Coerr, E., *The Josefina Story Quilt* (1989, HarperCollins)
dePaola, T., *Charlie Needs a Cloak* (1982, Simon & Schuster)
Donnelly, J., *Titanic: Lost and Found* (1987, Random House)
Dubowski, M., *Titanic: The Disaster That Shocked the World* (1998, DK Publishers)
Eastman, P., *Sometimes Things Change* (1983, Childrens Press)
Elliott, J., *Grandfather's Ghost* (1989, Rigby Education)
Gilman, P., *Something from Nothing* (1993, Scholastic)
Hall, D., *Ox-Cart Man* (1983, Penguin USA)
Houston, G., *My Great-Aunt Arizona* (1992, HarperCollins)
Humphrey, P., *In Dad's Day* (1995, Steck Vaughn)
Humphrey, P., *In Grandma's Day* (1995, Steck Vaughn)
Jackson, E., *Turn of the Century* (1998, Charlesbridge)
Jonas, A., *Round Trip* (1983, HarperCollins)
Joyce, W., *George Shrinks* (1991, HarperCollins)
Levitin, S., *Nine for California* (2000, Scholastic)
Mathieu, J., *The Olden Days* (1981, Random House Children's Books)
Millard, A., *A Street Through Time* (2006, Dorling Kindersley)
Philipson, M., *Everything Changes* (1972, Pantheon Books)
Polacco, P., *The Keeping Quilt* (2001, Simon & Schuster)
Root, P., *The Name Quilt* (2003, Farrar, Straus, Giroux)
Rylant, C., *Birthday Presents* (1991, Scholastic)
Rylant, C., *When I Was Young in the Mountains* (1993, Penguin Books Australia)
Shannon, G., *Tomorrow's Alphabet* (1996, HarperCollins)
Shelby, A., *Homeplace* (2000, Tandem Library Books)
Spedden, D.C.S., *Polar, the Titanic Bear* (2001, Little Brown)
Taback, S., *Joseph Had a Little Overcoat* (1999, Viking)
Weiss, N., *An Egg Is an Egg* (1996, Tandem Library Books)
Wilder, L.I., *Winter Days in the Big Woods* (1995, Sagebrush Education Resources)
Wilder, L.I., *A Little House Birthday* (1997, HarperCollins)
Willis, J., *What Did I Look Like When I Was a Baby?* (2000, G.P. Putnam)
Ziefert, H., *A New Coat for Anna* (1988, Random House)

Start to Finish series

Hogner, F., *From Blueprint to House* (1986, Carolrhoda)
Mitgutsch, A. (Carolrhoda Books): *From Beet to Sugar* (1986), *From Cacao Bean to Chocolate* (1981), *From Sand to Glass* (1981), *From Graphite to Pencil* (1985), *From Sea to Salt* (1985), *From Grass to Butter* (1981)
Mitgutsch, A., *From Grain to Bread* (1981, Lerner Publishing)

Books about how things are made

Aliki, *How a Book Is Made* (1986, Crowell)
Barabas, K. *Let's Find Out About Money; Let's Find Out About Toothpaste* (1997, Scholastic)
Charles, O., *How Is a Crayon Made?* (1988, Simon & Schuster Books for Young Readers)
Davis, W., *From Tree to Paper* (1995, Sundance Publishers)
Ellis, G., *From Sand to Glass* (1995, Sundance Publishers)
Jones, G., *My First Book about How Things Are Made* (1995, Cartwheel Books)
Reid, M.E., *Let's Find Out About Bicycles* (1997, Tandem Library Books)
Reid, M.E., *Let's Find Out About Ice Cream* (1997, Scholastic)

Variations on the Three Little Pigs

Celsi, T., *The Fourth Little Pig* (1996, Steck-Vaughn)
Kellogg, S., *The Three Little Pigs* (1997, HarperCollins)
Laverde, A., *Alaska's Three Pigs* (2000, Sasquatch Books)
Lowell, S., *The Three Little Javelinas* (1992, Northland Publishers)
Marshall, J., *The Three Little Pigs* (1996, Penguin Group USA)
Rounds, G., *Three Little Pigs and the Big Bad Wolf* (1992, Holiday House)
Scieszka, J., *The True Story of the Three Little Pigs! by A. Wolf* (1996, Penguin Group USA)
Trivizas, E., *The Three Little Wolves and the Big Bad Pig* (1997, Simon & Schuster)
Walton, R., *Pig, Pigger, Piggest* (2003, Sagebrush Education Resources)

Books about people

Adler, D. (Holiday House): *A Picture Book of Benjamin Franklin* (1990), *A Picture Book of Martin Luther King, Jr.* (1989)
Aliki, *The Many Lives of Benjamin Franklin* (1977, Prentice Hall), *A Weed Is a Flower: The Life of George Washington Carver* (1988, Tandem Library Books)
Baker, C., *Let's Read About Rosa Parks* (2004, Scholastic/Cartwheel)
Bridges, R., & G. Bridges, *Let's Read About Ruby Bridges* (2003, Scholastic)
Colbert, J., & A. Harms, eds., *Dear Dr. King* (1998, Hyperion Books for Children)
Coles, R., *The Story of Ruby Bridges* (1995, Scholastic)
Driscoll, L., *George Washington Carver: The Peanut Wizard* (2003, Grosset & Dunlap)
Greene, C., *Martin Luther King, Jr.: A Man Who Changed Things* (1989, Scholastic Library)
Hamanaka, S., *All the Colors of the Earth* (1994, HarperCollins)
Intrater, R.G., *Two Eyes, A Nose, and a Mouth* (2000, Tandem Library)
Katz, K., *The Colors of Us* (1999, Macmillan)
Kissinger, K., *All the Colors We Are* (1994, Redleaf Press)
Krensky, S., *Benjamin Franklin and His First Kite* (2002, Simon & Schuster Children's Books)
Longfellow, H.W., *Paul Revere's Ride* (2003, HarperCollins)
Marzollo, J., *Happy Birthday, Martin Luther King* (2000, Scholastic)
Murphy, F., *Benjamin Franklin and the Magic Squares* (2001, Random House)
Patrick, D.L., *A Lesson for Martin Luther King, Jr.* (2004, Simon & Schuster Children's Books)
Rappaport, D., *Martin's Big Words* (2007, Hyperion Books for Children)
Roop, C., & P. Rope, *Go Fly a Kite, Ben Franklin* (2003, Scholastic)

Children continually reflect on their own work and their learning. For example, the children think about their learning styles (see "Myself As a Learner," below). Before the March conferences, they write about what they like best about first grade and what they are really good at in school, then what they need to work on more, and next what they would like the teacher to tell their families about themselves and school. These documents too go into their binders. The children enjoy looking through their binders throughout the year to revisit past experiences and see their own progress. At the end of the year, the binders go home with them.

Myself As a Learner

Name:_____ Date:_____ Grade___

Please draw a face to show how you feel about the following sentences.

If you feel this way often draw: ☺

If you feel this way sometimes draw: 😐

If you never feel this way draw: ☹

1. I like to find things out for myself. I am curious.	
2. I like to read. (I read alot on my own; I enjoy library books.)	
3. I like other people to read to me.	
4. I like to share my ideas by: talking	
drawing	
writing	
5. When I'm reading or writing and I don't know a word I try to figure it out myself and keep on going.	
6. I keep working at things even when they're hard.	
7. I like to do math.	

The children tell their own stories, bringing together their learning, skills, experiences, interests, and home cultures.

The children enjoy looking through their binders throughout the year to revisit past experiences and see their own progress.

Families and school administrators support the integrated curriculum approach because it has proven successful. Children in my class get excited about learning and *want* to read and explore. We discuss connections between the things we've studied to help give meaning to their world. At the end of the year, they keep three special documents: their writing binder, with an overview of their year; their Themes and Authors book, with theme bibliographies and their own reviews of their favorite book in each theme; and their Riddle and Poem Anthology, with copies of the poems and songs they learned as well as pages of the weekly riddles-a-day.

Weaving a tapestry

Weaving a tapestry is one way to describe the teaching and learning in an integrated curriculum. Start with the warp—the fixed strands on a loom. These are the big ideas, the knowledge, skills, and concepts children must understand, acquire, and internalize. They are the values and beliefs we hope they will embrace, the foundation for their future success. These are the starting point for the tapestry.

Teachers provide the threads—activities, resources, materials, books, and instruction. Children add their own colors and textures. The themes are the patterns the children weave; they form the overall design. As the year progresses, children's skills develop and their knowledge increases. Early learning standards tighten the weaving. The tapestries take shape.

What do the final tapestries look like? Through the designs the children tell their own stories, bringing together their learning, skills, experiences, interests, and home cultures.

Conclusion

We've found that a classroom using an integrated curriculum is a great place for teachers as well as for children. Learning and teaching are more meaningful and interesting when they evolve around concepts rather than pages in a workbook.

Like weaving, learning takes time, patience, effort, skill, and attention. Children are curious, interested, and deeply involved. The process can open a child's mind to discovery and knowledge. The search for answers is ongoing and exciting.

An integrated classroom at the primary level is filled with intricate tapestries woven by the teacher and the children as they create together. The weavers can enjoy, use, and build on their learning throughout life.

References

Hinde, E. 2005. Revisiting curriculum integration: A fresh look at an old idea. *The Social Studies* 96 (3): 105–11.

Maynard, C. 2001. *Kitchen science.* New York: Dorling Kindersley.

Shonkoff, J.P., & D.A. Phillips, eds. 2000. *From neurons to neighborhoods: The science of early childhood development.* A report of the National Research Council. Washington, DC: National Academies Press.

Wolfe, J. 2000. *Learning from the past: Historial voices in early childhood education.* Alberta, Canada: Piney Branch Press.

Wortham, S. 1996. *The integrated classroom: The assessment-curriculum link in early childhood education.* Upper Saddle River, NJ: Prentice Hall.

The Gittings Group News
January 27, 2006

Greetings! We've had a very busy week! On Wednesday Haley's baby sister, Grace, came to visit with her mom. Grace is 7 months old. We measured her length, her foot length, and her head circumference and compared them with our own. It was very interesting! Visiting babies also give us a chance to talk about what they can and can't do yet (walk, talk, etc.) and what they like to do and eat. It helps the first graders put in perspective the CHANGES in their own lives. We also talk a little about brain development and why babies put everything in their mouths to explore it! Thanks, Lisa, for bringing in Grace! Here's a tidbit of information... When Rebecca was a baby SHE was the one we measured when her sister, Abby, was in my classroom!!! Now SHE has CHANGED!

We've done several really cool science experiments this week as well as documenting the changes in our own. One of our favorites was the cabbage juice - baking soda - vinegar one. See if your child can tell you about it!

We also looked at surface tension in an experiment called "Nervous Colors" -- I'll attach a "recipe" for that one. The next day we made our own magnifying lenses with a drop of water on waxed paper. We put the waxed paper on top of a piece of newspaper so we could see the words. The surface tension held the drop of water in a little ball and magnified the words! Pretty cool!

This week our focus was on Benjamin Franklin, a fascinating fellow! He did so many different things in his life that our author, Aliki, titled her book The Many Lives of Benjamin Franklin. His experiments with electricity are legendary (they even made it into our riddles!).

We're also looking at many versions of The Three Pigs to see how one story can CHANGE! We have some great versions!

Another really neat thing we did this week was to total the number of jumps everyone did in PE with jump ropes. Mrs. P. . wrote down everyone's jump number then each child collected that number of unifix cubes and put them in groups of tens and ones. Then we sat in a big circle and collected each child's sets of cubes, adding them together to build the total. All together the class did 442 jumps! WOW! Actually DOING the collecting, moving from ones to tens to hundreds, helps the nebulous math concepts make sense. It was pretty amazing!

We're anxious to graph the information on who was President when each generation of your family was born. We still need a few more papers to do so. Keep "tuned" for further info!!!

We worked on birthday graphs this week as well. It's a very interesting spread with some very sweet faces!

Have a great weekend. I can't believe we're at the end of January! We'll do our CHANGES documentation one more week... very interesting!

Susan Gittings