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A Literature-Based Thematic Unit
for a Multi-Age Classroom

A Graduate Project
Submitted to the
Department of Curriculum and Instruction
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of the Requirements for the Degree
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Diane C. Beard
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Abstract

The development of a literature-based integrated science unit for a multi-age classroom of 6- to 8-year-olds is based on a review of professional literature and a search of library materials for children. The integrated science unit on Iowa Owls and Bats allows children the opportunity to study animal life in their neighborhood, thus developing a better understanding of the real world around them. The print rich environment with a whole array of literature genres and developmentally appropriate expressive activities gives the children a secure and predictable environment in which to learn and grow socially, mentally, emotionally and physically. This integrated thematic unit allows children the opportunity to make connections in all areas of learning.

Many school districts in the United States have examined their classroom organizations and have decided to change from a traditional single grade classroom to a multi-age organization which is heterogeneously grouped and ungraded. A multi-age classroom is populated by children of different ages and abilities working together with no grade level distinction. The curriculum is developmentally appropriate and is integrated in order to foster the growth of the total child--socially, emotionally, physically and cognitively (Anderson & Pavan, 1993; Gustad, 1992; Katz, Evangelou, & Hartman, 1990). This type of classroom organization can provide for learning experiences across all areas of the curriculum. Calkins (1992) states, "Other major benefits of this classroom organization is that it provides choice for the students and the students can often stay with the same teacher for more than one year which provides for more effective communication" (p. 8).

Such a school organization can lead to a feeling of community, fostered by children of different ages and abilities working together in a thematic unit that integrates the areas of the curriculum. To have a successful multi-age classroom, the instructional design should be focused on an integrated thematic curriculum supported by the different literature genres. This integrated curriculum can provide real-life experiences that are meaningful to children (Kovalik, 1994). Referring to an

integrated curriculum, Anderson and Pavan write, "There is a more personal involvement of students and teachers with these units, thus students have the opportunity to learn and use the skills of learning to learn. Students also have more time for trial and error as they perfect their skills" (p. 115). A literature-based thematic instruction should focus on offering a literature rich experience and whole units of language which provide children structure so they can create meaning from their experiences (Harms & Lettow, 1992).

Multi-Age Classroom Organization

Historical View

The study of multi-age classrooms yields many insights that have assisted this teacher in developing such a program for young children. The multi-age classroom is not a new school organization concept. In the 1800s, multi-age classes existed. They offered peer and cross-age tutoring, cooperative learning, and opportunities for more effective relationships to develop (Uphoff & Evans, 1993). Then in the 1960s and 1970s, the concept of open classrooms and multi-age grouping emerged again. However, the curriculum from the graded schools was still used which caused problems (Anderson & Pavan, 1993). Uphoff and Evans (1993) noted that parents related negatively to these organizational innovations for there was a mismatch between curriculum

expectations and methods and materials. Also, many adults could not tolerate the noise that freedom of children's movement in the classroom created; they assumed that children had a similar problem. These problems eventually caused the open classroom, or multi-age grouped classrooms, to disappear.

Contemporary View

The concept of multi-age classrooms has made many changes from those which failed in the 1960s and 1970s. More in-depth understanding of developmentally appropriate school programs has emerged. From these studies concerning children's learning strategies, researchers have concluded that teachers and other educational professionals need to take into consideration the total growth of individual children. Anderson and Pavan (1993) state, "No two children arrive at school with identical dispositions to learn" (p. 33). Katz et al. (1990) suggest that many factors contribute to the varied abilities of children, such as past experiences, psychological and physical development, individual interests and abilities, and the types of materials presented in the school program.

Many studies have been conducted to look at the effectiveness of nongraded and graded programs. Anderson and Pavan (1993) summarized 64 research studies conducted from January 1968 to December 1990, comparing nongraded and graded

students. The results indicate that nongraded students frequently achieve better academic scores on standardized measures. The mental health and school attitude of the nongraded students were observed to be positive. Boys, African Americans, underachievers, and students of lower socioeconomic status were more likely to perform better and feel more positive toward themselves and their school in a nongraded environment.

Miller (1990) reviewed 21 quantitative studies comparing the effects of multi-age grouping with single grade classrooms and concluded: (1) A multi-age classroom does not negatively affect academic performance or student social relationships or attitudes. (2) A multi-age classroom is an effective organizational alternative to single instruction. (3) Students in multi-age classrooms out perform those in single grade settings.

The Virginia Education Association and the Appalachia Educational Laboratory (1993) suggest these reasons for implementing a multi-age classroom, "Currently trends in demographics and economics have motivated educators to consider school reorganization and consolidation to deal with the problems of uneven student distribution, limited instructional resources and inadequate facilities. Multi-age classrooms are often the results of such reorganization" (p. 91).

Elkind (1987) states the best strategy for dealing with age effect, and for giving the majority of children entering schools

a chance to develop a healthy self concept and to learn, is a multi-age grouping at the K-1 level, and perhaps throughout the elementary school years. Grant (1991) suggests, "A multi-age structure allows children to develop and learn in a nurtured way without being subjected to the artificial constraints and pressures imposed by traditional grade levels" (p. 17). Such a program requires the use of learning centers to provide options for learning, an integrated curriculum, cooperative learning, individualized instruction, and authentic assessment--all of which should be a part of a developmental approach under any circumstance.

Integration of the Curriculum in a Multi-Age Classroom

Uphoff and Evans (1993) relate, "A multi-age nongraded classroom accommodates the development and abilities of a diverse group of students. In order for this accommodation to occur, a major change needs to be made in the instructional experiences. Integrating the curriculum is one means" (p. 36). Routman (1991) suggests using the major concepts and the learning processes together in an integrated unit so children can connect prior knowledge and relate it to new knowledge. "This type of learning can develop lifelong learners." (Kovalik, 1994; Drake, 1993).

Recent research indicates that the human brain searches for patterns and interconnections as a way for making meaning. Caine

and Caine (1991) suggest that if humans learn through making connections, school programs should offer opportunities to engage in such processes. "Thematic units can assist in linking children's learning across the curriculum" (Lipson, Valencia, Wixon, & Peters, 1993, p. 252). Such linkage is supported by a rich learning environment and adequate time periods for students to make connections (Kovalik, 1994).

Integrated Language Arts and Science Areas

In examining the science curriculum in the elementary school, educators need to keep in mind that children are naturally curious about the world around them, and many of them are inherently interested in science (Main, 1984). Fisher and Fisher (1985) write, referring to the integrating of the language arts and science, "Reading, writing, and science are or should be inseparable because the science activities introduce children to a particular way of looking at the natural world and also help them gain the skills they need as readers and writers" (p. 23).

Basing the content of a unit on science concepts can connect science knowledge with other domains such as language, social studies, and mathematics. The relevance of ideas becomes clearer to children as they are viewed from multiple perspectives and in greater depth (McDonald & Czerniak, 1994). Bybee and Landers (1988) state, "Depth rather than breadth in the

curriculum allows students the time needed to develop richer interpretations of their world" (p. 37).

Integrated Science Unit: Iowa Owls and Bats

After reviewing the professional literature on multi-age classroom organization, the writer extrapolated this study to the development of a literature-based thematic unit that integrates the language arts and science areas. The process of integrating literature-based language arts into the science area was explored for a multi-age classroom of children ages 6 to 8 years old. The science topic was Iowa Owls and Bats, a study of animal life in childrens' neighborhoods. Such a unit can assist children in developing a better understanding of the world around them.

The goal of the multi-age heterogeneously grouped classroom is to create a learning environment that enables children to have experiences with many hands-on experiences and to share the knowledge they created with others. The learning environment is characterized as print rich with a whole array of literature work representing the genres of literature and related expressive activities. These different genres provide children with choices of structures in which to create meaning and to develop a more in-depth understanding of the owls and bats. Experiences with poetry along with fiction and nonfiction will be presented to enhance the children's learning.

Several teacher-selected sessions are planned. Examples are: field trips to the Rapture Center and Indian Creek Nature Center, speakers from the Department of Natural Resources, and films that focus on the theme. Literature-based learning centers, sustaining and specific to the unit, have been developed to provide expressive activities and to extend the children's learning throughout the unit. Careful consideration was given to provide developmentally appropriate activities.

Sustaining Centers

These centers provide a secure, predictable learning environment. Their contents support the current unit.

Reading/Listening Center.

Stories and accompanying cassette tapes representing the different genres and reading levels of the students in the multi-age classroom have been collected to support the unit. A resource folder of collected articles and photographs from various newspapers and magazines can also provide further information. This center can offer the opportunity for the children to hear stories as they follow along in the books. It can also provide flannelboard pieces, masks, and puppets with which children can retell a story or re-enact a story through dramatization. Examples of works that can be included are:

Fiction

- Cannon, Janell. (1993). Stellaluna, New York: Harcourt Brace.
- Lobel, Arnold. (1975). Owl at Home, New York: HarperCollins.
- Lesser, Carolyn. (1984). The Goodnight Circle, San Diego: Harcourt Brace.
- Yolen, Jane. (1987). Owl Moon, Ill. John Schoenherr. New York: Philomel.

NonFiction

- Cutts, David. (1979). I Can Read About Creatures of the Night, Ill. Jean Chandler. New York: Troll.
- Houk, Randy. (1993). Ruffle, Coo and Hoodoo, Fairfield, CT: Humane Society of the United States.
- Warren, Elizabeth. (1975). I Can Read About Bats. Ill. Norman Nordel. New York: Troll.

Poetry Center.

Poems with images of owls, bats and other night animals can be presented in this area. Some of the poems will be taped so the children can listen to them and eventually can recite them from memory. Poems selected for this center can be from the following authors:

Livingston, Myra Cohn. (1990). If the Owl Calls Again: A Collection of Owl Poems. New York: Elderry.

Five Owls: Finger Puppet Poem. (1989). New York: Macmillan.

Author Center.

Joanne Ryder's work, Step Into the Night, (New York: Four Winds, 1988) can be the focus of the center. Other nature books to accompany this work supporting the study of nocturnal animals can be:

Bunting, Eve. (1991). Night Tree. San Diego: Harcourt Brace.

Crump, Donald J. (1983). Creatures Small and Furry. National Geographic Society.

Grange, Rita. (1986). Now You Can Read About . . . Creatures of the Night. New Market, England: Brimax.

Kendall, Cindy. (1995). Bats. New York: Dial.

Lesser, Carolyn. (1984). The Goodnight Circle. San Diego: Harcourt Brace.

Rinard, Judith. (1977). Creatures of the Night. New York: National Geographic Society.

Tejima, Keizaburo. (1987). Fox's Dream. New York: Philomel Books.

Interesting Object Center.

An exhibit of ceramic and stuffed owls, bats and nocturnal animals, a beaver stump, pelts from various animals, and owl

feathers from different species can be examined--allowing the children to observe, compare and classify.

Bookmaking Center.

This center can provide the necessary materials for children to create their own books during the unit.

Centers Specific to the Unit

These centers are designed specifically for the unit of study. Each center can offer literature experiences and related expressive activities to extend the unit through the integration of the language arts and the science areas.

Animal Habitats.

Goal: To identify different habitats of owls, bats, and other night animals.

Literature Experience:

Listen to/read these books about animal habitats:

Rowland-Entwistle, Theodore. (1978). All About Animal Homes, New York: Nutmeg.

Van Norman, Karen. (1992). Awesome Owls, The Minnesota Volunteer, 55, (Sept./Oct.), 30-39.

Weiner, Eric. (1993). Owls Explorer Books, New York: Parachute.

Dabovich, Lydia. (1988). Busy Beavers, New York: Scholastic.

Dewey, Jennifer. (1989). Can You Find A Book About Animal Camouflage, New York: Scholastic.

Expressive Activity:

1. Choose a night animal, either an owl or a bat, and construct a diorama illustrating their natural habitat.
2. Draw a picture of the habitat of an owl or a bat.

Thumbprint Creatures.

Goal: To explore the making of animals from thumbprints.

Literature Experience:

Look at or read the thumbprint book.

Krauss, Ruth. (1967). This Thumbprint, New York: Harper & Row.

Expressive Activity:

1. Make a number booklet from 1-10 by creating animals for each number from your thumbprints.
2. Make a mini addition or subtraction booklet by using your thumbprints. Let a friend write the answers for your problems.

Puzzling Pellets.

Goal: To examine owl pellets to further an understanding of what owls eat.

Literature Experience:

Listen to/read these books about owls:

- Cooper, Ann C. (1994). Owls On Silent Wings, Denver Museum of Natural History. Denver, CO: R. Rinehart.
- Miller, Claire. (1991). Owls, Ranger Rick, 25, 12-15.
- Van Norman, Karen. (1992). Awesome Owls, The Minnesota Volunteer, 55, (Sept./Oct.), 30-39.

Expressive Activity:

1. Choose a friend to work with you in examining an owl pellet. You will need a toothpick and a magnifying glass.
2. Describe through writing what you found.

Bat Builders.

Goal: To examine the skeletal structure of the bat.

Literature Experience:

View/read these books about bats and their skeletal system:

Colombo, Luann. (1995). The Bat Book, Hong Kong: Becker & Mayer.

Livaudois, Madeleine & Robert Dunne. (1972). The Skeleton Book: An Inside Look at Animals, New York: Walker.

Weekly Reader. (1994). Bats Help People, 72, (October 28), 1-4.

Zoobooks. (1994). Bats, San Diego: Wildlife International.

Expressive Activity:

1. Using the bat model, assemble the bat skeleton.
2. Label the parts of the bat according to the Weekly Reader diagram.

WWhoos Reporting.

Goal: To research and report on a specific species of bats or owls as nocturnal animals.

Literature Experience:

Read/view these books on owls and bats:

Owls

Brown, Vee. (1995). Animal Lore and Legend Owl, New York: Scholastic.

Coldrey, Jennifer. (1988). The Owl in the Tree, Milwaukee: Gareth Stevens.

Garelick, May. (1975). About Owls, New York: Four Winds.

Greenway, Frank. (1991). Amazing Bats--Eyewitness Junior Book, New York: Knopf.

Bats

Kaufmann, John. (1972). Bats In The Dark, New York: Crowell.

Milton, Joyce. (1993). Bats: Creatures of the Night, New York: Grosset & Dunlap.

Parry-Jones, Jemima. (1992). Amazing Birds of Prey--
Eyewitness Junior Books, New York: Knopf.

Weiner, Eric. (1993). Owls--Explorer Books, New York:
Parachute.

Expressive Activity:

1. Select either a species of owls or bats and write a report; include size, colorings, habitat, food source, and any other important information that you find interesting.
2. Create a drawing of the actual size of the animal.
3. Make a mobile of bats using the patterns provided or be creative and draw your own patterns.
4. Illustrate the food chain of an owl or bat for a poster.

Conclusions

The development of this integrated literature-based thematic unit connecting the language arts and sciences for a multi-age classroom will assist children in making connections to the real world. It provides a chance for all children to succeed. The print rich environment along with the developmentally appropriate and varied expressive activities give children the opportunity to explore concepts and engage in the functions of language.

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