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## Providing a rich learning environment through a literature-based unit across the curriculum : gardens and gardening

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## Providing a rich learning environment through a literature-based unit across the curriculum : gardens and gardening

### Abstract

A literature base with related expressive activities from the language arts and graphic and performing arts can support an integrated instructional study. As a result, personal-social and thinking-language abilities can be nurtured. This specific literature base on gardens and gardening was developed for at-risk children in a multi-age classroom (grades 2-3).

Providing a Rich Learning Environment  
Through a Literature-Based Unit  
Across the Curriculum:  
Gardens and Gardening

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## Abstract

A literature base with related expressive activities from the language arts and graphic and performing arts can support an integrated instructional study. As a result, personal-social and thinking-language abilities can be nurtured. This specific literature base on gardens and gardening was developed for at-risk children in a multi-age classroom (grades 2-3).

As an elementary teacher of a multi-age group of second and third graders, I have asked myself: How can I present the reading and writing processes to at-risk children and help them create meaning out of their lives? How can I nurture their sense of ownership of the reading and writing processes? First, the characteristics of at-risk children need to be considered. Then, ways to implement experiences with the reading and writing processes that are meaningful to these children need to be explored. One way to encourage children's involvement in the language processes is to organize a classroom into a literature-based environment representing many genres, thus facilitating a rich learning environment for children.

#### Characteristics of At-Risk Students

The term "at-risk" has a multitude of meanings. Most students are at-risk in some aspect of their learning or at some time in their lives. Students who are at-risk are doing poorly in academic and personal-social areas of their lives (Bartusek, 1989). Usually more than a single factor is present to threaten normal development. Some of the educational factors include low achievement, behavioral problems, and enrollment in a school with a large number of poor students (Slavin, 1989). Students may be at risk in one school environment and not in another (Richardson, Casanova, Placier, & Guilfoyle, 1989). Studies of at-risk students conclude that by the time they are in third grade, it

can be predicted with much accuracy which ones will complete school and which will drop out of school unless changes are made in their instructional environment (Slavin, 1989).

Home and community factors can contribute to students being at-risk socially, emotionally, and academically. Family factors contributing to a child being at-risk are highly mobile, non-traditional lifestyles and single parent families. Other family risk factors are the lack of language interaction in the home and the age and marital status of the mother (Richardson et al., 1989).

#### At-Risk Students and Reading

Although national tests have indicated that children, in general, are reading as well as in 1970, substantial numbers of students in elementary and secondary schools have difficulties with reading. The National Assessment for Education Progress found that 60% of the 17-year-olds who were assessed in 1988 did not have adept reading skills and were thought to be at risk as they became adults in a society that depends on the ability to get meaning from various forms of written language (Mullis & Jenkins, 1990).

Substantial differences in reading performance have been found at grades 4, 8, and 12 related to socioeconomic status and ethnicity. For example, twelfth-grade students from disadvantaged urban schools performed, on average, below the level of

eighth-grade students from advantaged urban schools. African- and Hispanic-American students performed less well than Caucasian students at all three grade levels assessed (Langer, Applebee, Mullis, & Foertsch, 1990).

The difference in performance levels between better and poorer readers has been found to remain constant at each grade. This suggests that schools have not been successful in their attempts to help lower-achieving students find success (Langer et al., 1990).

Effective reading intervention programs for children have long been an interest to educators. Early intervention programs focusing on authentic reading and writing experiences have been implemented to accelerate the literacy of linguistically-delayed children. These programs have demonstrated that most children can be prevented from experiencing failure in school (Slavin & Madden, 1989; Stanovich, 1986).

Students who are at-risk vary in their developing language abilities. Some are successful in learning to read while others are delayed. The latter may continually struggle with reading and eventually become alienated to school life. Others may develop some cognitive abilities. Children's lack of control over the reading process often leads to feelings of inferiority. To experience control over their own reading processes, at-risk students need to know how to assess a reading task, make plans



for reading, and learn how to construct meaning from reading (Vacca & Paduk, 1990).

Schools can offer hope for linguistically-delayed children. Many elements of a classroom program can support at-risk children's emerging literacy. If children seldom see their family members reading, which is often the case of at-risk children, then the teachers need to serve as models. They need to also encourage parents to involve the family in reading activities. Children benefit from observing their peers, older students, and teachers enthusiastically reading if they are to become readers (Edwards, 1995).

Classroom teachers can create a positive language environment by reading aloud daily and by providing a whole array of literature-based activities. For beginning reading experiences, many at-risk children benefit from quality predictable books that can engage them in successful prediction activities. Several types of predictable books are available (Huck, Hepler, Hickman, & Kiefer, 1997). For my reading program, the best books I have found to use at the primary level are repetitive sequential books.

For at-risk students, instruction in reading that can make a difference needs to focus on comprehension, creating meaning while engaged in the reading process. Such an instructional program emphasizes quality literature experiences to which these

children can relate. Many at-risk students have difficulty comprehending beyond the literal understanding of the text. They need to have opportunities to find clues to do inference-making. Strategies for aiding comprehension include activities preceding, during, and after reading. Before reading a selection, with the support of the teacher, the students can preview the text, build background, and set purposes for reading. During reading, students can check for understanding and integrate new concepts with existing knowledge. After reading, activities such as making summaries, retelling the story, evaluating ideas in the story, and applying their ideas in other situations can strengthen the comprehension of the piece (Bergman & Schuder, 1992; Flood & Lapp, 1990).

To extend the comprehension of a text, opportunities need to be provided for children to respond with the ideas they have created. Such responses can be given in discussion and conferences and by pursuing other reading on a theme or type of literature. Also, a whole array of expressive activity, both in the language arts and the graphic and performing arts, can be offered (Harms & Lettow, 1992). As children gain reading ability, their success promotes self-esteem and achievement across the curriculum. They can develop positive attitudes towards school, for they can participate successfully in the school community.

Imagine such a classroom in which children are engaged in the reading process and then can connect with the composition processes--speaking and writing--and other modes of expression. Walk into a classroom in which most of the at-risk children are destined to succeed in learning to read and write and what do you see? A print-rich environment with many types of literature and other related expressive activities, along with evidence that the teacher and the children read and write. Stay in that classroom as the children enter and the school day begins, and notice that the children are excited, know the routine, and work in a productive manner. The teacher encourages and supports the students' business of learning. Throughout the day, the teacher reads aloud to the students and guides them in discussions of their literature experiences. The children are engaged in a multitude of reading and expressive activities, which includes writing in all areas of the curriculum. Children are experiencing the genuine functions of language as they read and write across the curriculum and share these experiences with real audiences. The children have opportunities to interact with their peers and the teacher to reflect upon their progress in gaining reading and writing abilities and their instructional needs. Thus, instruction and assessment are closely linked.

Children who are successful at becoming literate view reading and writing as authentic activities from which they get

information and pleasure and by which they communicate with others. They know the purposes of the reading and writing processes.

#### A Literature-Based Unit Extended Across the Curriculum:

##### Gardens and Gardening

This literature base for the study of gardens and gardening in a multi-age classroom (grades 2-3) will enable the language arts and graphic and performing arts to be extended across the curriculum to the social studies and science areas. The science area will provide content for the language arts and graphic and performing arts. Because this class assignment has many at-risk children, these areas of the curriculum can assist in developing personal-social abilities that are important goals of the social studies: developing self-esteem, collaborating with others to nurture and appreciate the environment, gaining the experience of setting a goal to foster a life cycle and then carrying out the goal, and experiencing through one's efforts that destiny can be affected.

This literature base will supply content, models of language, and expressive activities from the language arts and the graphic and performing arts for a long-term unit (spring, summer, fall), for the school is in session year round. The literature base with related expressive activities offers many

options for children's learning experiences and flexible grouping--whole class, small group, pair, and individual.

#### Introduction of the Unit

To introduce this integrated unit on gardens and gardening, the teacher can introduce the overall science concept of the life cycle of plants in gardens through reading aloud these picture books.

Titherington, Jeanne (1986). Pumpkin, pumpkin. New York: Greenwillow.

Hughes, Monica (1996). A handful of seeds. Luis Garay, (Il.), New York: Orchard.

Before or after the above read-aloud experiences, the class can assist the teacher in beginning a concept web on the life cycle of a garden in the North Central region of the United States. The teacher can also share aloud these picture books:

Schertle, Alice (1991). Witch hazel. Margot Tomes, (Il.), New York: HarperCollins.

Tamar, Erika (1996). The garden of happiness. Barbara Lambase, (Il.), San Diego: Harcourt Brace.

These four picture books also supply a multicultural view of gardening.

The webbing for the gardens and gardening unit can be developed into a circle to portray the life cycle of garden plants (vegetables, fruits, and flowers). A chart with the

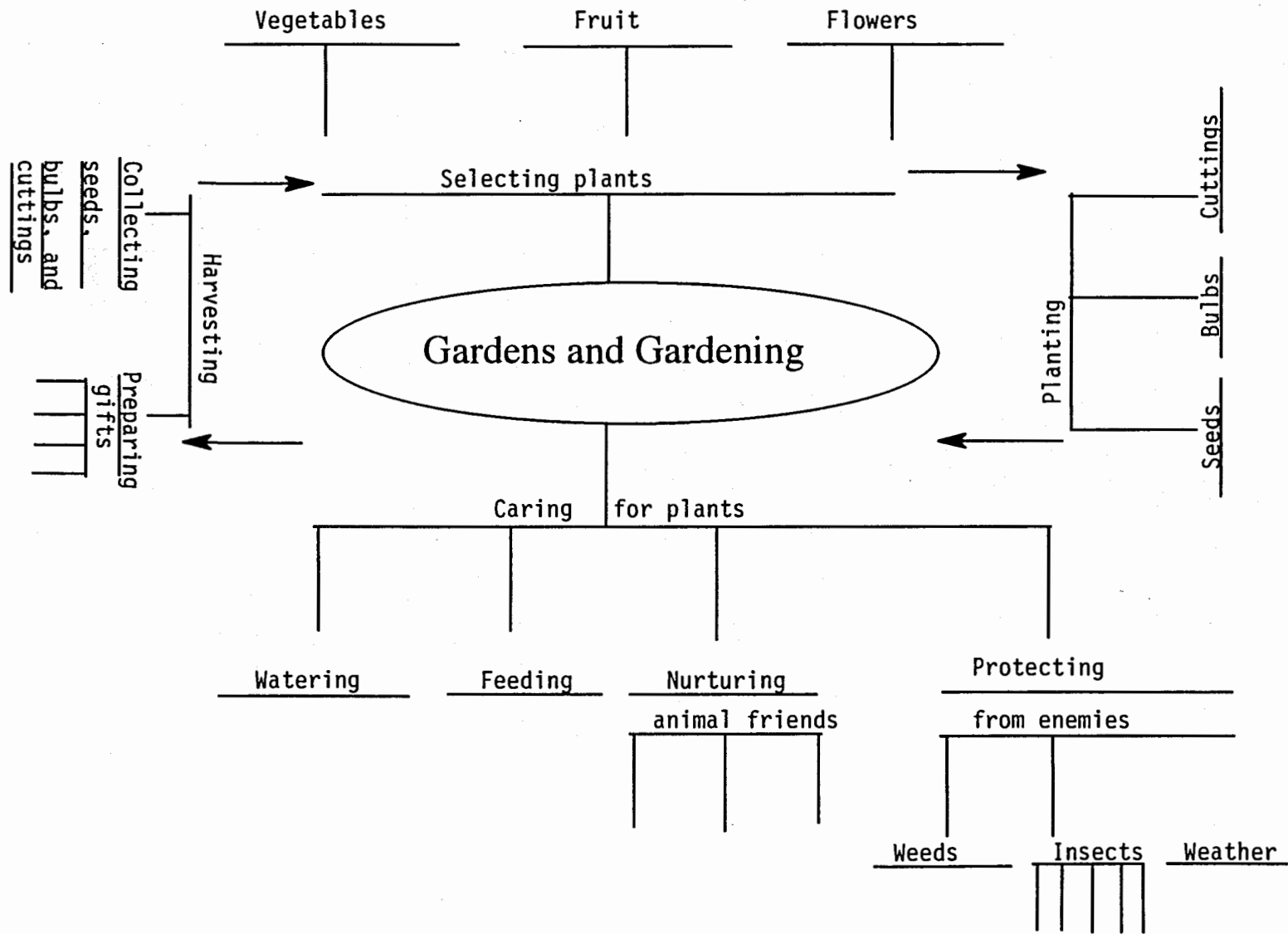
concepts can be created to allow for reference--concepts, vocabulary, and spelling--and secondary and tertiary entries (see Figure 1). As each segment of the web is experienced, a representative photograph of the children involved in the study's activity can be added.

To supplement the circular web, each segment can be developed on the pages of a chart pad with secondary and tertiary concepts and related vocabulary listed. Summaries of related activities and photographs can be included.

To further demonstrate the circular nature of the unit, an ongoing book can be developed with each section explaining the activities with accompanying illustrations--drawings and photographs--of each major segment of the web. The circular nature of this study can be extended by continuing with the next school year's study (e.g., collecting at the end of the current year to selecting at the beginning of next year).

Many other teacher-directed lessons can be presented to small groups of children or to the entire class: for example, planning the garden, organizing the students to care for the garden, using a table of contents and an index, following directions for bookmaking, and learning form elements as they are needed in writing throughout the unit. Each child during the unit study can add words that are needed in writing to his/her spelling book.

Figure 1  
Circular Web of Gardening



### Learning Centers

Many of the options for student learning can be provided through literature experiences and related expressive activities in learning centers. Two types of centers--sustaining centers and centers specific to the unit--can be presented. The sustaining centers are available throughout the school year. Their content changes as the units are introduced. They assist in providing a secure, predictable learning environment.

The activities in the centers can be shared with the class in displays, sharing times, and peer conferences and can be monitored by the teacher through these means and also through entries in students' journals, student-teacher conferences, and portfolio collection.

### Sustaining Centers

These centers provide content and models of language for the unit of study.

Listening/reading center. The different literature genres are presented in this center to enrich the unit study. Works representing a wide range of reading levels are included. Some works have accompanying teacher-made cassette tapes.

#### \*Information works

Bjork, Christina (1988). Linnea's windowsill garden. Lena Anderson, (Il.), New York: Farrar.



Brown, Marc (1981). Your first garden book. Boston: Little, Brown.

Cole, Henry (1995). Jack's garden. New York: Greenwillow.

Creasy, Rosalind (1994). Blue potatoes, orange tomatoes.

Ruth Heller, (Il.), San Francisco: Sierra Club.

Ehlert, Lois (1987). Growing vegetable soup. San Diego: Harcourt.

Ehlert, Lois (1988). Planting a rainbow. San Diego: Harcourt.

Ford, Miela (1995). Sunflower. Sally Noll, (Il.), New York: Greenwillow.

Gibbons, Gail (1991). From seed to plant. New York: Holiday.

Glaser, Linda (1996). Compost. Anca Hariton, (Il.), Brookfield, CT: Millbrook.

Godkin, Celia (1995). What about ladybugs? San Francisco: Sierra Club.

Hall, Zoe (1998). The surprise garden. Shari Halpern, (Il.), New York: Blue Sky.

Lauber, Patricia (1986). From flower to flower. Jerome Hehler, (Il.), New York: Crown.

Lerner, Carol (1998). My backyard garden. New York: Scholastic.

Rhoades, Diane (1995). Garden crafts for kids. New York: Sterling.

Waters, Marjorie (1988). The victory garden kids' book. Gary Mottan, (Il.), Boston: Houghton Mifflin.

Wilkes, Angela (1991). My first green book. New York: Knopf.

\*Fiction works (with tapes)

Bunting, Eve (1994). Flower garden. Kathryn Hewitt, (Il.), San Diego: Harcourt.

Ernst, Lisa Campbell (1991). Miss Penny and Mr. Grubbs. New York: Bradbury.

Garland, Sherry (1993). The lotus seed. Tatsuro Kiuchi, (Il.), San Diego: Harcourt.

Greenstein, Elaine (1996). Mrs. Rose's garden. New York: Simon & Schuster.

Lobel, Arnold (1984). The rose in my garden. Anita Lobel, (Il.), New York: Greenwillow.

Potter, Beatrix (1987). The tale of Peter Rabbit. New York: Penguin.

Ryder, Joanne (1992). Dancers in the garden. Judith Lopez, (Il.), San Francisco: Sierra Club.

Ryder, Joanne (1994). My father's hands. Mark Graham, (Il.), New York: Morrow.

Stewart, Sarah (1997). The gardener. David Small, (Il.), New York: Farrar.

\*Folk literature (with tapes)

Oppenheimer, Joanne (1992). One gift deserves another. Bo Zaunders, (Il.), New York: Dutton.

Stevens, Janet (1995). Tops and bottoms. San Diego: Harcourt.

Poetry center. Poems with images of the garden, both plants and animals, can be presented in the form of teacher-made posters, a chart pad of poems, or a booklet of poems taken from several sources. Suggested poets and their works are listed below:

Esbensen, Barbara (1995). Dance with me. Megan Lloyd, (Il.), New York: HarperCollins.

Kuskin, Karla (1980). Dogs and dragons, trees and dreams. New York: Harper & Row.

McCord, David (1980). Every time I climb a tree. Marc Simont, (Il.), Boston: Little, Brown.

McCord, David (1975). The star in the pail. Marc Simont, (Il.), Boston: Little, Brown.

Merriam, Eve (1992). The singing green. Kathleen Collins Howell, (Il.), New York: Morrow.

Moore, Lilian (1992). Adam Mouse's book of poems. Kathleen Gary McCord, (Il.), New York: Atheneum.

Moore, Lilian (1982). Something new begins. Mary Jane Dunton, (Il.), New York: Atheneum.

Worth, Valerie (1994). All the small poems and fourteen more. Natalie Babbit, (Il.), New York: Farrar.

The poetry forms--cinquain and concrete poetry--can be presented for composition activity.

Examples of cinquain are found in Livingston, Myra Cohn (1979). O sliver of liver. Iris Van Rynbach, (Il.), New York: Atheneum.

Form of cinquain:

Line 1: a word representing an image

Line 2: two words describing the image

Line 3: three words describing the image

Line 4: four words describing the image

Line 5: a word representing the image on Line 1

Examples of concrete poetry are found in these volumes:

Froman, Robert (1974). Seeing things. New York: Crowell.

Graham, Joan Bransfield (1994). Splish splash. Steven Scott, (Il.), New York: Ticknor & Fields.

Form of concrete poetry: Words associated with the shape of an image. Directions: Select an image from the garden; create the shape with words or arrange words around the drawing. A cinquain can be presented in the shape of its image.

Author/illustrator center. Lois Ehlert is the author/illustrator of several works on gardens and fruits and vegetables, published by Harcourt in San Diego.

Eating the alphabet (1989).

Feathers for lunch (1990).

Growing vegetable soup (1987).

Planting a rainbow (1988).

Lois Ehlert illustrated Growing Vegetable Soup and Planting a Rainbow by cutting out pieces of colored paper and gluing them on sheets of paper. For the illustrations of Eating the Alphabet and Feathers for Lunch, she painted sheets of paper with water colors, cut pieces out, and glued them on sheets of paper.

Different sheets of colored paper and tubes of water colors, glue, and white drawing paper can be used to explore Lois Ehlert's media.

Interesting objects center. Items that can whet the imagination, provide sensory experiences, and offer information about life in the garden can be exhibited. Examples of items that can be placed in the center are:

Dried flowers

Butterfly collection

Insect collection

Other exhibits contributed by the children

Museum center. Paintings with images of gardens of the impressionist, Claude Monet, can be explored through posters and these books:

Bjork, Christina (1987). Linnea in Monet's garden. Lena Anderson, (Il.), New York: Farrar.

Le Tord, Bejou (1995). A blue butterfly. New York: Doubleday.

Muhlberger, Richard (1993). What makes a Monet a Monet? New York: Metropolitan Museum of Art.

Posters of Georgia O'Keeffe's flower images can be displayed along with her book, One Hundred Flowers (New York: Callaway/Wings, 1987).

Paints and drawing paper can be supplied in this center for the exploration of the impressionist style of painting and Georgia O'Keeffe's style of creating flowers and images. The children's work can also be exhibited in the museum center.

Bookmaking center. For this unit on gardens and gardening, the directions for making flap books and shape books can be included along with bookmaking materials. Mordicai Gerstein's flap book, Roll Over! (New York: Crown, 1984) can be used as a model.

Scrap center. A whole array of material can be available for graphic arts projects. Specifically for the gardens and

gardening study, nursery catalogs, cloth, wallpaper, and wrapping paper with plant images can be included.

### Centers Specific to the Unit

The creation of a garden mural with plant and animal images can be an ongoing project for the class. The concept of making the world more beautiful can be modeled by Barbara Cooney's Miss Rumphius (New York: Viking, 1982). Literature experiences and related expressive activities from other centers can contribute to the mural.

#### A cumulative story center.

##### Literature Experience

Listen to or read the cumulative story, The Rose in My Garden (1984), by Arnold Lobel (Anita Lobel, Ill.), New York: Greenwillow.

##### Expressive Activity

Add text and illustrations to one of the pages of the large accordion book to create the class' version of the cumulative story, The Rose in My Garden. The story can reflect the plants in the class' garden and animals observed there. Ideas for illustrations can be found in several of the centers.

#### Riddles center.

##### Literature Experience

Examine these riddle books:

Livingston, Myra Cohn (1990). My head is read. Tere Lo Prete, (Il.), New York: Holiday.

Spires, Elizabeth (1995). With one white wing. Erik Blegvad, (Il.), New York: McElderry.

Worth, Valerie (1994). All the small poems and fourteen more. Natalie Babbitt, (Il.), New York: Farrar.

#### Expressive Activity

Create riddles using garden images. These riddles can be made into a flap book and placed in the Listening/Reading Center.

#### Diary center.

#### Literature Experience

Examine these books for recording observations of nature. They are found in the information section of the Listening/Reading Center.

Lerner. My Backyard Garden

Wilkes. My First Green Book

#### Expressive Activity

Keep a diary of the progress of the class garden.

#### Helpers and enemies of the garden center.

#### Literature Experience

Examine books in the information section of the Listening/Reading Center. Also Arnold Lobel's A Rose in My



Garden and Joanne Ryder's My Father's Hand (Mark Graham, (Il.), New York: Morrow, 1994).

#### Expressive Activity

Contribute names of animals to the sections of the chart entitled "Helpers of the Garden" and "Enemies of the Garden."

You may choose one of these animals on which to give an oral or written report. You may need to ask the media specialist to assist you in finding more information on your subject.

#### Potato print center.

##### Literature Experience

Examine Diana Pomeroy's One Potato: A Counting Book of Potato Prints (New York: Harcourt Brace, 1996). The images are vegetables and fruits.

#### Expressive Activity

Experiment with potato printing. This type of illustrating can be used in creating the mural, the cumulative story, the riddle book, and the poetry posters and chart pad in the Poetry Center.

#### Paper-folding and origami center.

##### Literature Experience

Examine the books on paper-folding and origami.

Henry, Sandi (1997). Cut-paper play! Norma Jean Jourdenais, (Il.), Charlotte, VT: Williamson.

Nakano, Dokuotei (1985). Easy origami. New York: Viking.

Tembo, Florence (1993). Origami magic. New York: Scholastic.

#### Expressive Activity

Create some paper-folding images of the garden. They could become part of the mural.

#### Gifts center.

#### Literature Experience

Examine books on window boxes and containers in the Information section of the Listening/Reading Center.

Brown, Marc. Your First Garden Book.

Bunting, Eve. Flower Garden.

Gibbons, Gail. From Seed to Plant.

Ford, Miela. Sunflower.

Rhoades, Diane. Garden Crafts for Kids.

#### Expressive Activity

Plant a vegetable, fruit, or flower or several of a combination in a container to give to someone as a gift.

#### Literature Experience

Examine Rhoades' Garden Crafts for Kids on pressed flowers.

### Expressive Activity

Press flowers from the garden as gifts.

### Cooking center.

Make vegetable soup from the recipe in Ehlert's Making Vegetable Soup. Make zucchini tea cake from the recipe in Rhoades' book, Garden Crafts for Kids, in the Information section of the Listening/Reading Center.

### Summary

A wealth of literature experiences representing many genres with a whole array of related expressive activities have been found to enrich the gardens and gardening unit. Such experiences can greatly extend the goals of the unit, prepared for at-risk children in a multi-age classroom. The learning centers with many language and graphic and performing arts activities can assist in maintaining a long-term unit.

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