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Literature-based language arts extended to the science area : backyard unit, grade 2

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Literature-based language arts extended to the science area: backyard unit, grade 2

Abstract
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Literature-Base Language Arts. Extended to the Science Area:

Backyard Unit, Grade 2

A Graduate Project

Submitted to the

Department of Curriculum and Instruction

In Partial Fulfillment

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Master of Arts in Education

UNIVERSITY OF NORTHERN IOWA

by

Suzanne Jensen

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Abstract

This paper explores the process of integrating second grade language arts into a science unit through a literature base representative of the different genres. This experience will provide students with the opportunities to connect the content of a backyard theme with quality literature and related expressive activities. From the supporting professional references cited, it becomes clear that students' positive interactions with literature develop self-motivated learners.
A major focus of the language arts program in elementary schools should be on children creating meaning through the language processes while involved in the language functions. Such activity can extend children's thinking-language abilities (Smith, 1994).

Language arts instructional programs need to have purposes that are meaningful to children. While engaged in processes, children need to be encouraged to relate new information to their prior knowledge (Smith, 1994). Such programs need to take place in social situations in which children use language to enable them to learn from one another as well as from the teacher (Newman, 1985).

A language arts program built on the above theoretical base is child-centered and holistic. The key belief is that just as babies learn oral language by actually being immersed in using speech, so children learn to read and write in the same way. As oral language is acquired in a natural way so are reading and writing abilities developed as children are involved in whole written units (Smith, 1994). Instruction that breaks language into small pieces, isolated from meaningful text, is abstract and therefore difficult for children (Goodman, 1986; Smith, 1994).

In supporting such a classroom, teachers need to recognize that students come with varied backgrounds of knowledge and abilities to make meaning (Goodman, 1986). Teachers also need to be aware that children learn best in a low-risk environment but also in one that encourages risk-taking.
(Harste, 1990). Learning occurs when risks are being taken. Teachers can create learning environments that allow children to feel free to try new things when they read or write. Exploration, invention, and communication are encouraged and accepted (Smith, 1994). Such activity and success can foster children's pride in their accomplishments (Spiegai, 1992).

Elements of a Literature-Based School Program

In a rich learning environment in which print is abundant, children are immersed in literature experiences representative of the different genres. Books, magazines, poetry charts, signs, labels, and theme-related word banks provide many opportunities for children to connect the spoken word within written language (Cambourne, 1995). Quality texts help to develop life-long readers who grow in language and thinking abilities that support the meaning-making process (Huck, 1996).

Reading in a literature-based classroom is on-going throughout the day. Reading aloud periods that offer children quality literature representative of the different genres is an important component of a literature-based classroom. Through these experiences, children not only increase their knowledge base but also learn how to be better listeners, increase their vocabulary, learn to make meaning, and develop a positive attitude toward reading (Routman, 1991).

Independent reading is another important part of fostering emerging
literacy. When children are allowed to select their own reading material from a wide range of interests and reading levels, they not only are enthused about the subject matter, but they also select books that they are able to read (Huck, 1996).

Guided reading groups give teachers opportunities to use teachable moments. As they work with students, teachers can help them think critically about books that they have read (Routman, 1991).

Writing is an important part of a literature-based program. Independent writing, guided writing, and shared writing, often overlapping, provide children with a wide range of choices and learning opportunities (Routman, 1991). In a literature-based classroom, the teacher is aware that children learn to write by writing and extend their reading abilities through writing experiences (Graves, 1994).

As children engage in many types of expressive activities that extend quality literature, they begin to make connections with the common tasks of the comprehension and composition processes (Harms & Lettow, 1992). In an environment that nurtures children's thinking-language abilities, centers abound, offering students numerous opportunities for using language and other expressive means. Students can be involved in such activities as research, plays, bookmaking, art, and an unlimited number of other literature-related adventures.
Integrating the curriculum can extend children's experiences with the functions of language in the science and social studies areas. Children can then learn that both reading and writing have a purpose throughout all subject areas (Strickland, 1994/1995).

Another classroom accommodation that facilitates children's learning is large blocks of time. With these large periods, children are able to work on projects without interruption. Within such time frames, teachers can form instructional groups to introduce or strengthen language abilities (Strickland, 1994/1995).

More opportunities for learning take place when groups are heterogeneous and organized by interest and social adaptability. This kind of flexibility is another important component of a child-centered classroom (Routman, 1991).

Textbooks vs. Tradebooks in the School Program

Typically, textbooks in the content areas have provided an introduction to new information and helped teachers plan the scope and sequence by which the new information was presented to students. However, textbooks do have their limitations. With the need to cover an extensive number of topics, textbooks can only focus on content in a cursive way, providing little opportunity for in-depth study. Information in textbooks is usually organized and written in a style that is difficult for young readers (Moss, 1991). The specialized vocabulary and intensity of facts found in many textbooks
contribute to a lack of comprehension and the inability of young children to make meaning of the printed text (Hadaway & Young, 1994).

Moss (1991) relates that nonfiction tradebooks, or literature works, often have the ability to compensate for many of the weaknesses found in textbooks. Teachers can select books that focus on specific content areas, allowing for a much more rich and in-depth study of a topic. When tradebooks are used in instruction, information is presented in a more logical and coherent manner than in most textbooks. When using realistic settings to present new information to children, authors help to facilitate comprehension (Bosma & Guth, 1995). Children become excited to learn new information when it is presented through interesting text that has the aesthetic qualities found in their more familiar fictional literature (Dorian, 1994). When the other literature genres are presented along with nonfiction in content areas, they expand the dimensions of learning (Langer, 1995).

Assessment of a Literature-Based School Program

Assessment in a literature-based classroom that focuses on process needs to be descriptive. Rather than formalized testing of all children at designated intervals, children can be assessed with qualitative techniques that are more authentic; these techniques are on-going, for example, student journals, teacher observations and note-taking, and student-
teacher conferences. Goodman (1986) refers to this type of assessment as "kid-watching." These assessment techniques support portfolio development, an ongoing collection of exhibits that reflect each child's progress and instructional needs (Routman, 1991).

Literature-Based Language Arts

Extended to the Science Area:

Backyard Unit

The science unit, the ecological system of the backyard, for second grade, was enhanced by the integration of literature-based language experiences. Many literature genres provided rich learning experiences. The learning activities were presented through teacher-directed activity and student-initiated activity in learning centers.

Teacher-Directed Activity

One of the major roles of the teacher in this literature-based classroom was to provide content through quality literature that instilled in each student an excitement and enthusiasm for learning. The teacher offered opportunities for children to share in the decision-making and to assume some responsibility for their own learning. It was the responsibility of the teacher to organize the classroom environment and to monitor the progress of the students through student journals, teacher logs, student-teacher conferences, and portfolios. Teacher-directed activities included read
alouds, videos, webbing, discussions, and nature walks. These teacher-directed activities were presented for a backyard theme:

- From the read aloud *My Father’s Hands*, by Joanne Ryder (Mark Graham, Il., New York: Morrow, 1994), the children made a web of living things that might be found in a backyard.

- From the read aloud *One Small Square – Backyard*, by Donald M. Silver (Patricia J. Wynne, Il., W.H. Freeman: New York, 1993), the class went on a “100 Inch Safari.” Students measured off 100 inches of string. Together the students and the teacher went outside to a grassy area and made a circle with their string. Within this area, the teacher vacuumed with a small hand-held vacuum to collect specimens in the filter. Back in the classroom, the contents were examined. Their findings were recorded on a large sheet of chart paper (see Figure 1).

Figure 1

Students on a “100 Inch Safari”
• The Reading Rainbow video, "The Life Cycle of the Honeybee," based on a book of the same name, by Paula Z. Hogan (Milwaukee: Raintree, 1979), was shown.

• In advance of this study, the teacher ordered caterpillars, ladybugs, and ants. Also, a collection of cages, aquariums, and various containers to house a variety of backyard creatures were gathered.

• The teacher and the students collaborated to create an insect word bank in categories, such as Insect Names, Insect Noises, Special Insect Words, Where Insects Live, and Ways Insects Move.

• After the children became familiar with many backyard creatures, they engaged in a scavenger hunt. The children explained their findings to the class and organized a display.

• As the music "The Flight of the Bumblebee" by Nikolai Rimsky-Korsakov (McMillan: New York, 1995), was played, the children painted or used crayons to interpret the music visually on paper. Their works were displayed in the classroom gallery.

**Student-Initiated Activity**

The students participated in two kinds of centers: sustaining centers and centers specific to the unit. Before the students engaged in the center activity, the teacher introduced the activities to small groups.
Sustaining Centers

These centers remained in the classroom throughout the year with their content changing to reflect the units of study. This consistent structure helped to create an environment that was secure and predictable yet rich in content and opportunities for students to engage in the thinking-language processes. Sustaining centers provided experiences with the different genres of literature that allowed children to broaden their understanding of a unit's concepts and offered many models of languages.

- Listening/Reading Center

At this center, children were provided with quality literature representative of all genres, and in many instances, accompanying teacher-made cassette tapes. Student-authored books were included. This center also provided prompts for following along in the book or with the cassettes or retelling the story, such as puppets, a flannelboard and pelon pieces, pictures, games, and puzzles. Literature works that were used in the Reading/Listening Center are listed in Appendix A.

These related activities were listed on a chart in the center as options for the children's study:

1. After reading about insects, write something interesting that you learned in your journal.

2. After reading about insects, write a fact that you learned on one of
the blank bug shaped papers. Then, add the outer shell to your bug. On this cover, write a matching question. Fasten the pages together with a brass fastener. Leave this in the bug basket for your classmates to read.

3. After reading about backyard creatures, add new words to the backyard word bank.

4. Listen to the tape of the book, Bugs, by Nancy Winslow Parker. Listen for the two words that rhyme on each page. When the tape is over, use the cards in the packet to match the rhyming words from the book.

5. After reading a book with an insect as a main character, draw a picture of your favorite part and write about it.

6. After reading Buggy Riddles, by Kathy Hall, write a riddle about a living creature in your backyard. Add it to the class book of riddles.

Student Responses

Students enthusiastically responded to the different genres of literature. They especially enjoyed the flannelboard activities used in retelling the stories (see Figure 2).
Students Using the Flannelboard to Retell Stories

- Poetry Center

This center provided quality poetry that fostered children's imagination and enjoyment of the music in our language. Illustrated posters of single poems constructed by the teacher or students helped to enliven the center. Directions for poetry forms were presented on wall charts. Literature works that were presented in the Poetry Center are included in Appendix A.

These expressive activities were presented on a chart as options:

1. After reading a selected poem, draw a picture of how it made you feel.

2. Write and illustrate a poem and then make a border that expresses the main idea of the poem.
3. Using directions for writing poetry forms select a backyard image and write a poem about it.


5. Select a favorite poem to record. It can be part of the center’s collection and can be presented to the class during sharing time.

Student Responses

Students enjoyed the options of writing their own poetry and displaying it in the center. Some examples of student poetry are included below:

Butterfly, butterfly
In the sky
Butterfly, butterfly
Fly so high.
I wish that I
Could be a butterfly.

Caterpillar
Fuzzy, Soft
Crawling, eating, changing
Making a soft cocoon
Butterfly

In Figure 3, the children are shown enacting the ideas and rhythm of a poem. This activity was popular among the students and requested frequently.
Students Responding to a Poem in the Poetry Center

• Author/Illustrator Center

This center highlighted two author/illustrators whose works of nature are closely related to this unit of study. The children read about the life of Eric Carle, author/illustrator, and Joanne Ryder, poet; therefore gaining an understanding of the sources for their writing and ways to engage in the writing and illustrating processes. Examples of the works of the writers/illustrators were included. Literature works that were used at this center are found in Appendix A.

These expressive activities related to Eric Carle and his work were listed as options for the children’s study:

1. After studying the illustrations of Eric Carle, use the paints to make different colored sheets and then create a collage-style picture.

2. Make a bookmark advertising your favorite book written by this
3. Read *The Very Hungry Caterpillar*, by Eric Carle. Use the flannelboard pieces to retell the story.

4. Make a poster advertising one of the author's books.

**Student Responses**

Eric Carle's artwork particularly sparked an interest in one of the children. She was able to create a picture in his collage-style (see Figure 4). After becoming familiar with Joanne Ryder and her literature, one child discovered that she had one of her earliest authored works at home. She brought it to share.

**Figure 4**
Student Creating a Collage as Modeled by Eric Carle

- **Interesting Objects**

This center displayed many different objects that the teacher had
collected to extend the unit of study. The children were also encouraged to bring in items of interest. Examples of books that supported this center are listed in Appendix A.

These expressive activities were posted as options for the students' learning:

1. Sort the collection of plastic backyard creatures. Some sorting ideas might be by the number of legs, wings or no wings, harmful or helpful, or day or night hunters.

2. After reading *Owl-American Legends*, write why you think the owl was so important to the American Indian.

3. Using the magnifying glass, observe the collected insects through the closed container. Share what you observe with a partner.

4. Observe how a tree begins to grow as you look at the sprouting acorn. Draw and label the seed, the roots, the stem, and the leaves.

Student Responses

This center got the children actively involved in observing nature in their own backyard and on the playground (see Figure 5). Living and nonliving items were brought in and shared with the class.
Students Observing Nature in the Classroom

- Bookmaking Center

This center was available for students to publish their writing. The center included these materials for bookmaking: pencils, crayons, paper, scissors, tape, glue, paper clips, a stapler, markers, wallpaper books, cardboard, and cloth.

These expressive activities were posted as options for making books:

1. After reading The Grouchy Ladybug, by Eric Carle, make a flap book. Stamp a clock face on each page to help retell the story.

2. Choose a paper shape of your favorite backyard creature. Write your own true or fanciful story.


5. Make a question and answer book about creatures in the backyard.
Student Responses

At this center, students produced books that focused on insects. They shared their finished products with classmates and students from other classrooms (see Figure 6).

Figure 6
Children Reading Butterfly Stories to an Audience

- Drama Center

Dramatic play offered children a natural way to extend the learning of this unit’s concepts. Play of this type allowed the students to use these language tasks - - giving directions, responding to directions, and solving problems - - in many different situations. This center offered a collection of puppets, masks, costumes, and other props along with paper, scissors, glue, markers, and other art supplies to make puppets, costumes, and scene backgrounds.

These expressive activities were suggested as options:
1. Make ant finger puppets. Together with a friend, practice and perform "When the Ants Go Marching," an adaptation sung to the tune of "When Johnny Comes Marching Home."


3. After reading about the life cycle of a butterfly, create a play about metamorphosis.


6. Choose one of your favorite stories about a backyard creature, and then practice and perform it for the class.

Student Responses

This center was one of the most popular. All of the students were eager to participate in some form of performance. In particular, two children who were usually difficult to motivate and slow to get started were filled with excitement as they rewrote The Grouchy Ladybug, by Eric Carle, into a play called, "The Grouchy Firefly" (see Figure 7).
Figure 7

Students Performing a Puppet Play

Centers Specific to the Theme

These centers were designed specifically for the backyard unit. Through these centers, children learned about insect life as they made connections with many informational resources. The literature experiences offered natural movement to expressive activity. These literature experiences and related expressive activity were explained in each center.

- Cricket Center

Goals: a) To provide children with the opportunity to gain knowledge about crickets through observation and reading

b) To provide children with quality literature sources and many options for expressive activity

Literature Experience:

These expressive activities were offered as options for the students:

1. After reading Quick as a Cricket, by Audrey Wood, list some similes from the book and then some about yourself. A simile is a way of comparing two things using the words “like” or “as.” An example of a simile from the book is, “I’m as small as an ant.” You might choose a simile about yourself such as, “I’m as quiet as a mouse.”

2. Make a list of similes about the creatures in your backyard or on the playground.

3. After reading The Very Quiet Cricket, by Eric Carle, find an information book in this center that tells facts about crickets. Write facts about crickets on sentence strips. Place in the chart folder.

4. Observe the crickets in the terrarium. Record what you see in your journals.
Student Responses

At this center, the students observed and recorded the crickets' activity. After reading about the crickets, they were able to share information about the chirping that was heard in the classroom each day (see Figure 8).

Figure 8
Students Learning About Crickets

- Ant Center

  Goals: a) To observe the characteristics of teamwork and cooperation in an insect habitat
      b) To provide children with a purpose for reading fiction and non-fiction resources and then engaging in options for expressive activity

Literature Experience

These activities were presented as options for the students at this center:

1. After reading “I Can’t, Said the Ant, by Polly Cameron, write a problem and a solution page for a class book.

2. After reading Antics, by Cathi Hepworth, add “ant” words to the list.

3. At this center choose one of the containers filled with one hundred small objects and arrange them in rows like the ants in One Hundred Hungry Ants, by Elinor Pinczes.

4. In the book, Two Bad Ants, by Chris Van Allsburg, a marvelous crystal of sugar was discovered. Paint an Epsom salts mixture on a sheet of black paper. Let it dry in a warm place and watch the crystals grow.

5. Choose an insect to illustrate and write a story about its adventure.

6. Another word for opposite is antonym. Play the card game of matching antonyms.

7. Record in your journals the daily activity that you see in the ant farm. Draw a picture of the tunnels. Do they change from day to day? Add interesting ant facts.

8. Ants build tunnels underground like a maze. You might choose to
complete the printed ant maze at this center.

Student Responses

This center proved to be one of great interest not only to the students in our classroom but also to other children in the school. They closely monitored the ant farm. Students counted the ants each day and observed the activity-filled habitat (see Figure 9).

Figure 9

Students Observing the Community of Ants

- Caterpillar and Butterfly Center

  Goals: a) To provide opportunities for children to observe the lifecycle
of a butterfly

b) To extend the study of insects through fiction and non-fiction literature and related expressive activities

Literature Experience


These expressive activities were offered to the students on a chart at this center:

1. Record in your journal what you see happening each day in the butterfly/caterpillar habitat.

2. After reading about the lifecycle of a butterfly, make a poster or book showing each stage of a butterfly’s life.

3. Make a thumbprint caterpillar using the stamp pad. Write a story about a caterpillar.

4. Select a wallpaper sample. Fold it accordion-style from corner to corner. Secure it with a pipe cleaner, extending the ends for
antennae. Hang it as a mobile.

5. "Butterfly" is a compound word. Make a list of compound words. You might like to write the two words on separate cards making a matching game for you and your friends to play.

6. After reading about butterflies, write some interesting facts about them in your journal.

7. Butterflies flutter: What would you do and where would you go if you could flutter like a butterfly? Write about your journey.

8. To make a scratchboard design, color symmetrical areas on a large butterfly shape with light and bright crayons. Apply a coat of black paint or crayon over the colored area. Then, rub off some of the black paint or crayon to expose a design.

Student Responses

At this center, the children were able to observe the life cycle of the Painted Lady butterfly. Shortly after the caterpillars arrived, they began their metamorphosis. When each chrysalis began to open, the children were treated to an experience that not only filled them with awe, but also helped to build a wealth of background knowledge. Much conversation evolved out of the observations at this center. In response to a survey of "What did you like best while studying the backyard?" most of the students highlighted this center (see Figure 10).
Figure 10
Children Observing the Metamorphosis Process

- Bee Center

Goals: a) To realize the importance of bees in pollination and the honeymaking process

b) To value the importance of informational resources in answering questions about our world

Literature Experience (see Figure 11)


These expressive activities were listed at this center as options for study:

1. After reading about bees, write a fact on a bee shape and put it up at the center.

2. In your journal, write any bee facts that you have learned.

3. Taste each of the three kinds of honey offered at this center. Vote for your favorite flavor by filling in the graph.

4. Each bee has a role in the hive. If you were a bee, which job would you like to have and why? Share your idea with a friend.

5. Where do bees like to fly? If you were a bee, where would you like to go? Where would you land? Use these ideas in a story.

Student Responses

This center offered a honey-tasting activity which was popular with the students. They enjoyed comparing their favorite flavors.
Figure 11
Child Reading About the Importance of Bees

- Firefly Center

  Goals: 
  a) To understand the lifecycle of the firefly and its special glowing appearance
  b) To read for information, enjoyment, and provide options for expressive activity

Literature Experience

Row.

These selections were posted as options for expressive activities:

1. After reading *The Very Lonely Firefly*, by Eric Carle, make a firefly to add to the flashing bulletin board.

2. After reading about fireflies, write a fact that you learned on a sentence strip. Add it to the bulletin board.

3. After reading *Fireflies*, by Julie Brinkloe, sequence the “Lifecycle of the Firefly” picture cards.

4. After reading about bioluminescence in the firefly books, write about this special glow in your journal. Share this new word with your family.

Student Responses

All of the students participated in making a firefly to attach to the flashing (Christmas lights) bulletin board. The children shared firefly facts with their families. Several parents visiting school related that they had learned what bioluminescence meant.

- Ladybug Center

  Goals: a) To understand the value of the ladybug to the well-being of plant life

  b) To value literature works for their information, enjoyment, and as a resource for expressive activity

Literature Experience

New York: Crowell.


These expressive activities were posted as options at this center:

1. Using the walnut shells, follow the printed instructions for making a ladybug magnet.

2. After reading about ladybugs, make a poster that promotes the good that a ladybug does.

3. After reading *The Grouchy Ladybug*, by Eric Carle, make a flap book, stamping a clock face on each page. Write the time on each page to help in retelling the story.

4. After reading *The Grouchy Ladybug*, by Eric Carle, make a schedule of your day.

5. Ladybugs are insects. All insects have a head, thorax, abdomen, six legs, and an outer shell. Label the parts of a ladybug on the diagram.

6. The lifecycle of the ladybug takes from two to three weeks. Make a picture of the ladybug life cycle. Use rice for the ladybug eggs.

7. Place three or four ladybugs in the observation tube. Look at the ladybugs and write your observations in your journal. Be sure to draw the top and the bottom side of the ladybug.

8. Ladybugs have defenses. Their bright coloring tells their enemies
to stay away. To discover another defense, carefully handle a ladybug, moving it gently from hand to hand. You will need to use your sense of smell to discover this defense. Record the findings in your journal.

Student Responses

Students were actively involved in this center because of the many options for activities. They observed real ladybugs and engaged in visual expression as they made magnets and mobiles (see Figure 12).

Figure 12
Students Making Ladybug Magnets for Their Families

• Spider Center

Goals: a) To help children appreciate the importance of spiders in the world and to lessen their fear of these creatures that has been caused by misunderstandings
b) To provide children with quality literature and a variety of informational resources to use while involved in the options for expressive activity

Literature Experience


These expressive activities were posted on a chart as options for the students’ learning:

1. After reading about spiders, write and illustrate a fact page for the class book on spiders (see Figure 13).
2. Make a spider for our classroom web following the example and the printed directions.

3. After reading Be Nice to Spiders, by Margaret Graham, make a poster advertising why people should appreciate spiders.

4. Observe the spider terrarium. How many spiders do you see? Make a sketch of the different kinds of spiders that you see. Look up your sketches in the spider book to see if you can identify them.

5. Make a set of spider words from the display web. Use your cards for sorting activities. Alone or with a friend, sort your cards by categories of webs, spider body parts, naming words, action words, or describing words.

6. Write a mini-report on one kind of spider.

7. Fill in the class graph "How Do You Feel About Spiders?" Survey your family's feelings about spiders. Share the results with the class.

8. While reading The Very Busy Spider, by Eric Carle, feel the raised web on the pages. Draw a web on a piece of white paper using a thin line of white glue. After the glue is dry, use a marker to color over the web. Add a paper spider.

Student Responses

Several of the students became interested in spiders. One student brought a spider from home. The children kept it in the terrarium and were able to observe how it caught its prey. Much to their surprise, it
developed an egg sack. The students observed this event closely and reported each day on any new observations.

Figure 13
Students Sharing Facts About Spiders with a Visitor

Assessment

Several qualitative assessment techniques were used during this unit to describe the progress and instructional needs of the students. The teacher was able to observe and take notes as the students were involved in authentic tasks. Student-teacher conferences allowed the teacher to check on science understanding and to guide the students in making literacy connections. Student journals reflected each child’s involvement in the literature-based language arts/science activities. The use of portfolios allowed the students to follow their own academic growth and reflect on their learning. Portfolios also served as a tool for the teacher to obtain a more clear view
of the students’ progress over time. This rich collection of exhibits included different writing samples, drawings, graphs, and maps. It gave the parents concrete evidence of their children’s achievement during this study.

As part of the culminating activity, parents, teachers, students from other classrooms, the principal, and support personnel were invited to the classroom. Children presented factual information about the insect of their choice. At each center, children shared facts about insects with the visitors.

Summary

Implementing this literature-based study on the backyard achieved the instructional goals that had been set for student learning. The learning that took place was relevant for the students. Because the unit offered the children options for study, they were able to build on their own strengths and expand their knowledge base. With the freedom to make choices about their learning, students were actively involved. The students’ interest and enthusiasm resulted in a wide range of accomplishments.

The student journals contained factual information about insects and many forms of expressive activity, such as poetry and fanciful stories with insects as main characters. Students created class books and individually developed ones. The class books were on spiders in an alphabet-style book. The children created many shape books that highlighted a favorite insect. Posters that prompted the beneficial qualities of insects were created and hung in the classroom and the hallway. Students wrote and/or performed dramatizations, readers theatre, poetry and songs.
Bibliography


Appendix A
Bibliography for Sustaining Centers

- Listening/Reading Center

New York: Freeman.


- Poetry Center


"Butterfly," by Hilda Conkling

"Firefly," by Elizabeth Madox Roberts

"Fuzzy Wuzzy, Creepy Crawly," by Lillian Schultz Vanada

"Green Moth," by Winifred Welles

"Little Snail," by Hilda Conkling

"Snail," by Langston Hughes


“An Explanation of the Grasshopper,” by Vachel Lindsey

“Ants Live Here,” by Lilian Moore

“Ants,” by Mary Ann Hoberman

“But I Wonder...,” by Aileen Fisher

“Dragonfly,” by Florence Page Jaques

“Grasshopper Green,” by Nancy Dingman Watson

“Only My Opinion,” by Monica Shannon

“Raindrops,” by Aileen Fisher

“Snail’s Pace,” by Aileen Fisher

“The Butterfly,” by Clinton Scollard

“The Underground,” by Margaret Lavington

“Under the Ground,” by Rhoda W. Bacmeister

“Wings,” by Aileen Fisher


“Fireflies,” by Mary Ann Hoberman

“Firefly,” by Li Po

“Hurt No Living Thing,” by Christina G. Rossetti

“Snail,” by John Drinkwater

“The Caterpillar,” by Christina G. Rossetti

• Author/Illustrator Center

Works by Eric Carle, author/illustrator


Works by Joanne Ryder, poet


• Interesting Objects Center


Magnuson, Il., New York: Scholastic.


