Literature base unit on ants, bees and crickets

Lisa S. Foley

University of Northern Iowa

Copyright ©1996 Lisa S. Foley

Follow this and additional works at: https://scholarworks.uni.edu/grp

Part of the Education Commons

Recommended Citation

https://scholarworks.uni.edu/grp/2363

This Open Access Graduate Research Paper is brought to you for free and open access by the Student Work at UNI ScholarWorks. It has been accepted for inclusion in Graduate Research Papers by an authorized administrator of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.
Literature base unit on ants, bees and crickets

Abstract
The process of instructional development was engaged in to extend the literature base of the unit on insects, specifically ants, bees, and crickets, for grade two. Quality literature works were gathered to enrich the unit. The result of this project was the development of a rich environment in which the processes of the language arts and science areas were integrated to foster students’ in-depth study of the concepts of the unit and thinking-language abilities. The unit was presented through teacher-directed activities and learning centers--sustaining and specific to the unit. Sustaining centers maintained a secure, predictable learning environment as well as enhanced the unit of study.

This open access graduate research paper is available at UNI ScholarWorks: https://scholarworks.uni.edu/grp/2363
Literature Base Unit on Ants, Bees and Crickets

A Graduate Project
Submitted to the
Department of Curriculum and Instruction
In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Education
UNIVERSITY OF NORTHERN IOWA

by
Lisa S. Foley
May 1996
This Project by: Lisa S. Foley

Entitled: Literature Base Unit on Ants, Bees and Crickets

has been approved as meeting a project requirement for the Degree of Master of Arts in Education.

Jeanne McLain Harms

5/29/96
Date Approved

Director of Research Paper

Jeanne McLain Harms

5/29/96
Date Approved

Graduate Faculty Adviser

Dale D. Johnson

5/29/96
Date Approved

Graduate Faculty Reader

Peggy Ishler

5/31/96
Date Approved

Head, Department of Curriculum and Instruction
Abstract

The process of instructional development was engaged in to extend the literature base of the unit on insects, specifically ants, bees, and crickets, for grade two. Quality literature works were gathered to enrich the unit.

The result of this project was the development of a rich environment in which the processes of the language arts and science areas were integrated to foster students' in-depth study of the concepts of the unit and thinking-language abilities. The unit was presented through teacher-directed activities and learning centers--sustaining and specific to the unit. Sustaining centers maintained a secure, predictable learning environment as well as enhanced the unit of study.
Children are active learners; they learn by doing-moving, observing, exploring, and creating. They have a natural curiosity and enthusiasm for learning that can be greatly enhanced by a print rich learning environment. "A literature base representing many genres, or types of literature, can facilitate a rich learning environment for children" (Harms & Lettow, 1992, p. 324).

Literature-Based Language Arts Extended to the Science Area

In providing a literature-based instructional program, educators are constantly engaging in an ongoing search for meaningful language experiences for children. When language experiences are extended across the curriculum, interesting content and genuine experiences with the functions of language can be provided. Such an integrated instructional program provides connections in learning experiences, thus extending children’s knowledge of topics and their thinking-language abilities (Huck, Hepler, & Hickman, 1993).

Specifically, a literature-based language arts program extended into the science area can facilitate meaningful learning experiences for children. Literature provides more than facts (Graves, 1983). The genres of literature with their different perspectives of concepts and experiences can greatly enrich science study. In selecting fiction, poetry and information
works, they need to be closely examined for accuracy and bias in both text and illustrations (Mayer, 1995).

Zarrillo (1989) says, "When a science unit is developed with an extensive literature base, children are exposed to experiences that can lead to meaningful reading and writing opportunities to study important concepts in depth." (pg. 22) When children are involved in activities that make these connections, their language abilities, listening, reading, speaking, and writing can be nurtured.

Science is usually taught as a separate subject. This approach does not allow for connections to be made with other curricular areas. Many times a textbook is the focus of instruction when science is taught as a separate subject. Students are often asked to answer questions at the end of the chapter in a textbook assignment to check for comprehension. Because these exercises are usually meaningless, comprehension suffers. When the purpose of science study is limited to recall, children’s learning is threatened. In contrast, when teachers actively involve students in the learning processes, their reaction is quite different (Fisher & Fisher, 1985).

By extending science through literature experiences, the teacher will provide meaning and relevance to children’s lives (Armbruster, 1991). Extending the literature base of the science curriculum involves a change in the way science is presently
taught in many elementary classrooms. The focus is on engaging students in the language and science processes to clarify and extend previous levels of understanding, according to Fisher and Fisher (1985).

In the process of establishing a literature base for a unit of study, related expressive activities naturally emerge, thus further enriching the learning environment (Harms & Lettow, 1992). Such expressive activities can involve children in a whole array of hands-on experiences. Katz (1987) says that children learn through interactive rather than reactive experiences.

Learning centers can be one means of offering literature experiences and related expressive activities. Besides extending children’s understanding of a unit’s concepts and their thinking-language abilities, centers can assist in providing a predictable, secure learning environment. Much of the activity for a unit can be presented in sustaining centers, maintained throughout the school year with their content changing with the units. In addition, centers specific to a unit can be developed.

Literature-Based Language Arts Extended to a Science Unit for Grades One and Two

The process of integrating a literature base into the science area posed a challenge for the author. First, she examined the professional literature and found support for a
literature-based program in science as a means of providing an effective learning experience for children. Then, she searched for quality pieces of literature from the different genres to enrich the learning environment for a unit on insects for grade two. From this search, many language experiences emerged. As a result, the instructional development project extended the literature base of the unit, thus enhancing the school district’s curriculum on living things within backyards.

The major goal of the unit was to promote children’s awareness of the natural world through discovery. The common tasks of both the language arts and science areas strengthen children’s conceptual and language abilities. Observations of small creatures were supported by literature experiences, thus fostering young children’s appreciation of science. The children had opportunities to explore and apply many science concepts from the literature experiences and related expressive activities offered in the learning centers.

The learning environment was structured by sustaining centers. Their content reflects the unit that is being studied. In this predictable, secure environment, children had freedom to explore and to discover, thus taking charge of their own learning

Introduction of Unit

The unit on insects, specifically, ants, bees, and crickets, was introduced by making a class chart of what the
children knew and what they wanted to find out about these insects. After a cassette tape of insect sounds was played, the children identified the different sounds that they had heard. Then, the students drew pictures of their backyards and the insects that they had observed there.

**Centers to Enhance the Unit**

**Sustaining Centers**

**Listening/Reading Center.** This center offered books from many genres, (information, fiction, folklore, and poetry) and teacher-made cassette tapes of several books. It also included stuffed animals, puppets, and flannelboard stories for retelling opportunities. Examples of books that enriched the reading/listening experience specific to the unit were:

- Dorros, Arthur. *Ant Cities*
- Brett, Jan. *Berlioz the Bear*
- Carle, Eric. *The Honeybee and the Robber*
- de Paola, Tomie. *Michael Bird-Boy*
- Polacco, Patricia. *Bee Tree*
- Ness, Evaline. *A Pocketful of Cricket*
- Wood, Audrey. *Quick as a Cricket*

**Poetry Center.** This center included a collection of poems with images related to the unit of study, for example:

- *I Never Told and other Poems,* by Myra Cohn Livingston
- *Something New Begins,* by Lilian Moore
Go With the Poem, by Lilian Moore
4-Way Stop, by Myra Cohn Livingston
All the Poems, by Valerie Worth
Teacher-made posters of these poems were displayed in the center:
"Notes On A Bee," by Myra Cohn Livingston in I Never Told and other Poems.
"Crickets," by Myra Cohn Livingston in I Never Told and other Poems.
Literature-based expressive activities were presented in a stand-up folder.

Literature Experience
Read "Notes On A Bee," by Myra Cohn Livingston.

Expressive Activity
Draw a bee from the poet's description.

Literature Experience
Read "Crickets," by Myra Cohn Livingston.

Expressive Activity
Experiment with the pattern that the poet uses in this particular poem (Typography).

Literature Experience
Read "Bee," by Robert Sund in Poems of Magic and Spells.
Expressive Activity

Write how the bee must have felt trapped inside the windowsill. Your story will be collected into a class booklet.

Author/Illustrator Center. This center presented the author/illustrator, Eric Carle, and his books that focus on insect images (see Figure 1). This center included a brief biography, his books, and the materials used in his illustrations. These books were placed in the center:

- The Very Grouchy Ladybug
- The Very Busy Spider
- The Very Quiet Cricket
- The Very Hungry Caterpillar
- The Honeybee and the Robber

Several videos of Eric Carle’s work were available for the children to view. They were Eric Carle: Picture Writer, and The Very Hungry Caterpillar and other stories. Flannelboard pieces of his books The Very Hungry Caterpillar and The Very Busy Spider were included to foster sequencing ability.

Materials were also available for the children to experiment with the media Eric Carle used in his illustrations. They could use acrylic paints, colored paper of different sizes, markers, crayons, and scissors.
Interesting Objects Center. This center exhibited items, collected by the students and the teacher, that offered many sensory experiences. Some of the items were: insects alive and dead, an ant farm, insect collections, magnifying glasses, photographs of insects, insect catching nets, beekeeper clothing items, and insect collectors. Many resource books were presented to facilitate observations of insects. They were:

Life Story Ant, by Michael Chinery
Discovering Ants, by Christopher O'Toole
Honeybee, by Barrie Watts
Insects, by Rena Kirkpatrick

A Picture Book of Insects, by Joanne Mattern

The children were encouraged to write in their journals about their discoveries in the center.

Writing/Bookmaking Center. This center supplied materials for the students to use in bookmaking, such as paper of all shapes and sizes, crayons, markers, pens, pencils, watercolors, paper punchers, staplers, and chicken rings to bind the books.

Centers Specific to the Unit

Puppet Show

Literature Experience

Read The Grouchy Ladybug, by Eric Carle.

Read The Very Hungry Caterpillar, by Eric Carle (see Figure 2).

Read Easy to Make Puppets, by Joyce Luckin.

Expressive Activity

Make puppets for retelling one of the stories.

Examples: sack puppets, puppets on a stick
Finger Plays.

Literature Experience

Read *Rhymes for Fingers and Flannelboards*, by Louise Smith.

Read *Finger Rhymes*, by Marc Brown.

Read diagrams of finger plays.

Read "The Beehive," by Joann Cole and Stephanie Calmenson.

Expressive Activity

Work with a partner to do finger plays.
Insect Number Book Center.

Literature Experience
Read How Many Bugs in a Box, by David A. Carter.

Expressive Activity
Make a number book.

Directions:
Take one sheet of construction paper for a title page and one additional sheet for each number that you wish to include in your book. (For example, if you include the numbers 10-20 in the book, take 12 sheets of paper.) Write a numeral and the corresponding number word on each sheet of paper and then draw that many of the same insect on the page. You may wish to write sentences on each page or rhyming text.

Cricket Center.

Literature Experience
Listen to the book, The Very Quiet Cricket, by Eric Carle.

This book presents vocabulary words that represent locations.

Expressive Activity
Write a patterned story answering the question, Where are you Cricket?

Example: Where are you cricket? I am on a log.
Cooking Center.

Literature Experience
Listen to the book, *The Big Honey Hunt*, by Stanley Berenstain (see Figure 3).

Expressive Activity
Make bear biscuits and taste honey.

Literature Experience
Listen to *The Ultimate Bug Book*, by Luise Woelflein.

Expressive Activity
Create an insect using a variety of food items that are in the center.

Write a description of the insect and its parts.
Figure 3

Example of a Student’s Writing Following the Activities with the Book, The Big Honey Hunt.

Insects Everywhere Center.

Literature Experience

Read and observe photographs in the following books:

Those Amazing Ants, by Patricia Demuth
Ant Cities, by Arthur Dorros
Watch Honeybee With Me, by Judy Hawes
Bees, by Alice Goudey
The First Book of Bees, by Albert B. Tibbets
Crickets, by Olive Earle

Expressive Activity
Imagine that you are a scientist and that you have just discovered a new insect. Create an insect out of construction paper. The insect should have all of the body parts that a real insect has.
Create an article that tells all about the new discovery.

Bugs-A-Poppin' Center.

Literature Experience
Read How Many Bugs in a Box? by David A. Carter.
The children can review all of the bugs, both real and imaginary.

Expressive Activity
Create pop-up bug pictures.
You may wish to write a story about your pop-up picture.

Ant Farm Center.

Literature Experience
Expressive Activity
Recreate an imaginary ant farm using a cereal box and plastic ants. Write about the ants in the ant farm and the jobs that they are doing.

Bee Center.

Literature Experience

Expressive Activity
Describe the process that a bee engages in to make honey. You may wish to create an illustrated book of your writing (see Figure 4).

Figure 4

An Example of a Student’s Illustrated Book from the Bee Center.
Figure 4 (continued)

1. The bees are making honey.
2. Now he is putting pollen in the cells.
3. The bees are getting honey.
Conclusion

The process of instructional development was engaged in to extend the literature base of a unit on insects, specifically ants, bees, and crickets, for grade two. Quality literature pieces were gathered to enrich the unit. The result of this project was the development of a rich environment in which the processes of the language arts and science areas were integrated to foster students' in-depth study of the concepts of the unit and their thinking-language abilities. The unit was presented through teacher-directed activities and learning centers—sustaining and specific to the unit. Sustaining centers maintained a secure, predictable learning environment as well as enhanced the unit of study.

The many options for literature experiences and hands-on activities livened up the study. The second graders enthusiastically discovered concepts and engaged in the processes as individuals and in pairs and small groups. Because of their interest, the children sustained attention on the tasks in the learning centers and produced extensive written and graphic art pieces. Their self-selected assignments were frequently presented during sharing time. This sharing added to the momentum of the unit, for the students gave their peers ideas for projects.
Bibliography


Children’s Books


