The Birds and Their Nests Project

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Abstract

This article discusses a project about birds and their nests undertaken by 3- to 5-year-olds in a preschool class in Florida. After a description of the center and the goal of the project, the three phases of the project are presented. Reflections of the teachers and photographs taken for documenting the project are also included.

Background Information

South Dade Child Care Center is an institution built in 1996 by Catholic Charities as part of an effort to reconstruct the area of Homestead, Florida, that was devastated by Hurricane Andrew in 1992. Catholic Charities supervises the daily activities of the center. Head Start and the Child Development Center of Florida collaborate with Catholic Charities in managing the center's operations.

The Center provides 15 programs—12 for preschoolers, 1 for infants, and 2 for young children—as well as a child care program for the community during after-school hours.

Twenty children from 3 to 5 years of age attend the preschool programs Monday through Friday, from 7:30 in the morning until 4:00 in the afternoon. The director of the program is Rose Marie Inserni. The Birds and Their Nests Project was undertaken in the preschool classroom of teacher Liliana Elizondo and her assistant Lilian Valencia, from February through May of 2005. Of the 20 children who participated in the project, 17 speak Spanish and 3 speak English. The program uses the Head Start guidelines and the High/Scope curriculum.

Learning Goals of the Project

While making the initial plans for the Birds and Their Nests Project, we had the following goals in mind:

- Assure that each child had an opportunity to participate in the project.
- Increase the children's skills in maintaining interactions with others through helping, sharing, and conversing.
- Develop their skills in negotiating and resolving problems and conflicts.
- Develop their skills in understanding and using language to comment on information.
- Encourage them to test hypotheses.
- Introduce them to different materials and techniques for creating representations to express their knowledge and ideas.
- Integrate concepts and skills in reading and writing, mathematics, and science in a useful context for applying that knowledge.

Phase 1: Starting the Project

Discovery of the Nest

This project began during outside playtime when two of the girls, Silvana and Lucía, discovered

a bird's nest in a tree. After observing it, they began to call the rest of their classmates to come and see it too. Upon returning to the classroom, the children continued commenting on what they had seen in the park, adding their previous experiences with birds and nests.

On seeing the children so motivated, we asked them whether they wanted to know more about birds and their nests. They responded very enthusiastically, "Yes."

During large group time, we asked them what they knew about birds. We looked for a large sheet of paper and wrote down what they said. Among the 20 children in the group, 6 expressed their hypotheses:

> *Silvana:* The little bird came out of the egg and stayed inside for a moment. The mama bird is taking care of her eggs, and she has fuzzy little hairs.
> *Nicolás:* The mama bird made her nest with little twigs, and she sat on top of it.
> *Daniel:* The nest is the house for the birds, and the eggs go "crack."
> *Sofía:* The little birds fly.
> *Nicole:* Birds fly with wings.
> *Victoria:* The bird eats rice.

Figure 1. The children expressed their understandings of birds and nests.

This was our first project. In the beginning, we felt a little apprehensive, but the children's initiative and interest motivated us to proceed.

Experiences Related to the Topic

To create a common understanding, we brought books from the library and gathered information from the Internet on the topic. While the children were looking at the photographs, they commented on the different sizes and colors of the birds.

Figure 2. The children commented on the nests in the books.

Reflecting on the idea of not underestimating preschool children's intellectual capacity, we went to the library to choose nonfiction books that included photographs of birds and nests, with descriptions that contained scientific vocabulary. Before presenting the books to the children, we explained to them that the books came from the library, and therefore we had to be very careful with them. Seeing the children using the books with such care, we once again thought about the importance of not underestimating the competence of young children.

The experience awoke the children's curiosity and desire to know more about the topic. This led them to develop questions for investigation:

Pablo: What color are they?
Silvana: Are they big or small?
Christopher: Do they eat leaves?
Andreína: Who lays the little eggs?
Carlos: How are they born?
Lucía: Where do they live?
Nicolás: How do they make their little houses?

Figure 3. Using the children's questions, we made a conceptual map.

The children's questions served as a guide for organizing the second phase of the investigation.

Phase 2: Investigation and Representation

First Field Trip

During large group time, we asked the children in what way they would like to better observe birds and their nests. Directing their conversation, we obtained the answer from Silvana: "Seeing them outside."

Then I told them, "We need to organize a trip. In the first place, we should be very clear about what we're going to observe. Here I have a large sheet of paper with your questions."

After reviewing the questions, Lucía reminded us about the place where the tree with the nest was.

Figure 4. Children observed and commented on the nest.

The children's direct experience with nature was one of the best resources that we could have used. Going outside with a purpose motivated them and increased their interest in the investigation.

Second Field Trip

After successfully discovering other nests, we decided to create a chart for the children to apply their understanding of the mathematical concept of quantity. During large group time, each child counted how many empty nests and how many full nests he or she found in the park.

Figure 5. Children observed the nests and completed their charts.

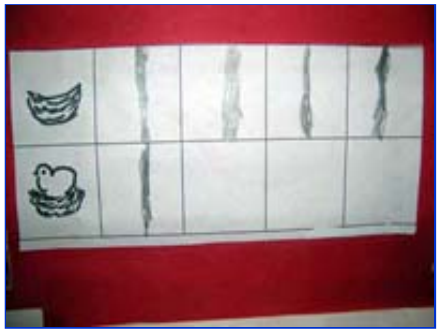

Figure 6. Each mark represented an empty nest or a nest with a bird inside.

Third Field Trip

The objective of this field experience was for the children to make their first sketch. Before going to the park, we talked about the experience from the previous day. We told them that the purpose of this field trip would be to represent the nest using pencil and paper.

Figure 7. Silvana, Lucía, and Nicolás drew the nest.

We observed that some children erased their nests while they were drawing and then re-drew them. We discerned that they were trying to make their drawing look as much like the real nest as possible.

Figure 8. First sketch by Nicole (age 4 years, 2 months).

A Real Nest in the Class

One of the mothers brought a real nest into the classroom and put it on the table. The children gathered around the table and excitedly made comments such as, "It's large"; "It's broken"; "It's dirty."

After listening to the children's comments, we asked, "What makes you think that it's broken?" "Why do you think it's dirty?"

Figure 9. The real nest that Pablo's mother brought.

During small group time, we drew pictures to represent the nest that Pablo's mother had brought, and we compared them with the representations from the day before.

Figure 10. The children drew pictures of the real nest.

> *We will never forget the expressions on the children's faces when they saw the nest. Some held back from touching it as if they were afraid to break it, while others went ahead and touched it as though to confirm that it was a real nest. Some of the children were careful to touch it gently in order to protect it. We noted that their interest in this investigation was growing.*

Second Sketch

We went out to the park, carrying our clipboards with paper and pencil to make our second sketches.

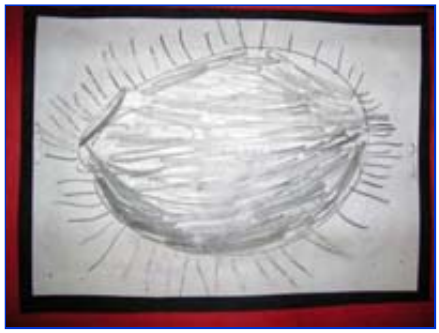

Figure 11. Second sketch by Nicole (age 4 year, 2 months).

Representation of the Nest with Clay and Plasticine

The class worked with clay and plasticine for several days. The children enjoyed this sensory experience, and they improved the quality of their representations.

Figure 12. Pablo modeled with clay.

Figure 13. Christopher modeled with plasticine.

This representation arose from our observation in the books about nests made of clay.

Analysis of the Real Nest in Class

We analyzed the materials that the bird used to construct the nest that Pablo's mother brought to class. We used the following table to represent each child's analysis.

Figure 14. We used a table to represent each child's analysis of the nest.

In order to teach the children about other ways to represent the information they had obtained from the analysis, we worked up a graphic as a group.

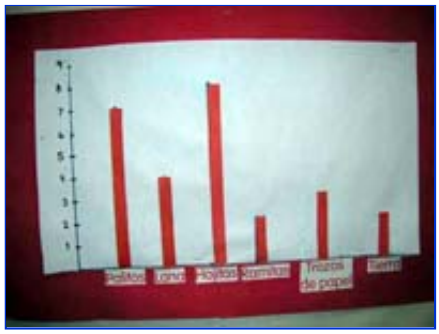

Figure 15. The children worked as a group to create a graphic.

We compared information from the books about nests with our table of materials that the bird uses to make its nest. We discovered that some birds use their beaks to weave the materials that they gather.

Weaving

To represent how the bird uses its beak to weave its nest, we began to use yarn and needles to make a model of our nest and to learn how to weave.

Figure 16. Carolina wove a model nest.

What we observed in this activity was persistence and concentration. At the same time, the children acted out what birds do to build their nests. The process of weaving their nests lasted many days.

Third Sketch

During small group time, we organized another field outing to do our third sketch.

Figure 17. Third sketch by Nicole (age 4 years, 3 months).

We noticed that the children added more detail to their drawings.

Field Trip to Gather Materials

As we observed the children's growing interest in making models of nests, we decided to take them to the park to look for materials to make more realistic models. In the park, we picked up small leaves, twigs, branches, and other materials to represent our nests.

Figure 18. Children gathered materials in the park to make nests.

Representing the Nests in Work Groups

We made model nests with the materials that we had collected in the park. We discovered that it was impossible to finish a nest in only one day and that we needed more time. The children commented that the birds were smaller, and they were making large nests. Their needing more time made the children curious to know how much time a bird needed to build its nest.

Figure 19. Alex, Fabiana, Andreína, and Sophia worked on their nest.

The way the children negotiated what materials to use and how to use them made us reflect about the growth of their social competence. We observed that the children proposed ideas and also accepted those of others. Project work stimulates their intrinsic motivation, which helps them to be able to work with others, creating a sense of community in which we respect each other's ideas.

Song

We decided to compose a song about birds, and each time they saw a bird, they sang the song:

The little birds that go through the air, they fly, fly, fly...
They open their beak when they're hungry, they fly, fly...
And their mama brings them food, they fly, fly...
They huddle beneath her little wings, they fly, fly...

Figure 20. The children sang the song about the little birds.

Representing birds with music and movement made our investigation more complete. We noted that the children used their bodies spontaneously to express how birds move. They loved singing the song. For future investigations, it also gave us the idea of introducing a dramatized song at the beginning of the project.

Feathers

Silvana brought a feather to school and showed it to the class during large group time. The feather provoked much conversation.

In order to keep integrating families into the project, we asked the parents if they might share with the children a field trip around the neighborhood to collect feathers.

Figure 21. Two girls searched for feathers in the books.

We Measure the Feathers

We compared the feathers that the children brought. We discovered that some were larger than others, but in order to be sure, we used a ruler to measure.

Figure 22. Lucía and Andreína measured the feathers.

We glued the feathers on a piece of cardboard, and we wrote underneath them what they measured.

Figure 23. The feathers with their measurements.

Then we completed a graph of the measurements of the feathers.

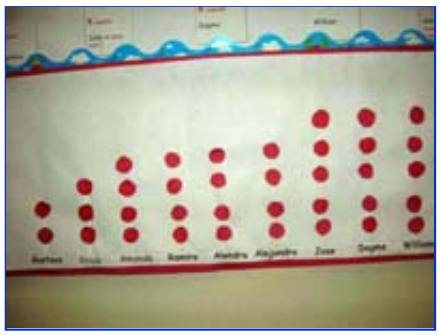

Figure 24. Graph that represented the measurements of the feathers.

Fourth Sketch

Because we knew that the field experiences turned out to be very productive, we decided to organize another in order to observe the development of the children's representations.

Figure 25. Fourth sketch by Nicole (age 4 years, 3 months).

The children's making repeated sketches of the same object showed us that while their knowledge of the topic of investigation increased, there was also an increase in the level of their representations as they gradually added details.

Observation of Bones

The teacher brought a chicken bone to class and put it on the science table. When Ana saw it, she asked, "Teacher, what does this bone here do?"

We looked in the books to find pictures of birds' bones, and we found one that looked like what we had.

This activity provoked interest in knowing more about bones. The children compared the chicken bone with bones in the book, superimposing them. They explored it for a long time, touching it and looking at it, since it was something novel for them.

We Compared the Weight of the Bones

We put two bones on the science table. After they explored both bones—those of the pig and those of the chicken—we compared their size and their weight on a scale. We discovered that the chicken bones were lighter. We asked the parents to find out why the chicken bones were lighter than those of the pig.

Figure 26. Lucía and Silvana comparing the weight of the bones.

Representation with Tempera Paint

Some children chose a bird from the resource books in order to paint it. First, they drew it in great detail in pencil. We observed that they erased and redrew lines, wanting to make their drawings the same as the photograph in the book.

They used tempera paint to paint their birds, using the same colors that appeared in the book.

Figure 27. Painted representation of the bird by Silvana (age 5 years, 5 months).

Figure 28. "My Bird" by Natalia (age 4 years, 3 months).

The children continued working in tempera for several days.

> We noted how the level of the representation had suddenly risen. For several days, the children were very focused on painting the bird they had chosen from the resource books.

Three-Dimensional Representations

Wanting to keep on representing the birds and their nests, some children decided to do so in three-dimensional form using different recyclable materials. They worked for several days on this type of representation.

Figure 29. "The Flamingo" by Lucía (age 5 years, 3 months).

Phase 3: Conclusion

Although the children were still interested in the project, we had to conclude it because the school year was drawing to a close. During large group time, we consulted the children about how they would like to share with others what they had learned during the investigation. One of the children suggested doing it the day of graduation. The rest of the children agreed to share with their families the knowledge they had acquired during the investigation.

Together we reviewed all that we had learned, observing our visual documentation of the project. We wrote down all that they were saying while observing the documentation:

> *Silvana:* The birds use twigs, leaves, and thread to make their nests.
> *Nicole:* The birds make their nests with clay.
> *Andrés:* There are long feathers and short feathers.
> *Mauricio:* Chicken bones are lighter than pork bones.

In the graduation celebration, one girl explained in sequence all that had happened during the Birds and Their Nests Project. She commented on the shared experience step by step, with details.

Figure 30. One of the girls commented on the project.

We sang the song, "The Little Birds That Go through the Air."

Figure 31. Children sang the song.

In order to offer their parents something related to the project, the children made 3-dimensional representations.

Figure 32. Andrés offered his mother a bird.

At the end of the event, many parents commented on their amazement at how much the children had learned.

When the process of investigation ended, we analyzed all that the children had learned, basing our analysis on the Head Start Child Outcomes Framework. We concluded that they had achieved the following indicators:

- Understanding progressively a complex and varied vocabulary.
- Developing abilities to understand and use language to communicate information, experiences, ideas, feelings, opinions, needs, and questions, and for a variety of other purposes.
- Progressing in the ability to initiate and respond appropriately in conversations and discussions with peers and with adults.
- Beginning to associate the concept of number and written quantities, using significant methods.
- Developing the ability to count.
- Beginning to use vocabulary appropriate to comparing the number of objects, such as "more than," "less than," "equal to," and "some."
- Demonstrating progress in using measurements of length and area.
- Developing the ability to observe and discuss common properties, differences, and comparisons about objects and materials.
- Beginning to participate in simple investigations to evaluate observations, discuss and draw conclusions, and form generalizations.
- Developing the ability to gather, describe, and write down information through a variety of methods, including discussions, drawings, maps, and graphics.
- Beginning to describe and discuss predictions, explanations, and generalizations, based on

past experiences.

- Expanding skills in observing, describing, and discussing the natural world, materials, living things, and natural processes.
- Participating in musical activities, singing, listening, playing, and performing.
- Gaining skill in using different materials with different techniques for creative expression and representations.
- Progressing in the ability to create drawings, paintings, models, and other artistic creations that are more detailed, creative, and realistic.
- Developing the ability to plan, work independently, and show carefulness and persistence in a variety of art projects.
- Beginning to understand and share opinions about artistic products and experiences.
- Participating in a variety of complex forms of pretend play.
- Demonstrating imaginative and creative growth using materials and assuming different roles during pretend play.
- Increasing the ability to sustain interactions with their peers, helping, sharing, and discussing.
- Demonstrating an increased ability to use compromise and discussion in group work, play, and resolving conflicts with their peers.
- Increasing the ability to give and take in interactions, in order to take turns in games and in using materials.
- Developing the ability to make choices independently.
- Being eager to learn about topics, ideas, and tasks.
- Persisting in completing a variety of tasks, activities, projects, and experiences.
- Increasing the ability to determine objectives, develop them further, and make plans to follow through on them.
- Showing growth in the capacity to maintain concentration on an activity.
- Developing the ability to find more than one solution to a question, activity, or problem.
- Growing in recognizing problems through active exploration, including trial and error, and interactions and discussions with peers and adults.
- Developing the ability to classify, compare, and contrast objects, events, and experiences.
- Progressing in the ability to use tools for drawing and art.

We understand the importance of project work with preschool children, since through the process of investigation, children construct their learning and develop their initiative, their curiosity, their inventiveness, and confidence in themselves. They create a community in which they can give and receive ideas, suggestions, and rules—dispositions that will be useful throughout their lives.

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Author Information

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