

BIRD STUDY BY JESSICA JOHNSON, KAILUA ELEMENTARY

CONCEPT (What is the Big Idea?):

Needs/Survival

TOPIC (What is the unit focus? Why is it worthwhile?):

Bird Study

This topic connects to our school environment, as we have a lot of chickens and birds, including some native and endemic birds on and near campus. This organically leads to the curiosity of children and hands-on experiences. Studying birds gives opportunities for observation, inquiry, language, and making connections. It also promotes a love for nature and inspires responsibility to care for all living things.

INTENDED LEARNING OUTCOME, ILO (What is important to learn?):

Bird behaviors and physical features help them to meet their needs for safety and survival.

FACTS (What important information will support understanding?)

- Different birds live in different environments, such as the forest, wetlands, and the sea.
- Female birds lay eggs in nests, which develop and hatch into chicks.
- Wings help birds fly to travel, gather food, and escape predators.
- Bird feet and beaks help birds grasp food and materials.

ASSESSMENT (What evidence/data will show what has been learned?)

Children will create an art gallery of their representation of a bird. The physical details included and verbal description will show what has been learned.

MAJOR LEARNING EXPERIENCES/OPPORTUNITIES (What will engage children's brains?)

- Gathering nest materials and building a nest
- Classroom visit from a farm sharing about eggs to put in our incubator
- Tracking how long it took for the eggs to hatch and how it was developing through the process
- Observe a baby chick hatch
- Caring for baby chicks in a brooder
- Bringing in different foods, and taking data on what birds like to eat most outside
- Comparing and contrasting birds in different environments through community walks/learning trips: on our campus, Hamakua Marsh, the lo'i, Sea Life Park. These walking trips are also an opportunity to point out native and endemic birds.

STEM LEARNING PLAN LESSON: NEST BUILDING

This lesson came about organically as students found a nest in our play area. As we read fiction and non-fiction books about building nests, the students had the idea to make their own nests.

What will children do during the lesson?

Children will build background knowledge through observing found nests, fiction and non-fiction books, and a video of a bird building a nest. Books and videos were primarily used, as it is rare to observe a bird building a nest in person. Children will then gather natural materials in our outdoor play area to build a nest. Children will be encouraged to grab items with tweezers to mimic beaks and their feet to mimic how a bird grabs materials with their feet. Children will then use the natural materials combined with materials found in the classroom to build a nest over a span of several days.

What will the teacher do?

- The teacher will help build background by exposing children to quality non-fiction and fiction books and videos that show what we cannot observe in our day-to-day.
- Shared writing- The teacher will help students put their findings in one place by helping students create a running list of materials birds use to build a nest and reasonings for why birds build nests.
- The teacher will provide quality materials and gently guide students when needed, but mostly step back and allow students to independently problem solve and create their representation of a nest.
- The teacher will take anecdotal records on what students say when describing their nest, asking open-ended questions.

Where will the lesson take place? Will it affect the learning? If so, how? What resources/materials will be needed/used?

The lesson will take place in our classroom and outdoor play area. Being outdoors could be a potential distraction, but we went out in small groups and did not have any issues. We will be using tweezers, found natural materials and art materials available in the classroom.

What do you intend for children to take away from this learning opportunity? How will you know?

Children should begin to understand:

- Birds use found natural materials to build nests over time
- The purpose of nests is to provide a safe place for birds to lay eggs
- Birds use their beaks and feet to grasp materials

I will know by observing students, interviewing students and taking anecdotal records throughout the course of this project.

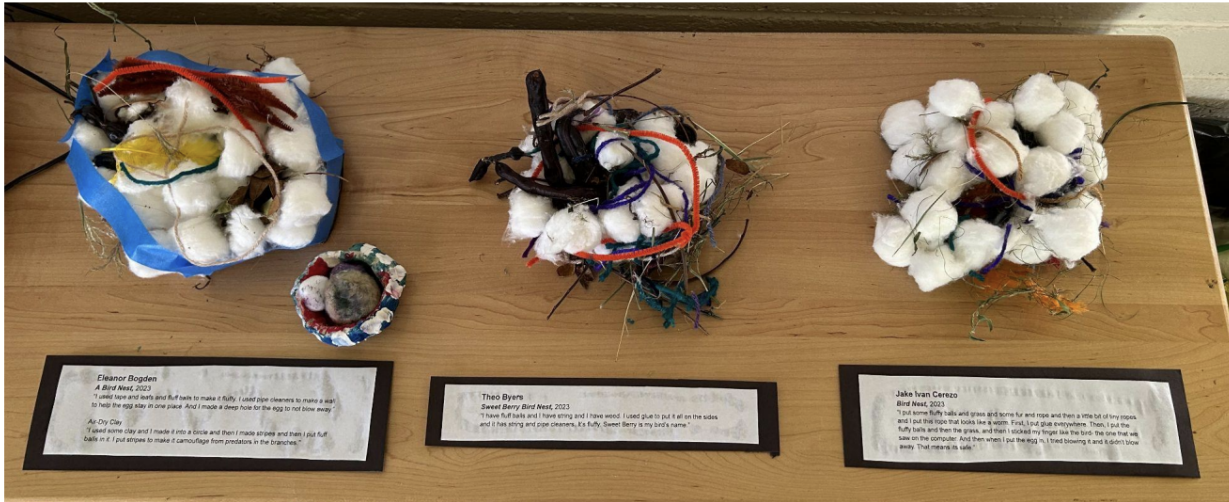
Children will build problem-solving skills, like trial-and-error, and revising their work. This builds cognitive flexibility and creativity. Children will also learn persistence as they complete the project for a span of several days.

REFLECTION

What worked in this lesson? Use your documentation of student growth to support your response.

Since this lesson was mostly student-initiated, majority of students were engaged throughout the entirety of the lesson. It was beneficial and more meaningful to build some background knowledge before the students went off to build their nests. The hands-on aspect and longevity of this lesson greatly served the students. Students using different types of tweezers helped students understand how birds use beaks to grasp materials. There were some students that even showed empathy towards birds in this process, saying things like, "This is hard! It must be hard to be a bird." Despite the challenge, I observed students persevere through the task.

As students built their nest, I observed problem solving skills as students struggled, but achieved putting their nests together. Some students realized they did not grab enough materials, and had to grab more. As students were finishing, they wanted to see if their nests could hold an egg. The students put Easter eggs in their nest and blew on it to see if their nest was secure in the wind. This led to more adjustments initiated by students over time. We wrapped up the unit with a gallery walk where students' nests were displayed along with their titles and captions. Students loved seeing their work in the classroom for all to see. I heard lots of rich language, as captured in the captions below.



Captions:

A Bird Nest, 2023

"I used tape and leaves and fluff balls to make it fluffy. I used pipe cleaners to make a wall to help the egg stay in one place. And I made a deep hole for the egg to not blow away."

Air-Dry Clay

"I used some clay and I made it into a circle and then I made stripes and then I put fluff balls in it. I put stripes to make it camouflage from predators in the branches."

Sweet Berry Bird Nest, 2023

“I have fluff balls and I have string and I have weed. I used glue to put it all on the sides and it has string and pipe cleaners. It’s fluffy. Sweet Berry is my bird’s name.”

Bird Nest, 2023

“I put some fluffy balls and grass and some fur and rope and then a little bit of tiny ropes and I put this rope that looks like a worm. First, I put glue everywhere. Then, I put the fluffy balls and then the grass, and then I stuck my finger like the bird- the one that we saw on the computer. And then when I put the egg in, I tried blowing it and it didn’t blow away. That means its safe.”

What would you do differently the next time?

Next time, I would have children hypothesize about the nest they found. My shared writing activity where I had children make a running list of nest materials only scratched the surface of nest-building and did not promote higher order thinking. On top of listing materials, next time, I would ask students: Why did the bird choose those materials? How do you think the bird put the materials together? Where did it find the materials? In my background building process, I would have also touched on endemic or native species, and the importance of those birds to Hawai`i. Next time, I would also limit the materials available. One student mentioned, “Birds don’t use tape and glue to make nests.” That insight was eye-opening for me! I put out tape and glue because I thought it would be easier for children to bind the materials with those items. Next time, I will try to have students use only natural materials and see what they come up with. It could also lead into a discussion on weaving. I did some more research after the lesson and learned that birds use mud and their saliva to make a glue-like binding agent for their nests. I showed students a video of a bird weaving materials to make a nest, but next time I could show them one of a bird using mud as well. I am learning that it is important for teachers to have their background knowledge down too.

I had two students who were not engaged in the nest-building process. They are students that do not gravitate toward art, but they love building in block center and one student loves play-doh. Next time, if I have students like that, I would encourage them to represent their nest in a way that is meaningful to them, even if it is not what I imagined.

How would you build on what you learned (for future lessons)?

Some directions I can take this lesson are to go into habitats/shelters or life cycles. Nests are a safe haven for birds and eggs. This can lead into: What is a safe haven for us as people? What is a safe haven for animals? Nests can also lead into life cycles, as birds lay eggs in nests, which develop into babies, then adults. The process repeats, bringing awareness to the fact that life is cyclical.

IMPACT MAPPING ACTIVITY – EVENT/EXPERIENCE/HUAKA’I Ulupo Lo`i

<p>What did I sense – see, feel, hear, experience – from this place?</p> <p>See: Lo`i patches: some with big kalo, small, and some getting ready for planting, other trees and plants, chickens, wetlands to be restored as a fish pond, huge heiau, community working together to beautify the land Feel: Welcome, peace, refreshed, mud on my feet and legs, sun beating down, cool breeze Hear: Birds, traffic sounds, staff sharing mo`olelo Experience: Pulling weeds out of the lo`i, satisfaction after looking at our finished work, working alongside the community</p>	<p>What did I learn and now know from this place?</p> <p>I learned that Kailua used to have many fishponds. All the “wetlands” behind Ulupo used to be a fishpond. The staff shared that it is their vision to see it restored. They shared a mo`olelo about a fisherman long ago discovering pink mud in the fishpond that had a sweet taste. They said one of their colleagues tried to find and study it. I now know that it will take the help of the next generation to preserve the beautiful land and rejuvenate the fishpond.</p>
<p>What questions did this experience leave me with?</p> <p>I wonder what practical steps there are in restoring the fishpond over time? How can I help? How can my students help? Could I carry on my experience at Ulupo by planting kalo at school?</p>	<p>What will I share from this experience when I return to my school/place?</p> <p>I will share the vision to rejuvenate the fishpond. I will share the sense of community and accomplishment I felt at the end of the task. I would like to bring kalo into our learning environment and see it become part of our culture.</p>