

Snuggly in a Nest

Sarsef 2026



Snuggly Nest Constructed. Taken on the campus
Jan. 2026

Introduction

Have you ever seen a bird fly by and watched where it landed? Or heard a bird singing in the morning? Our three, four, and five year olds were watching these amazing creatures and were taken on an adventure of science and wonder. After seeing many birds on our playground, we started to wonder where birds lived. As we looked around our playground we could find ant hills, small holes for bugs or small creatures, cracks for lizards, etc. but no place for birds. We started asking, "Where do birds go for protection in storms?" and "What do bird houses look like?" which led us to an online search of the homes for birds we saw visiting our playground, but not living there, sadly. These scientists and engineers loved the doves, woodpeckers, hummingbirds, sparrows, and crows flying around our space, and observing the different homes they built. We then started to wonder whose home, called a nest, was made of the safest and strongest materials.

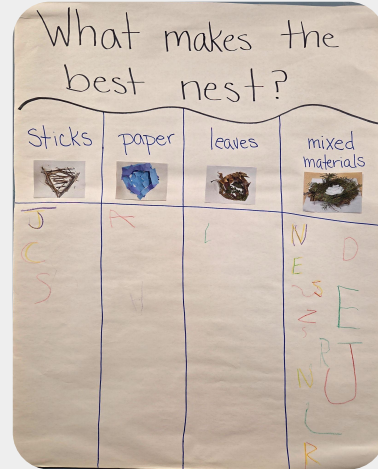


Young Children Going On A Bird Hunt. Taken on the campus Jan. 2026

Question

What material will make the safest bird nest?

Our class' prediction for what material will make the best bird nest is that a mix of materials will make the strongest nest for the birds. After we looked at pictures of birds nests, read books about birds, and explored our playground for bird nests, we noticed that the nests were made of all different materials. Students were excited to keep learning about these birds they see everyday and how they engineer their beautiful homes.



Best Nest Signs Taken
on the campus Jan.
2026

Procedures

Step By Step

We began by compiling a list of what materials we were noticing birds used to make a nest, and students charted the data. The students were surprised by all the different things they saw! We then sorted items on this list and talked about how they were similar and different. We then made a few different nests out of different materials birds might find in nature. The process for this is:

- Students design their nests and plan the materials they will build it out of like sticks, leaves, feathers, etc.
- Glue the material onto a new paper in a circle to start making a nest
- Students put the nests somewhere safe to dry overnight
- Students test how strong each nest is by placing eggs in them and moving the nests around
- Repeat until each student tests their nest and keep trying different materials to see which materials are the best at protecting the eggs



Test Our Construction In Many Variations. Taken on the campus Jan. 2026

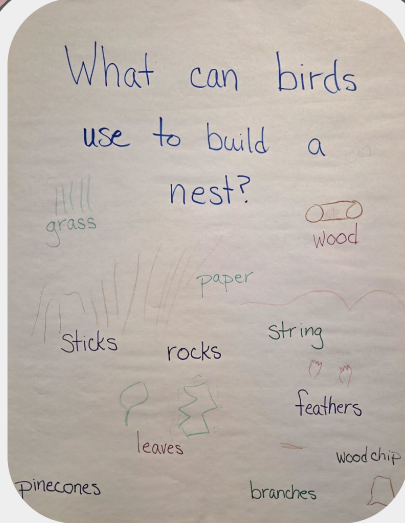
Variables

- **Independent variable:** The material type we are using to create our nests and hold our eggs. These items include sticks, leaves, feathers, etc.
- **Dependent variable:** How strong the nest is and how safe it will keep our eggs
- **Controlled variables:** The weight and size of the eggs used



Let's Look Closely At Nest Details. Taken on the campus Jan. 2026

Results



What Birds Use Data. Taken on the campus Jan. 2026



Testing our different nest creations. Taken on campus Jan. 2026

Based on the data we gathered and after we tested our materials, the best nest to keep birds safe is made of a mix of materials. We learned that birds are engineers and they build and engineer their nests to be safe homes out of different items they find in their environments. We were so impressed with the birds in our desert and birds all around the world, and how creative their nests can be! We are hoping to visit different museums in town, like the Desert Museum, that let us see some birds and their nests up close or go on desert hikes to see even more desert birds in their environment.

Results Continued...

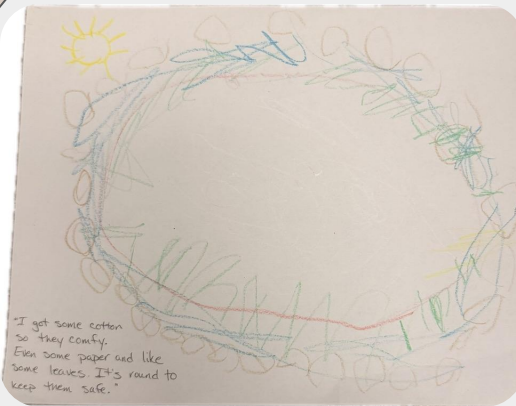


Let's Construct Like Bird Engineers Taken on the campus Jan. 2026

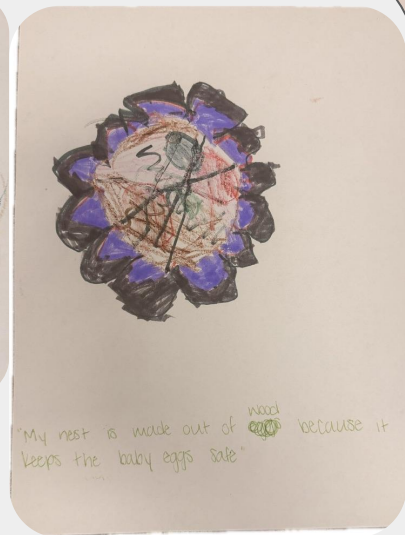
We feel our investigation of our question was successful. Our wonderings and investigations taught us about all the different materials birds might use in their nests, then our experiments and data showed us that a mix of materials makes the best nest. However, we noticed that there were a lot more materials birds could use that we did not try in our tests. We also could have done more experiments with different weights, and maybe even used real eggs, but we still enjoyed testing nests together! We all felt like real scientists and engineers, and we want more opportunities to explore what it's like to investigate and follow processes!

Discussion

When we discussed our data, we noticed that mixing different materials together is an important part of all the birds' nest construction, which was just what we predicted! Our Sonoran Desert has a lot of sticks, leaves, rocks, woodchips, and more, so we were glad to know the birds have so much to make their nests out of. We found that mixing materials makes the nest more stable for the birds and their eggs, and it felt stronger when we balanced the eggs. When designing their nests, one child said "Some paper and like some leaves. It's round to keep them safe" and another said "My nest is made out of wood because it keeps the baby eggs safe". Students were able to make a connection to their own environment and other content like geology, literacy, math, social, emotional, and more!

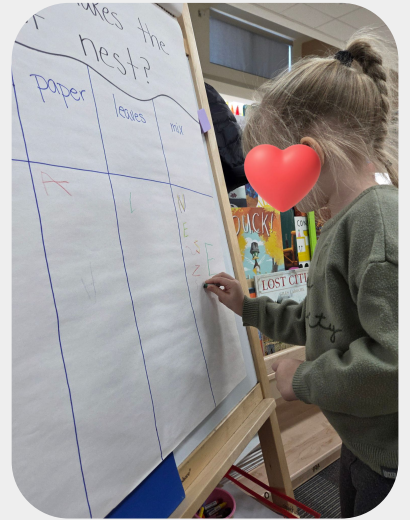


Safe nest designs.
Taken on campus Jan. 2026



Further research

To continue to gather research on birds and how they construct their homes, we would have to continue to explore and observe the birds in our environment. It is important for us to explore these topics and talk about how we have to take care of the outdoors so the birds have safe and clean spaces to live in. The students love to look at every bird and nest they see and they are sure that the birds have plenty of materials to create a home in our Sonoran Desert. To do further research, we could go on field trips and use more of our local resources like the Tucson Desert museum, going to the library and looking at more books about birds, using binoculars to look at birds in the wild, and researching the birds that live in our neighborhood. We could use all the new information we learn to create a new project about how to keep our environment clean and safe for birds and other wildlife.



Young Data Collector
Taken on the campus Jan. 2026

References

Books we used in nest research and engineering of our birds used were as follows...

Builds a Nest By: Martin Jenkins

Not your nest! By: Gideon Sterer

The Best Nest By: P.D Eastman

Nest By: Jorey Hurley

Animals the Build their Homes By: Robert M. McClung

What's inside a bird's nest By: Rachel Ignatofsky

Smithsonian Handbook of Interesting Bird Nests and Eggs By: Douglas G.D.Russell



Open Ended Play with Nature To Make Nest Taken on the campus Jan. 2026