A Sturdy Nest

Inspired by *Mama Built a Little Nest*
by Jennifer Ward, illustrated by Steve Jenkins

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LET'S LOOK AT THE PROBLEM

Bird nests come in all shapes and sizes. They can be in trees, near water, on beaches, and in the snow. Birds use what is around them to build their nests, so they can be made from all kinds of materials. They must build a nest that is strong and secure for their eggs and for the baby birds when they hatch.

What is different about the nests in the book? How is each one suited to the birds' environment and needs?

Have you seen a bird nest? What was it made of? Where did the bird make it?

MATERIALS

- ☐ Reusable resources such as shredded paper, pieces of string or yarn, toothpicks, and pipe cleaners
- ☐ Connectors such as wire, glue, and paste
- ☐ Tools such as scissors and pliers
- ☐ Natural items such as leaves, grass, twigs, mud, and branches
- ☐ A toy bird and plastic eggs
- ☐ Paper and markers, crayons, or pencils
- ☐ A bird nest to examine (optional)

TINKER WITH THE MATERIALS

Gather several items and explore them. What do you discover? What do you think you could make with the materials? What do you think a bird might do with them? Look for a way to hold the items together. What's another way?

STEM CONCEPTS

animal habitats / climate / environment / measurement / number concepts / properties of materials / scientific inquiry / structural engineering

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THE DESIGN CHALLENGE

Making Build a strong bird nest.

Engineering Build a strong nest that will hold the most weight possible. It must be strong enough to hold three plastic eggs and a toy bird. It must sit on a branch without falling while holding the eggs and the toy bird.

WORKING ON THE DESIGN CHALLENGE

- **Think about it.** Look out of a window or go on a walk to watch the birds. Look closely at the bird nest in the classroom or at the pictures of the nests in the book. What materials did the birds use to build their nests? Where do you think they found the materials? What do you want to use to make your nest? Draw or sketch your ideas.

  Engineering. Select a picture of a bird and think about where it lives and the type of habitat it needs. Where is its nest located? Look at the materials that are available. How will you build your nest? What will you do to make it strong enough to hold the bird and the eggs?

- **Build or create it.** Choose materials to construct your nest. Make sure that it is strong and sturdy.

- **Try it.** Balance the nest on a firm surface.

  Engineering. Balance the nest on a branch. How many plastic eggs can you add? What happens when you add the toy bird?

- **Revise or make it better.** Does the nest stay in one piece? If it doesn't, what can you change to make it stronger?

  Engineering. Does your nest stay on the branch with at least three eggs and a toy bird inside it? If not, what can you change to make it stronger or more stable?

- **Share.** Write or dictate a story about a bird that might use your nest.

  Engineering. Explain to someone why you made the nest the way you did. Tell them what kind of bird might make this nest and why.

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QUESTIONS AND COMMENTS

What do you think will happen if _____?

I wonder why your nest fell apart.

Would you want to use glue or tape to keep the nest together? Why or why not? What else could you use to hold it together?

How could you change your design so that it _____?

BACK TO THE PROBLEM IN THE BOOK

How does the nest you built compare with the nests in *Mama Built a Little Nest*? Do you think the baby birds would like the nest you built? Why or why not?

GOING DEEPER

- A bird doesn't have hands and fingers like you do to help it build its nest. How does it manipulate the materials? Try to build a nest like a bird would.
- Try weaving some of your items together.
- Would your nest stay together and balanced on a branch in the wind and rain? What could you do to make it strong enough to stand up against wind and rain?

OTHER BOOKS TO USE

Are You My Mother? / P.D. Eastman

The Best Nest / P.D. Eastman

Have You Heard the Nesting Bird? / Rita Gray, illustrated by Kenard Pak