

Lesson Plan

A Home in the Forest

Book: *Making a Windproof House for the Three Little Pigs*

Series: Fairy Tale Science

Level: Beacon

Objective

To help students explore how shapes and materials influence building design, both for structural and aesthetic reasons.

Supplies

- *Making a Windproof House for the Three Little Pigs* book
- Paper
- Colored pencils, crayons, and/or markers

Before the Activity

Read *Making a Windproof House for the Three Little Pigs*, or assign it to students to read on their own.

Activity

Open the book to the “In the Real World” feature on pages 20 and 21. This feature describes dome homes. Review its main ideas by asking the following questions:

- How does this feature describe a dome home’s shape? (Answer: It says the dome looks like half of a ball.)
- How does this shape help make a dome home strong? (Answer: It spreads out the home’s weight evenly.)
- What two materials does this feature say dome homes can be built from? (Answer: It says they can be built from concrete or from blocks of snow.)
- Why do you think builders might choose concrete? (Sample Answer: This material is very strong.)

Explain that architects are people who design buildings. They plan each building’s shape. Architects often choose shapes and materials that will help the building be strong and stable. They might also create designs based on where the building will be located. They might choose materials that are common in that area. Or, they might choose shapes that will help the home match its surroundings. For example, people might build an igloo in a cold, snowy area. This area would have lots of snow to use as material. Plus, a curved home made from snow would blend in with the land around it.

Ask students to imagine they are architects. They have been hired to design a home that will be built in a forest of tall trees. Students should brainstorm answers to the following questions:

- What dangers might a home in the forest face?
- What structures and/or materials could help reduce these dangers?
- What structures and/or materials would make these dangers worse?
- What materials would be easy to get in a forest?
- What structures and/or materials would blend in with a forest?
- What structures and/or materials would stand out?

Based on their answers, students should create a design for the home. They should draw this design on a separate piece of paper. Then they should use colored pencils, crayons, and/or markers to decorate it.

Evaluation

Have each student come to the front to present his or her design to the rest of the class. Students should explain their home's design, including the reasons they chose its shape and materials. After all students have presented their designs, hang the drawings on a wall so students can admire all the different ideas people created.

Standards

This lesson may be used to address the Common Core State Standards' speaking and listening standards, grade 3 (SL 3.1, 3.4), and the National Science Education Standards' Content Standard E, grades K–4.