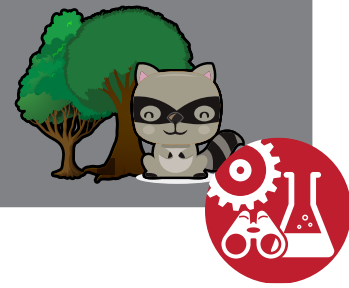


# THREE LITTLE PIGS

## RINGTAIL'S HOLLOW Environment & Outdoors



### THE ADVENTURE:

Which little pig built the strongest house? Build castles using sand, dirt, glue and water to find out which materials are strongest and safest from weather.

### PLAN:

- Do you want to do this Adventure indoors, outdoors or at camp? Where will you have sand and dirt to use?
- Doing the Adventure outside on pavement or grass, or on a tarp will make cleanup easier.
- Some of your buildings may need extra time to dry. When will you have your build phase? Your test phase?
- What kinds of materials are used to make buildings?
- What kinds of things do engineers have to think about when designing buildings?
- Why do you think engineers use different materials for different projects?
- What materials will you use to make your buildings?
- Do you want to do this Adventure alone or in pairs?

### DO:

#### Activity #1: Build it!

- Mix glue, sand, dirt, gravel and water to make different building materials.
- Make two houses out of each material.
- Set any buildings using glue aside to dry.

#### Activity #2: Test it!

- Before you start your tests, make sure any buildings using glue are completely dry.
- Which building holds up best under rain? What happens to the building under the rain?
- Which building holds up best against wind?
- Which building is the strongest? What if something drops on it?

### REVIEW:

- What do you know now that you did not know before?
- How did you work together to build your houses?
- Which house was the best? How do you know it was the best?
- What shapes were the strongest?
- How could you use what you learned at camp?
- What elements of STEM did you use in this Adventure? Science? Technology? Engineering? Math?

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## MATERIALS:

### For each builder/pair of builders:

- 6-8 bathroom-sized paper cups ("Dixie" cups)
- 1 small bowl for mixing ingredients
- White glue
- Water
- Plastic spoons (about teaspoon-sized)

### For everyone:

- Access to sand, dirt and gravel
- Markers or crayons
- Watering can
- Hair dryer
- Books and bricks to test the strength of the houses
- 1 can of non-stick cooking spray
- Safety glasses

## SAFETY TIP:

- If you are doing this adventure at a park or local beach, make sure to check the area for any hazards before you begin experimenting in the sand.

## ONLINE RESOURCES:

- A similar activity
- Three Little Pigs
- Build a different kind of house