

# Protect the 3 Little Pigs

## WHAT ARE WE INVESTIGATING?

Can you build a house that can withstand the big bad wolf?

## MATERIALS:

- Cardboard
- Popsicle Sticks
- Toothpicks
- Aluminum Foil
- Plastic Wrap
- Tape
- Scissors
- Hair Dryer
- Strive Academy's Engineering Design Process Handout (found at [www.striveacademy.org](http://www.striveacademy.org))
- Pencil or Pen

## EXTENSION:

- \* Try this variable - use different materials and repeat this activity. Compare which house stood up to the hair dryer better.
- \* Add some math by setting some constraints before you start building. Decide how high, long, and wide your house needs to be when you build it.

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## DIRECTIONS:

1. Gather all of your materials. Our materials are just suggestions - feel free to add other things too!
2. On your handout (found at [www.striveacademy.org](http://www.striveacademy.org)), fill in the title of your experiment (Blow Your House Down).
3. On your handout, fill in your hypothesis. You want to answer the question: How will I build a house that won't fall down when the big bad wolf blows on it (hair dryer)?
4. On your handout, sketch a design of your experimental setup. Feel free to use color and label the materials that you will be using!
5. Use your materials to build a house. Try to make it sturdy enough that it won't fall over when the hair dryer blows on it!
6. Under "Data Collection/Observations", draw a picture of your completed house. How does it compare to your original design?
7. Have a parent help you with the hairdryer! Use a hair dryer to blow on the house. Start on low and then try it on high. Under "Results", record what happens to your house when you blow on it.
8. Answer the "Analysis" questions on your handout:
  - Compare what happened to your house when the hair dryer was on low power vs. high power.
  - If you wanted to make your house sturdier, what materials would you add?

**\*\* Try the extension activities on the first page for more fun! \*\***