

# Was Goldilocks Telling the Truth?

## Experiment Planning Sheet

You will need:

1. Your science journal and a pencil
2. One set of three bowls of the same material. You may try another set of a different material if desired.
3. 1 ½ cups of warm “porridge” (½ cup oatmeal: 1 cup water)
4. One thermometer for every set of bowls
5. A bowl of very cold water
6. A stopwatch, timer, or watch with a second hand

Please plan the following prior to your experiment:

1. What is your question?
2. What background knowledge do you have to answer this question?
3. Based on your background knowledge, what is your hypothesis?
4. Identify the variables in your experiment.
5. Identify the controls.
6. What types of containers will you use? Why?
7. What time intervals will you use to test the temperature?
8. Use a different thermometer for each set of bowls. Store them in an ice bath between readings.

Consider the following during your experiment. Write your responses in your journal. You may want to use pictures, graphs, or tables to help.

1. How does the temperature change over time?
2. Did the size of the container affect the loss of heat? How?
3. Did the type of material of the container affect the loss of heat? How?
4. Record your data. How did you make sure all results are accurate?
5. While recording your data, begin a table and graph to show patterns in heat loss. Can you predict how much the temperature will drop each time you check the thermometer?
6. Write a conclusion based on your results. Don't forget to answer your question and state whether or not your hypothesis was correct.
7. What questions do you still have? Write these wonderings in your journal.