



Third Grade Science



3rd Grade Science: Activity 1

What is Matter?

Directions: This handout goes with a KCS Teacher Video. If you have access to the video, watch the video while doing this activity. You can find the videos here

<https://www.knoxschools.org/Page/21816>

Solids, Liquids, and Gases

Solids: have a definite shape and volume

Liquids: has volume but no fixed shape. When a liquid is poured it takes the shape of the container it is poured into. The particles in a liquid slide past one another.

Gases: has no shape of their own but fill the volume of the container the particles occupy. The particles bounce around and are spread far apart from each other.

Directions: In the boxes below, illustrate the particles that represent each phase of matter. After you illustrate, give an example of each phase.





3rd Grade Science: Experiment

Can you see particles that make up matter?

Make a Prediction: What will happen to a balloon when you combine a liquid (vinegar) and a solid (baking soda)? What will you see?

Inflate a Balloon

Materials Needed:

- Unfilled Balloon
- Baking Soda
- Dry Empty Water Bottle
- Measuring Spoons
- Small Funnel (not required but makes the process easier)

Experiment and Observe

1. Blow up the balloon a bit to stretch it out
2. Use the funnel and teaspoon to add baking soda to the balloon. Start with 2 spoonfuls of baking soda
3. Fill the container halfway with vinegar.
4. Attach the balloon around the top of the opening of the water bottle
5. Lift up balloon to dump the baking soda into the container of vinegar
6. Focus on what is happening to the balloon
7. To get the most out of the experiment, swirl the contents of the container around.



Illustrate what you observe BEFORE combining the baking soda and vinegar. Include the balloon and the water bottle.

• What state of matter is the baking soda? _____

• What state of matter is the vinegar? _____

Illustrate a picture of what you observed and the particles of gas inside of the balloon.

What state of matter is the air that inflated the balloon? _____

Drawing Conclusions: What happened to the vinegar and baking soda in the water bottle? Did the states of matter change? Explain why you could not see the particles inside of the balloon after the reaction.



Possible extension: Increase or decrease the amount of vinegar and/or baking soda to observe the degree of inflation. Compare results to initial experiment. What did you observe?
