



April STEM Challenge

Expanding Balloon Challenge



Challenge: Can you create a chemical reaction to make a balloon expand?

Materials:

Funnel
Recycled water bottle
Balloon 9''
Spoons
Measuring cups/spoons

Liquids- Water
Vinegar
Bubble solution
Other liquids of choice

Solids- Baking soda
Salt
Other particle solids of choice

Consideration: What are the things you should know about chemical reactions before you begin?

Procedure:

- Choose the liquids that you would like to place in your bottle.
- Decide how much of each you would like to add (totaling 200 ml)
- Add 200 ml of liquid into the recycled water bottle
- Choose a solid material to put into your balloon (total 1 Tbs)
- Stretch the opening of your balloon and tap in about 1 Tbs of powder.
- Place the balloon over the lid of your recycled bottle
- Tip the balloon upright until the powder dumps into the liquid
- Make sure to pinch your balloon tight to the lid of the bottle
- Watch your balloon and the liquids in the bottle. Observe what happens. Did you have a chemical reaction?
- Record what you noticed. Draw or take pictures

**** Teacher demonstration:** At some point, you might want to stop students to discuss the properties of matter: solids, liquids, and gases and chemical reactions.

Reflection:

- ✓ Draw or take a picture of your balloon investigation. Make sure to include labels.
- ✓ Explain what happened during your investigation
- ✓ Tell what changes you would make if you were given the chance to complete this investigation again.
- ✓ Teachers please submit a list of students who participated by email to the **STEM Resource Center** stem@gstboces.org
- ✓ **Teachers- Please make sure that your list has your name, school district, grade level and return address included.**
- ✓ **This challenge is Due: May 1st**



Name _____ Teacher _____ (primary)

Expanding Balloon Challenge

Challenge: Can you combine a solid and a liquid to make a balloon expand?

Materials: Balloon, water bottle, solid, and a liquid

Prediction: What do you think will happen when you combine a solid and a liquid to blow up a balloon? Circle what you think will happen



Observations: Draw and label what happened

What happens when the ingredients were combined in a bottle?

Explain the reactions you observe?

Explain what caused this to happen.

Name _____ Teacher _____ (3-8)



Expanding Balloon Challenge

Challenge: Can you combine a solid and a liquid to make a balloon expand?

Materials: Balloon, recycled water bottle, solid, and a liquid

Solid choice- _____

Liquid choice _____

Prediction: What do you think will happen when you combine a solid and a liquid?

Observations: Draw and label what happened

What happens when the ingredients were combined in a bottle?

Explain what you saw:

Explain what caused this to happen:
