



Bottle Rocket Experiment Sheet

Scientist: _____

Date: _____

Problem:

Can potential energy be transformed into kinetic energy?

Hypothesis:

Ms. Arcenas: I predict that chemical energy is needed to move the bottle.

My Hypothesis:

Materials:

- 1 liter bottle
- Equal portions water and vinegar (125 ml each)
- Graduated cylinder
- Cork
- Stopwatch
- Spoonful of baking soda
- Masking tape
- Coffee filter

Procedure:

1. Mark starting position with masking tape
2. Measure equal portions water and vinegar and pour into bottle
3. Measure one spoonful of baking soda and place it inside a coffee filter, then roll it into a tube that will fit inside the mouth of the bottle
4. Drop the tube into the water/vinegar solution, then quickly seal the bottle with the cork and start timing
5. Place the bottle side down on the start position and **STAND BACK!**
6. Measure the distance travelled by the bottle and cork



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Observations/Results:

TRIAL 1

Fill in the information.

Time Elapsed (seconds):	Bottle Distance Travelled (steps):	Cork Distance Travelled (steps):
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Label your drawing. Use science vocabulary in your description.

Draw what you saw:	Describe what you saw: _____ _____ _____ _____ _____ _____ _____
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TRIAL 2 - Use the [design process](#) to suggest alternate ways to modify the procedure.

Fill in the information.

Time Elapsed (seconds):	Bottle Distance Travelled (steps):	Cork Distance Travelled (steps):
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Label your drawing. Use science vocabulary in your description.

Draw what you saw:	Describe what you saw: _____ _____ _____ _____ _____ _____ _____
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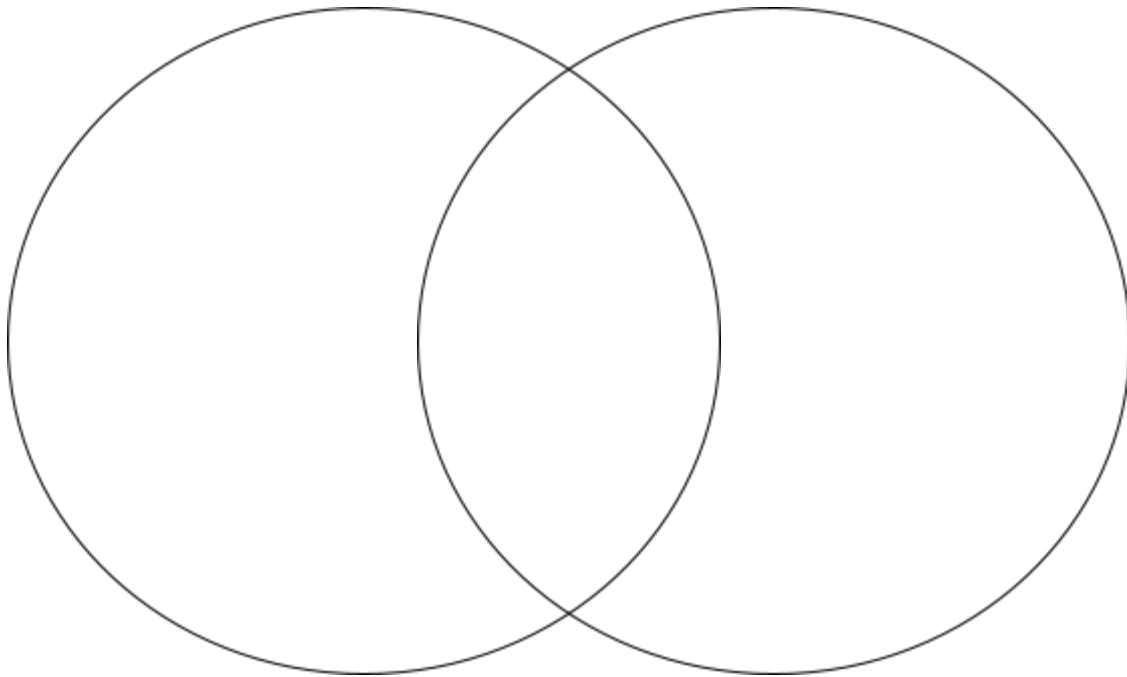
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Conclusion:

Compare the data collected.

Trial 1

Trial 2



What forms of energy were present in the experiment?

Describe how chemical energy was created.

Describe how potential energy transformed into kinetic energy.



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Was your hypothesis correct? How do you know?

Extension:

What would you change to make the experiment different? What makes you say that?
