

Popcorn STEM Challenges and Experiments

Created by Deirdre Smith of JDaniel4's Mom

Exploring Volume by Building a Popcorn Container

Volume is the amount of space in a container. Draw a diagram of a container that will hold one cup of popcorn no more. Label the height, width and length of the container you plan to build.

Supply:

- Construction Paper
- Tape
- Scissors

Exploration Requirements:

- Draw a diagram of a container that will hold a cup of popcorn.
- Label the height, width, and length of the sides of the container
- Construct the container you designed.
- Fill it with one cup of popcorn.

Draw a container you think will hold just one cup of popcorn.

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Making Popcorn Kernels Dance

It is fun to explore what you need to do to make popcorn kernels dance.

- Popcorn Kernels
- Baking Soda
- White Vinegar
- Clear Jar

Exploration Requirements:

- Pour dried corn kernels into the jar.
- Pour in two cups of vinegar into the jar.
- Sprinkle $\frac{1}{2}$ cups of baking soda into the jar..
- Watch the corn start to dance!
- Stir to watch the kernels dance again

Draw and label what you see in the jar at the beginning, middle and end of the experiment.



Popcorn Kernels and Vinegar.

Kernels and Vinegar with Sprinkles of Baking Soda

Mixture Stirred

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Do Popped and Unpopped Corn Weigh the Same?

You will need to discover if an unpopped bag of microwave popcorn will weigh the same as the corn popped.

Supply:

- Scale
- Bag of Microwave Popcorn Kernels
- Popped Corn

Weight of Popcorn Kernels

Complete sentence and draw hands on the scale.

A mini bag of unpopped microwave popcorn weighs _____.



Exploration Requirements:

- Weigh unpopped corn in a bag.
- Predict whether it will weigh the same as the corn popped.
- Pop the corn.
- Weigh the popped corn.

Prediction of the Popped Corn Weight

- ☐ The popped corn will weigh less than the unpopped corn.
- ☐ The popped corn will weigh the same as the unpopped corn.
- ☐ The popped corn will weigh more than the popped corn.

Weight of Popcorn Kernels

Complete sentence and draw hands on the scale.

A mini bag of popped microwave popcorn weighs _____.



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Name: _____

Exploring the Five Senses with Popcorn

Materials

- Popped Popcorn
- Magnifying Glass
- Baby Wipes
- Cup of Water

Process

- Touch the popcorn with your fingers. Wipe off your fingers before writing down how it felt.
- Taste a few pieces of popcorn. Write down how it tastes.
- Hold a magnifying glass up to the popcorn. Write down what you see.
- Sniff the popped corn. Write down what it smells like.
- Crush some popcorn in your hand. Write down any sounds that it makes.

Touch

Taste

See

Smell

Hear

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Exploring Volume by Building a Popcorn Container

Volume is the amount of space in a container. Draw a diagram of a container that will hold one cup of popcorn and no more. Label the height, width and length of the container you plan to build.

Supply:

- Construction Paper
- Tape
- Scissors

Exploration

Requirements:

- Draw a diagram of a container that will hold a cup of popcorn.
- Label the height, width, and length of the sides of the container
- Construct the container you designed.
- Fill it with one cup of popcorn.

Draw a container you think will hold just one cup of popcorn.

Making Popcorn Kernels Dance

It will be fun to explore what you need to do to make popcorn kernels dance.

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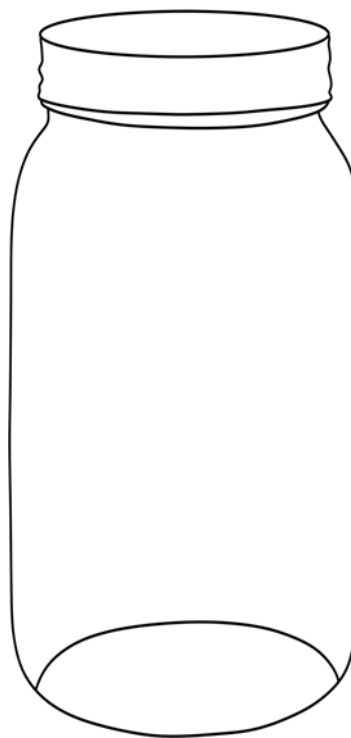
- Popcorn Kernels
- Baking Soda
- White Vinegar
- Clear Jar

Exploration

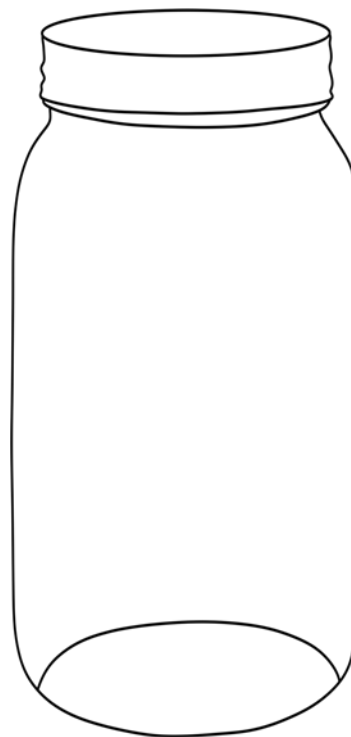
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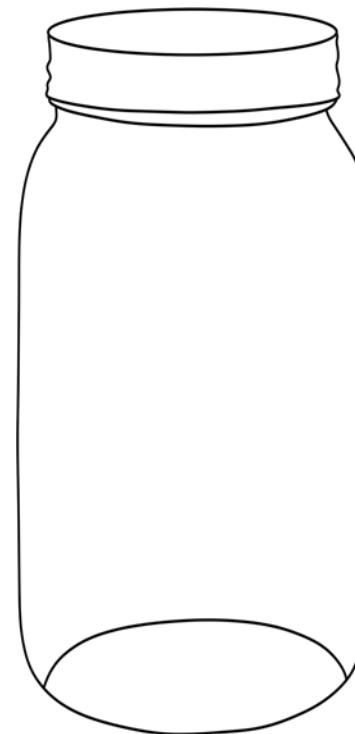
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Popcorn Kernels
and Vinegar.



Kernels and Vinegar
with Sprinkles of
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Mixture Stirred

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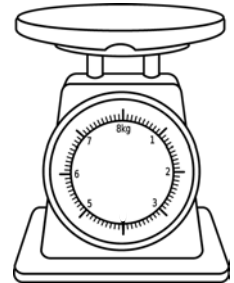
Supply:

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- Bag of Microwave Popcorn Kernels
- Popped Corn

Weight of Popcorn Kernels

Complete sentence and draw hands on the scale.

A mini bag of unpopped microwave popcorn weights _____.



Exploration

Requirements:

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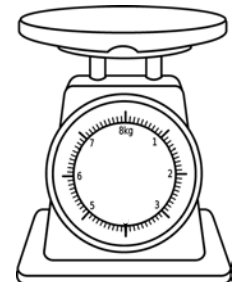
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Weight of Popcorn Kernels

Complete sentence and draw hands on the scale.

A mini bag of popped microwave popcorn weights _____.



Name: _____



Exploring the Five Senses with Popcorn



Materials

- Popped Popcorn
- Magnifying Glass
- Baby Wipes
- Cup of Water

Process

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Touch



Taste



See



Smell



Hear



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