

LEAK PROOF BAG

Do this experiment outside!

ITEMS NEEDED:

- 1. 3 Pencils**
- 2. Ziploc bag**
- 3. Water**

QUESTION: WHAT WILL HAPPEN IF I PUSH THESE PENCILS INTO THE BAG?

DIRECTIONS:

- 1. Sharpen pencils so that they have a really sharp point.**
- 2. Fill the Ziploc bag half full of water.**
- 3. Zip the bag shut.**
- 4. Push a pencil thru the bag to the other side, but do not push pencil the whole way thru the bag. Only have about an inch of the pencil on the other side. (You may need to keep pressure on the pencil or the bag will leak.)**
- 5. Push the other 2 pencils thru the bag just like the first pencil.**

WHY DOES THIS WORK?

**** The molecules will form a chain to seal the bag shut.**

FROZEN BAKING SODA FUN

ITEMS NEEDED:

- 1. Baking soda**
- 2. 2 empty fruit/applesauce plastic containers**
- 3. warm tap water**
- 4. vinegar**
- 5. Ziploc bag (do not use the kind with a lock zipper)**
- 6. Food coloring and a plastic spoon.**

DIRECTIONS:

- 1. Put baking soda into the bottom of the fruit container. (Cover the bottom of the cup)**
- 2. Pour water into the container, but do not overflow the cup. Add 3 drops of food coloring. Use a different color for each of the containers such as yellow and blue; or yellow and red; or red and blue.**
- 3. Stir the mixture. If the baking soda does not dissolve that is ok.**
- 4. Put these 2 cups into the freezer overnight.**
- 5. Do this experiment outside. The next morning, pour vinegar into your Ziploc bag. About $\frac{1}{4}$ of the bag should have vinegar in it.**
- 6. Take the frozen baking soda out of the fruit container. Add that frozen baking soda to the Ziploc bag.**
- 7. Zip the bag shut quickly. SHAKE THE BAG!**
- 8. Put the bag onto the grass and back away. The bag should swell up.**
- 9. Once the mixture stops fizzing, add the other frozen baking soda. Shake the bag and see what color you get.**

**** Facts: The vinegar and the baking soda cause a reaction. That gas is called carbon dioxide. The gas fills the bag and makes the Ziploc bag blow up.**