

# BUTTER IN A CUP

LET'S SHAKE SOME BUTTER!

## SUPPLIES:



2 cups cold heavy whipping cream



1 ounce plastic cups with lids

## INSTRUCTIONS:

### 1. POUR IT!

Pour 2 tablespoons of heavy cream into each portion cup. Place the lid on each cup, and distribute to students.

### 2. SHAKE IT!

Shake the container until butter forms a soft lump. Continue to shake until buttermilk separates out of the lump and the container contains a solid lump of butter and liquid buttermilk. The process should take 3 to 5 minutes.

### 3. STRAIN IT!

To strain, pour off or drink the buttermilk, leaving only the solid butter.

### 4. SERVE IT!

OPTIONAL: Remove the lump of butter, and wrap it in plastic wrap. Refrigerate until you are ready to serve.



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# EXPLAIN IT!

**CREAM IS COMPOSED MAINLY OF WATER AND FAT. THE SHAKING CAUSES FAT GLOBULES TO INTERACT WITH EACH OTHER. WHEN MAKING BUTTER, THE FAT MOLECULES BREAK FREE FROM THEIR GLOBULES AND JOIN TOGETHER TO FORM BUTTER.**

**1. AS YOU SHAKE THE CREAM IN THE JAR, WHAT IS HAPPENING TO THE VOLUME?**

- A. VOLUME IS INCREASING**
- B. VOLUME IS DECREASING**

**2. HOW DOES THE CREAM BECOME BUTTER?**

- A. AGITATION UNTIL CREAM TURNS INTO A SOLID AND LIQUID**
- B. BY HEATING AND COOLING THE CREAM**

**3. WHAT STATE OF MATTER ARE THE TWO FINAL PRODUCTS?**

- A. GAS AND SOLID**
- B. LIQUID AND SOLID**

**4. WHAT THREE IMPORTANT VITAMINS CAN YOU FIND IN BUTTER AND OTHER DAIRY PRODUCTS THAT HELP KEEP OUR BODIES AND BONES HEALTHY?**

Answers: 1. A, 2. A, 3. B, 4. Vitamin A, D, & E