STEMSPARK
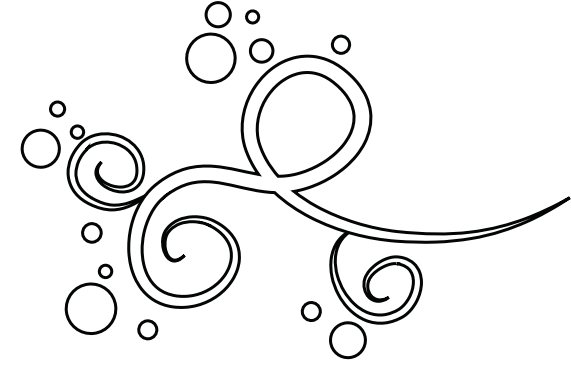
Presents

Milk Art:

Chemistry in Action
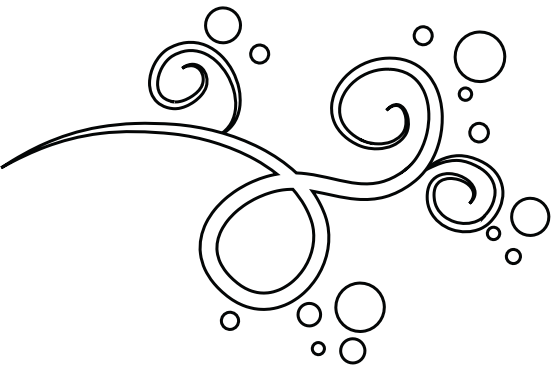
Milk Art!

Milk art happens when the fat in milk reacts with the soap. The soap traps all the fat causing the colors to swirl as the fat separates from water. The more fat a milk has, the longer it will take for the swirling to stop!

In this experiment, you are going to explore which types of milk contain the most fat using milk art!

My hypothesis:

Whole/ 2% / skim milk has the most fat.

Whole/ 2% / skim milk has the least fat.
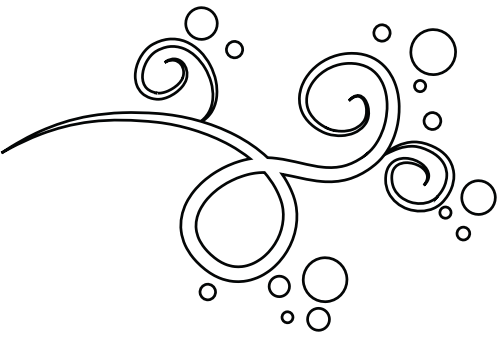
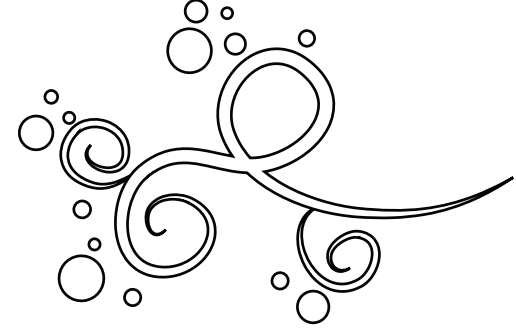# Material Exploration:

I See...

I Smell...

I Taste...

Milk

I Feel...

Milk Art

Milk • Dish Soap • Food Coloring • Cotton Swabs

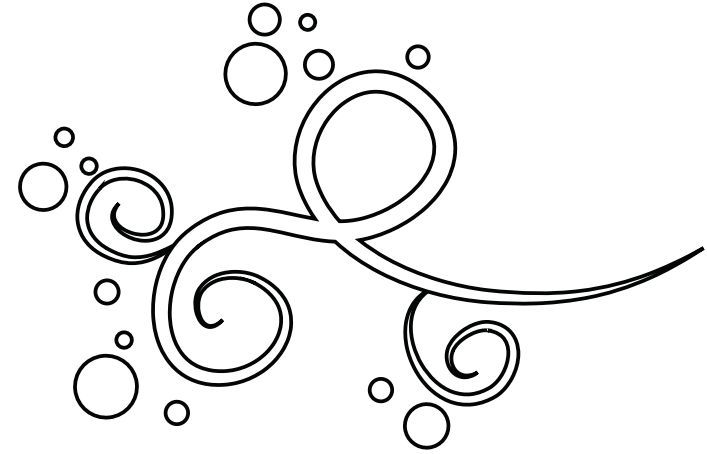## Observations   Time:

Whole

2%

Skim

My conclusion:

Whole/ 2% / skim milk has the most fat.
Whole/ 2% / skim milk has the least fat.

I learned:

Milk art happens when _____ fat reacts with _____.
The soap traps all the _____ causing the colors to swirl
and make art. Because the _____ milk took the longest to
stop swirling, I know it has the _____ fat.

Word Bank: milk   soap   whole   2%
                     skim   most   least

Science Extension!

There are many types of milk. Each type contains different amounts of nutrients, including fats! Try this experiment again comparing the effects of soap on almond milk, coconut milk, and oat milk.

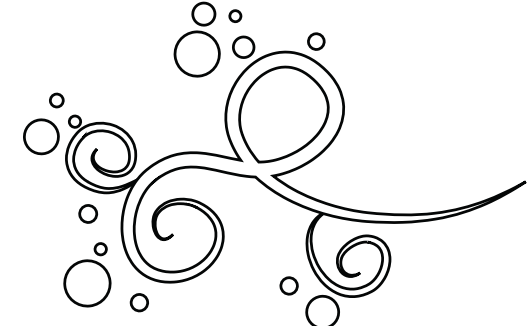Can you figure out which milk has the highest and lowest fat content using milk art?

My hypothesis:

I think **almond/coconut/oat** milk will have the most fat.
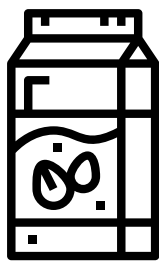I think **almond/coconut/oat** milk will have the least fat.
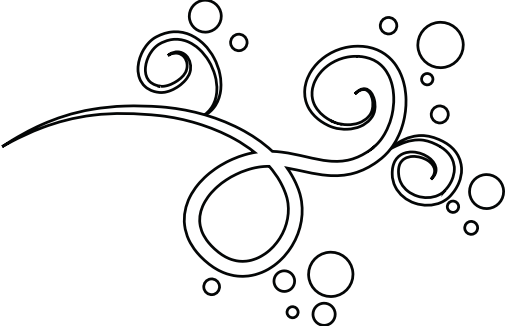
Milk Art

Milk • Dish Soap • Food Coloring • Cotton Swabs

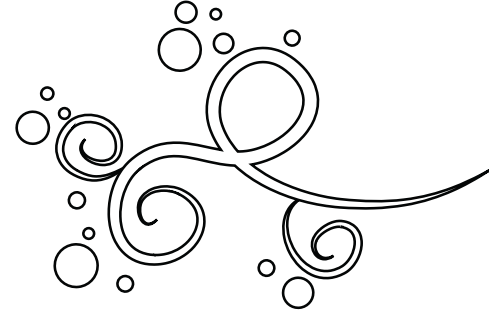Observations   Time:

1

2

3

My conclusion:

I found **almond/coconut/oat** milk has the most fat.
I found **almond/coconut/oat** milk has the least fat.

I learned:

This experiment can be done with many types of **milks/ sodas**.
Milks have different amounts of **fats/ proteins.** The amount of fat
a milk has changes how much the soap **reacts/ dances** with it.

STEM-Spark Stumper:

Try this experiment with hot, room-temperature, and cold milk.

I predict **hot/room-temperature/cold** will react the **fastest/ slowest.**

Hot/room-temperature/cold reacted the **fastest/ slowest.**