LETTER TO PARENTS

Cut here and paste onto school letterhead before making copies.

SCIENCE NEWS

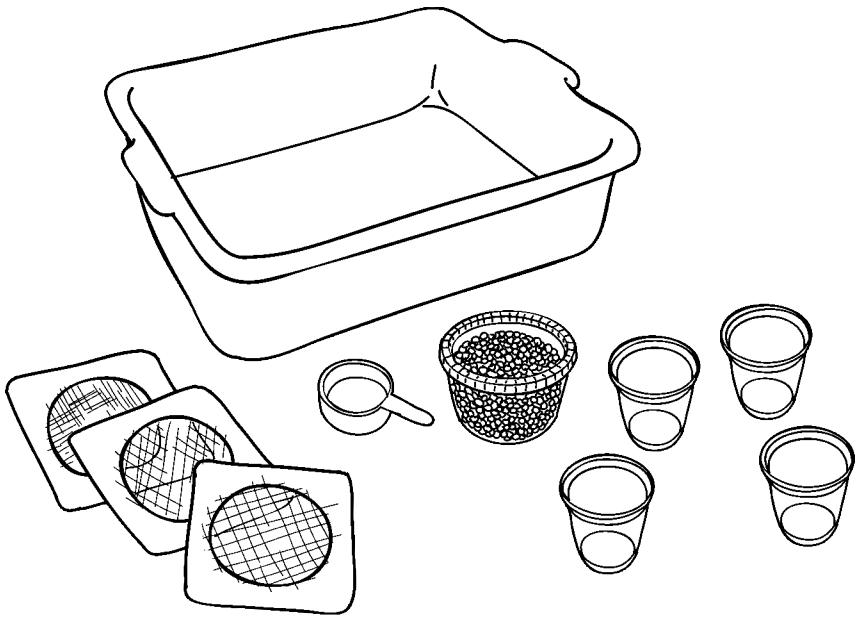
Dear Parents,

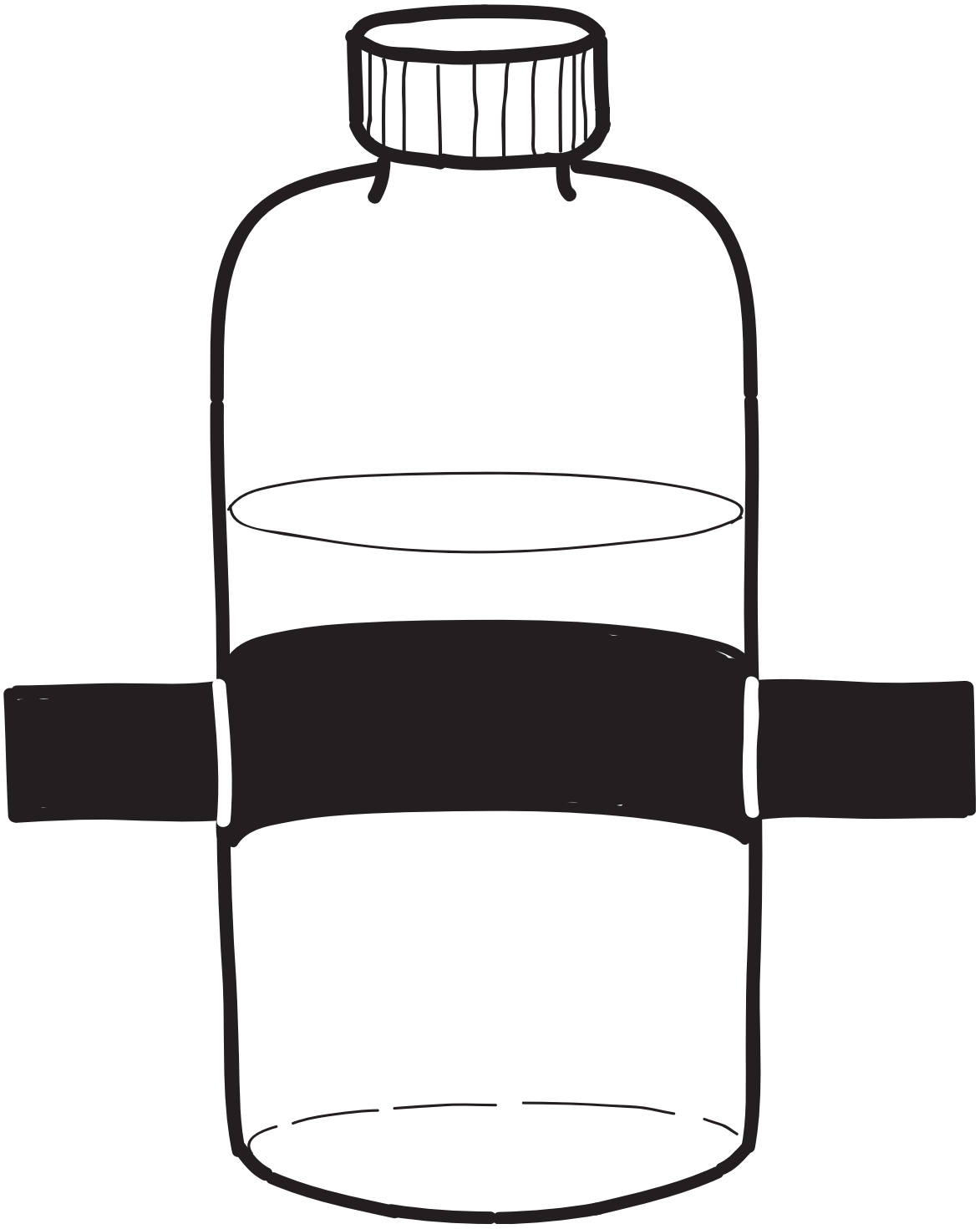
Our class is beginning a scientific study of solids and liquids. We will observe the properties of many solids and liquids, comparing how different solids and liquids are alike and how they are different, organize the results of our inquiries, and communicate both orally and in writing the things we discover. These processes (observing, communicating, comparing, and organizing) are the basic thinking processes students need at this age to develop a scientific understanding of the world around them.

Your child may ask you for help finding solids and liquids at home. You'll want to discuss and compare the different characteristics of those you find. (For example, how are salt and sugar the same? How are they different?) You may find yourself observing what happens when solids and liquids are put together. Making lemonade or salad dressing can provide interesting observations when solids and liquids are mixed. Watching an ice cube melt is a way to observe a solid change to a liquid.

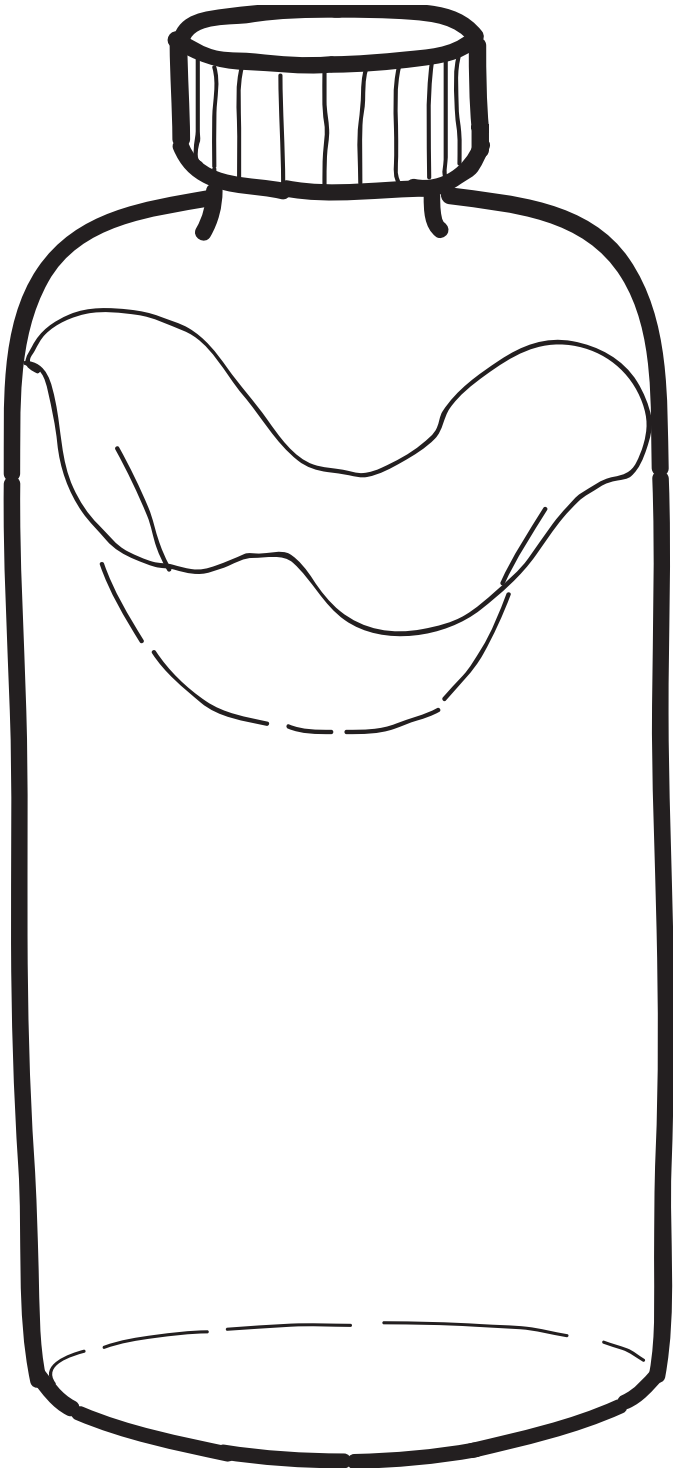
We're looking forward to lots of fun and lots of learning as we explore a world full of solids and liquids!

Sincerely,

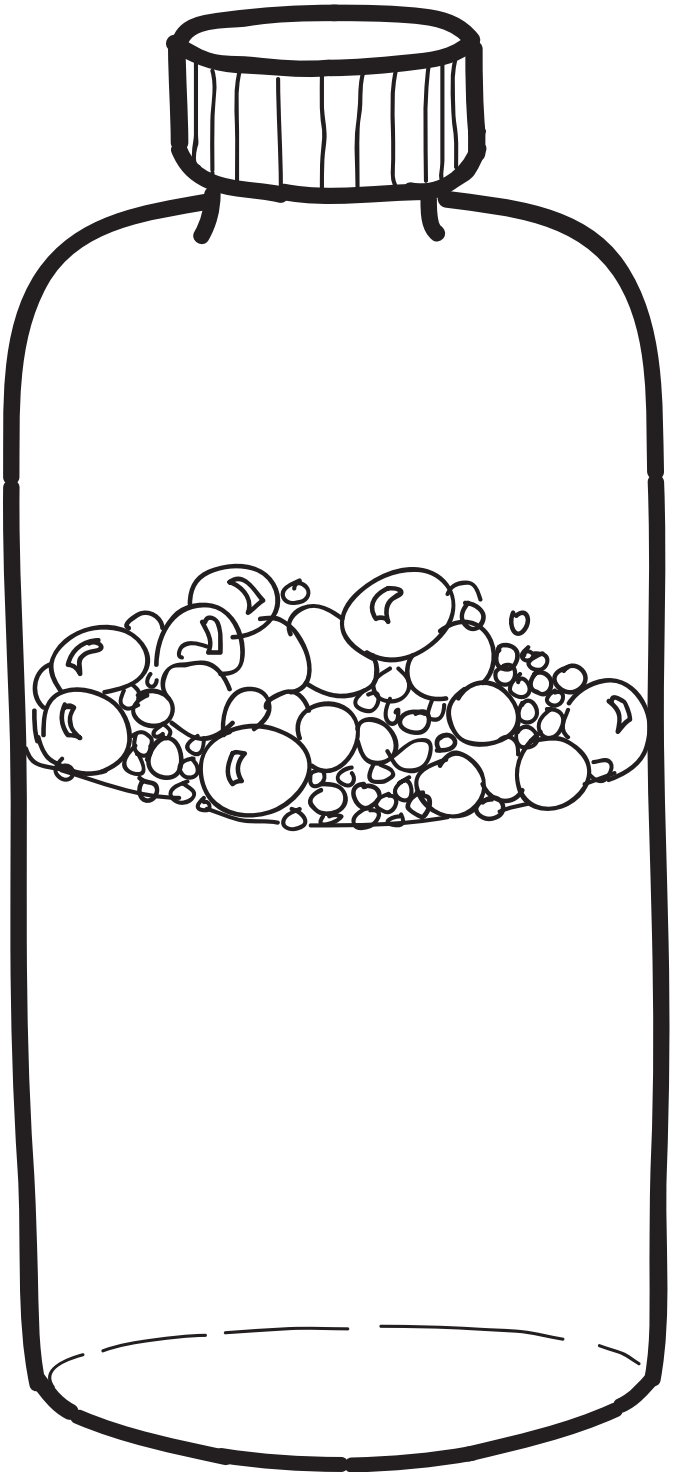




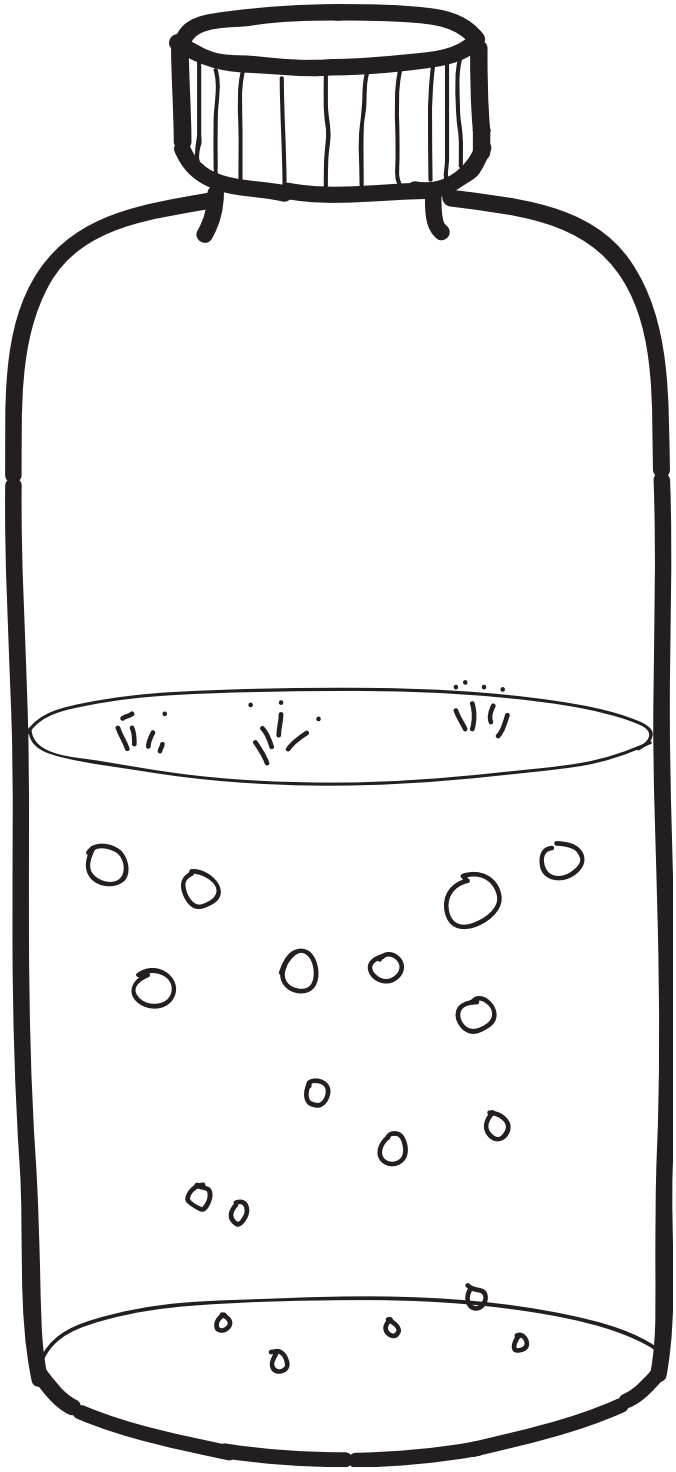
transparent



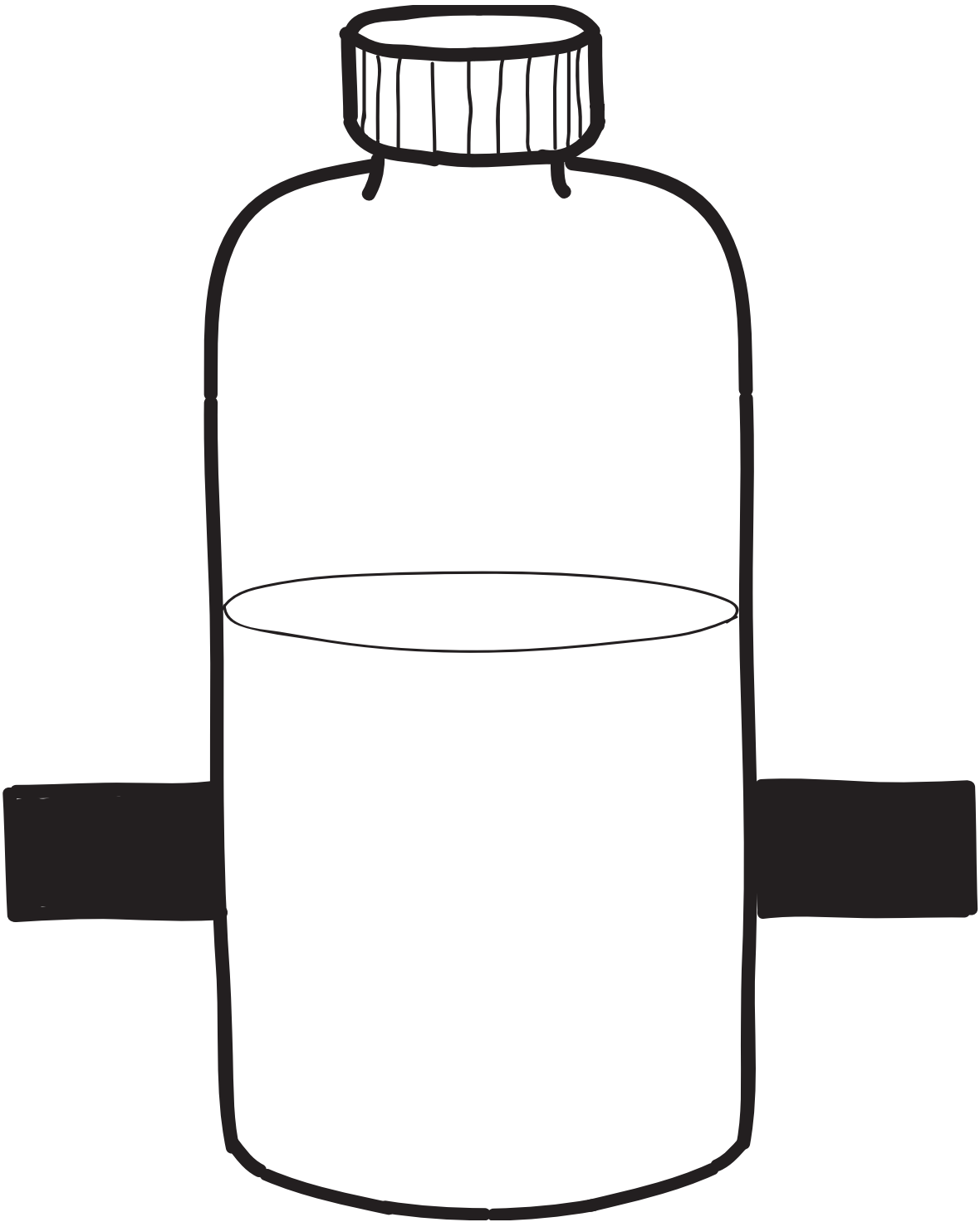
viscous



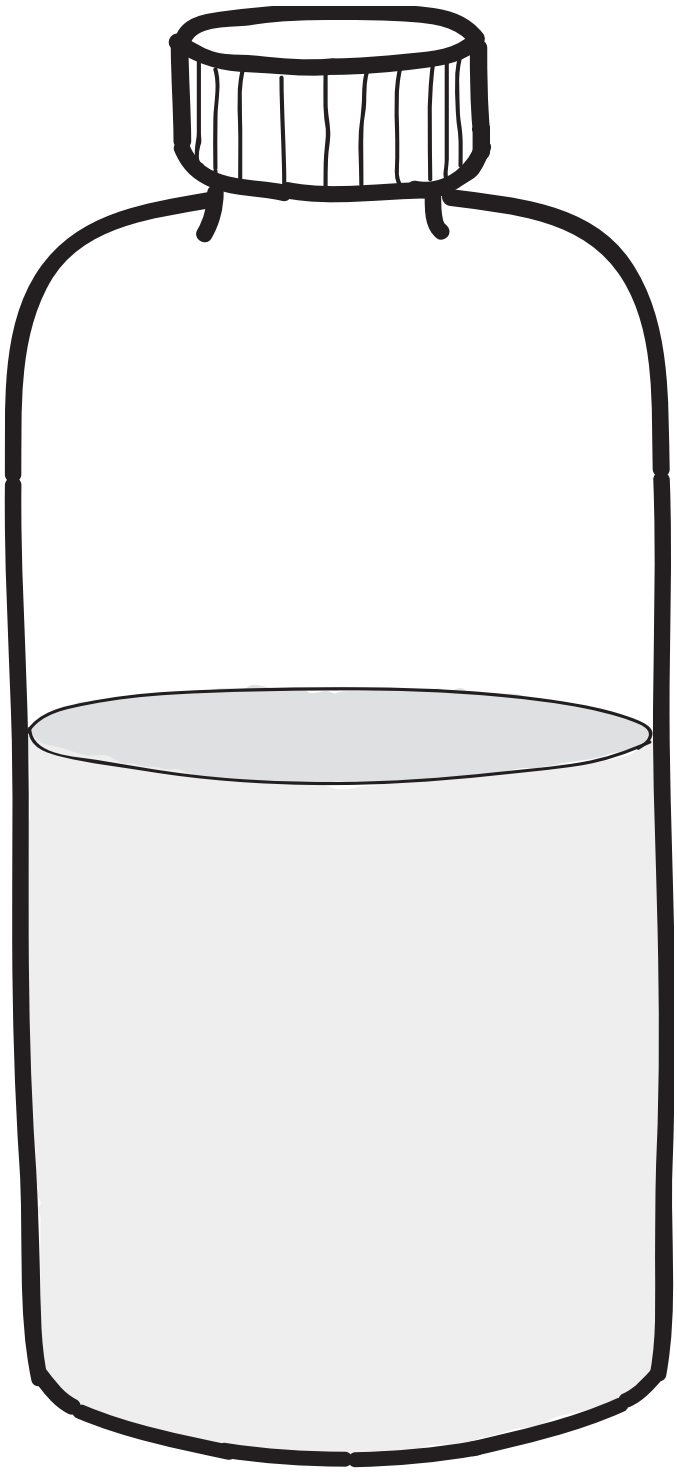
foamy



bubbly



translucent



has color

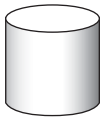
Name _____ Date _____

MATH EXTENSION A

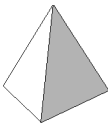
INVESTIGATION 1: SOLIDS

What solids have the shape of a **sphere** ?

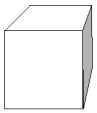
What solids have the shape of a **cylinder** ?



What solids have the shape of a **pyramid** ?



What solids have the shape of a **rectangular solid** ?

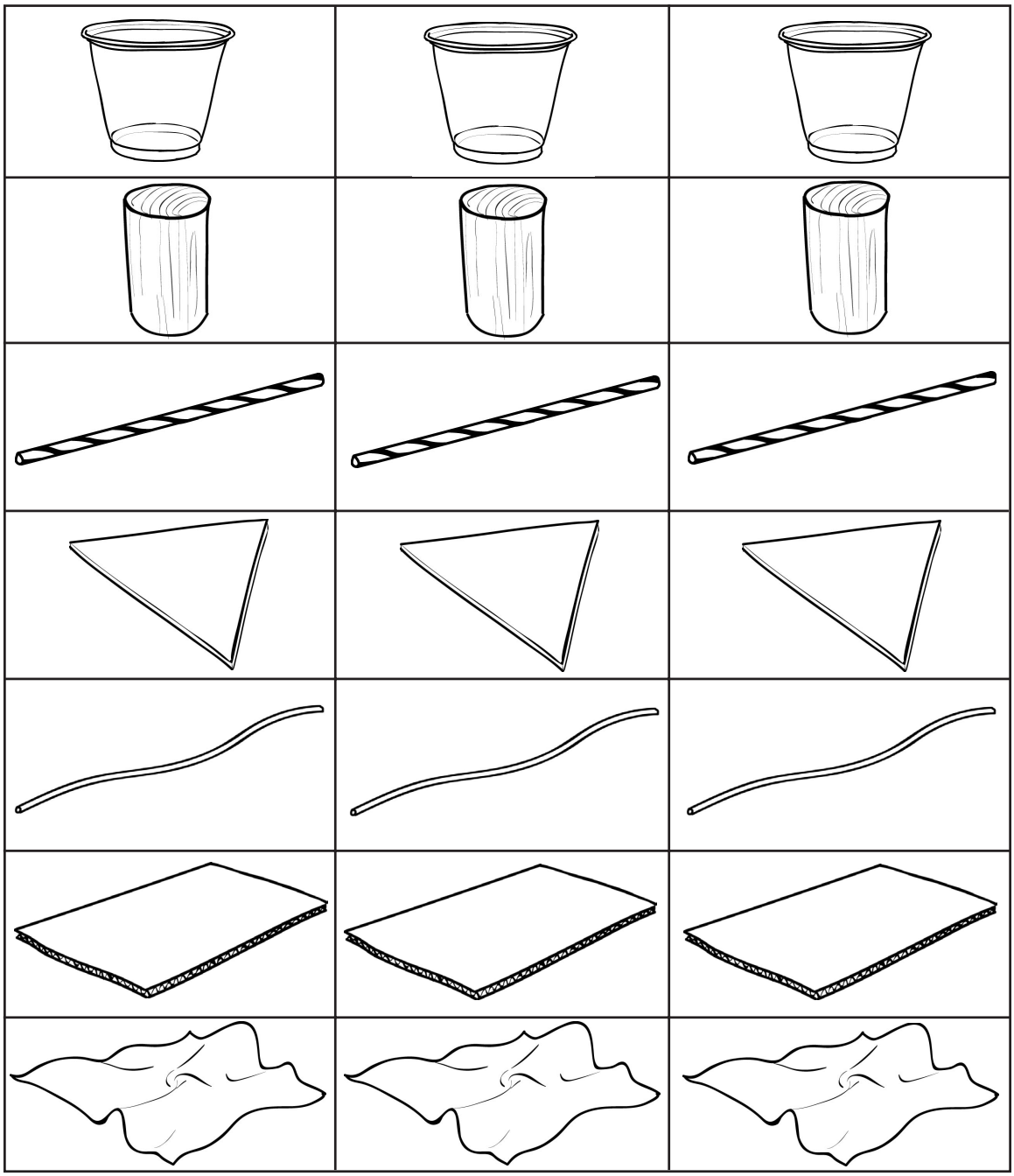


Name _____ Date _____

MATH EXTENSION B

INVESTIGATION 1: SOLIDS

Cut out the boxes with the pictures of objects. Build towers with the pictures to match the clues your teacher gives you.

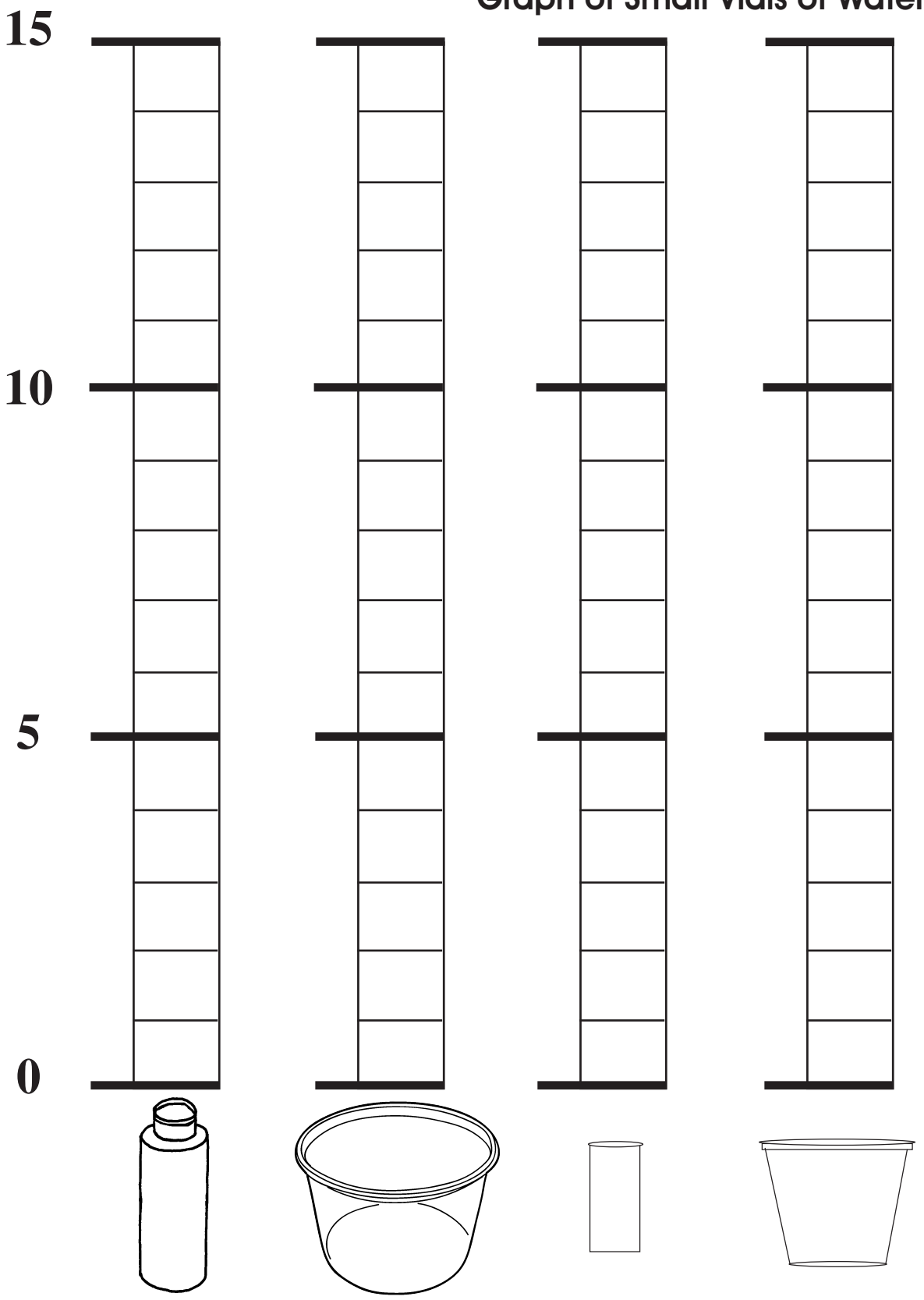


Name _____ Date _____

MATH EXTENSION A

INVESTIGATION 2: LIQUIDS

Graph of Small Vials of Water



Name _____ Date _____

MATH EXTENSION B

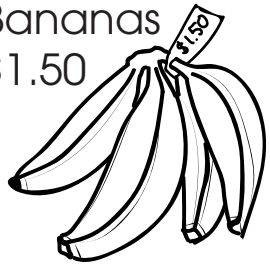
INVESTIGATION 2: LIQUIDS

Aubree went to the store with his mother to pick up a few things. They bought dishwashing soap, milk, bran flakes, some cheese, and some bananas. The prices for each are listed below.

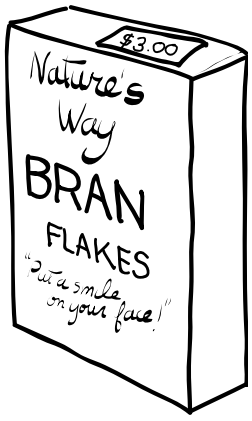
How much did they spend for liquids? _____

How much did they spend for solids? _____

Bananas
$1.50



Bran flakes
$3.00



Dishwashing soap
$1.50

Milk
$2.00

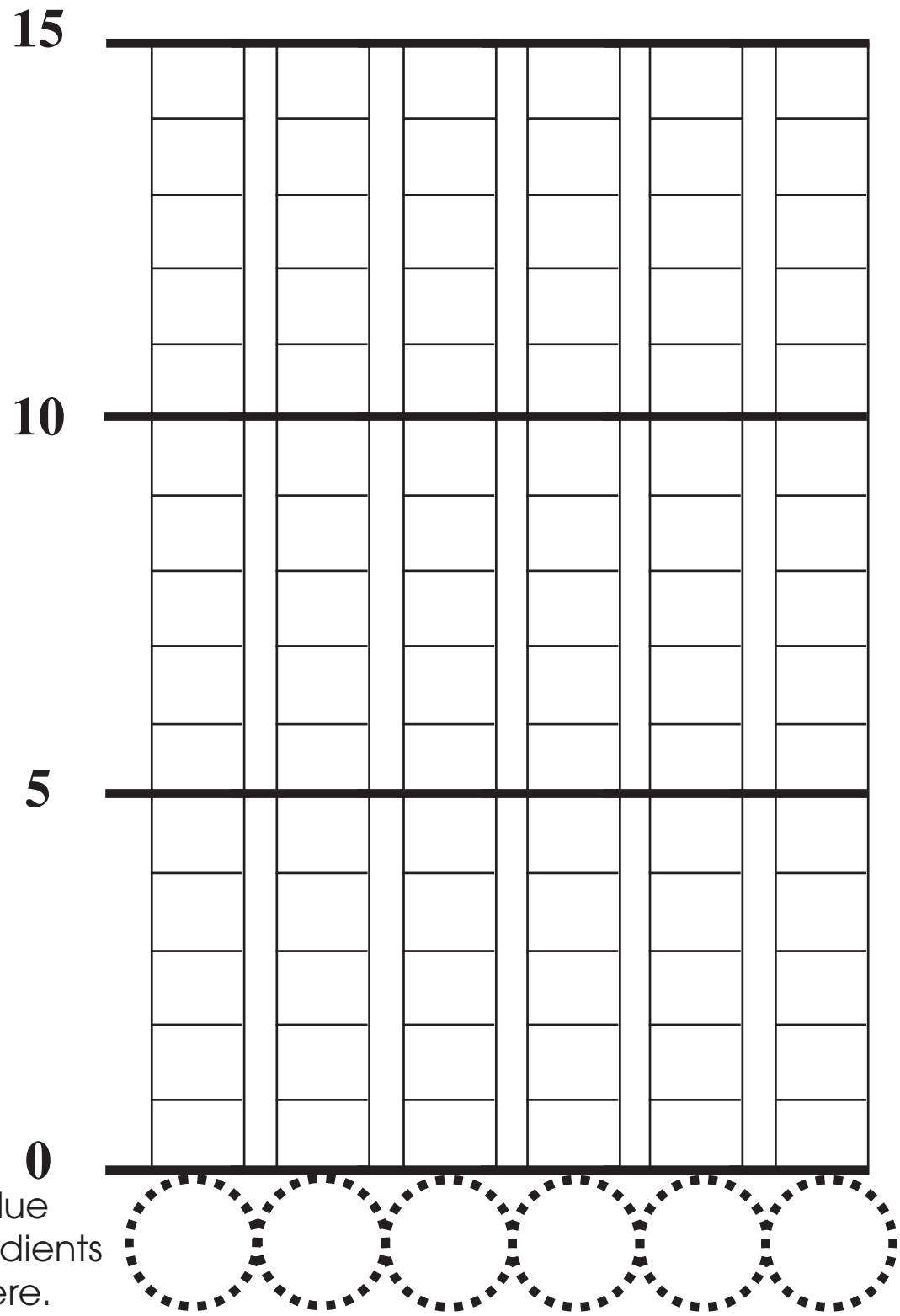
Cheese
$2.50

Name _____ Date _____

MATH EXTENSION A

INVESTIGATION 3: BITS AND PIECES

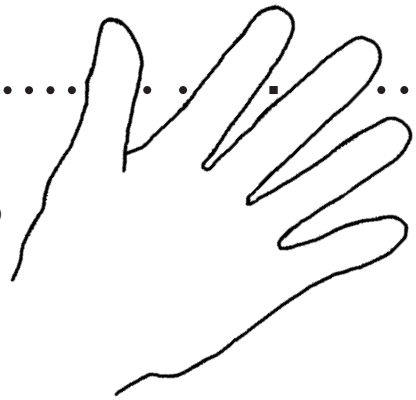
Trail-Mix Graph



Name _____ Date _____

MATH EXTENSION B

INVESTIGATION 3: BITS AND PIECES



How many pinto beans can you grab in one hand? Do it to find out, and record the number here. _____

Will you be able to grab more, fewer, or the same number of lima beans?
(Circle one.) More Fewer Same number

Why do you think so?

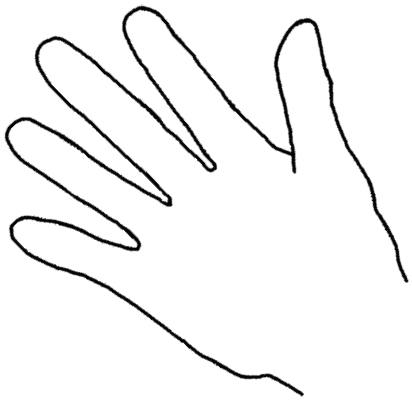
_____

_____

_____

_____

How many lima beans can you grab in one hand? Do it to find out, and record the number here. _____

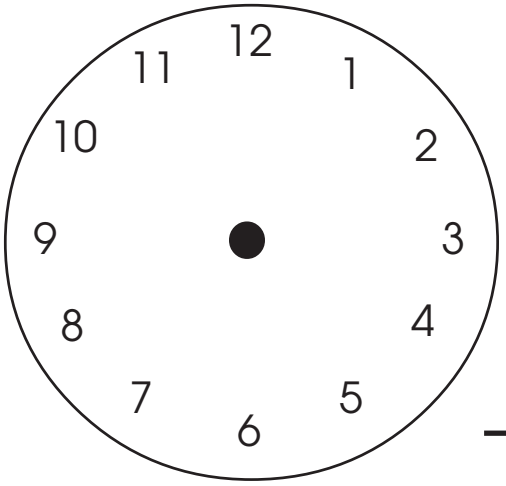


Name _____ Date _____

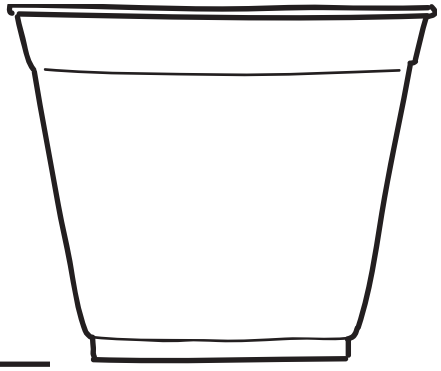
MATH EXTENSION A

INVESTIGATION 4: SOLIDS AND LIQUIDS WITH WATER

1. What time is it when you start?

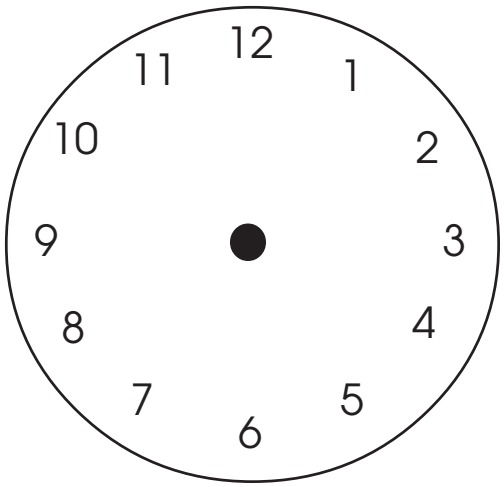


_____ : _____

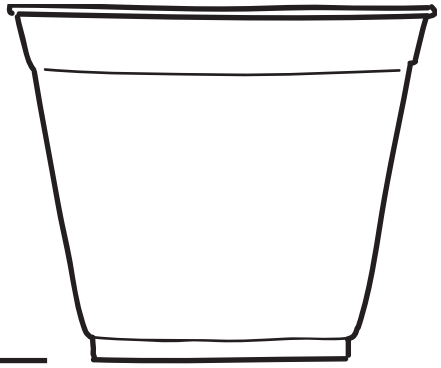


This is the ice before it melts.

2. What time is it when the ice is melted?



_____ : _____



This is the ice after it melted.

3. How long did the ice take to melt? _____

Name _____ Date _____

MATH EXTENSION B

INVESTIGATION 4: SOLIDS AND LIQUIDS WITH WATER

Shelby wanted to make a new kind of soda. She tested many ways of putting the solids and liquids together. Here is what she thought made the best-tasting soda.

Water	2 ounces
Sugar	4 spoons
Flavoring	3 spoons of vanilla, 2 spoons of strawberry
Coloring	5 drops of blue, 3 drops of red

Then she wanted to make a larger portion of soda, using 8 ounces of water. How much of each solid and liquid listed above should she use? She wants her 8-ounce soda to taste just like her 2-ounce test.

Name _____ Date _____

HOME/SCHOOL CONNECTION

INVESTIGATION 1: SOLIDS

Play I Spy a Solid with someone at home. These are some of the words we have been using in class to describe solids. Next to each word, draw or write the name of the solid you spied that matches the word. Add any other properties of solids that you spied.

"I spy a solid that is..."	
flexible	rigid
smooth	rough
soft	transparent
flat	pointed

Name _____ Date _____

HOME/SCHOOL CONNECTION

INVESTIGATION 2: LIQUIDS

Draw the bottle here.

This liquid is called

_____

_ _

_____

Circle the properties of the liquid.

transparent
translucent
bubbly
viscous
foamy
has color

_____

_____

_____

_____

Name _____ Date _____

HOME/SCHOOL CONNECTION

INVESTIGATION 3: BITS AND PIECES

Soak, Slide, or Pile Up?

Compare what happens when you drop a spoonful of different materials on a paper towel. You might try water, rice, milk, flour, cornmeal, or beans. Then try the same materials on a different surface, such as plastic wrap or foil.

What did you observe?

Material	On Paper Towel	On Other Surface	Solid or Liquid

Name _____ Date _____

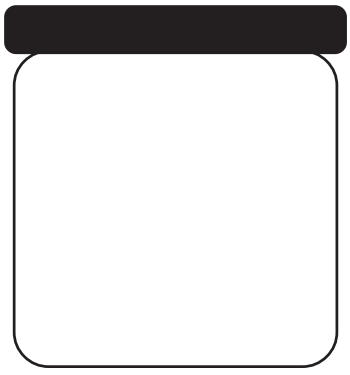
HOME/SCHOOL CONNECTION

INVESTIGATION 4: SOLIDS AND LIQUIDS WITH WATER

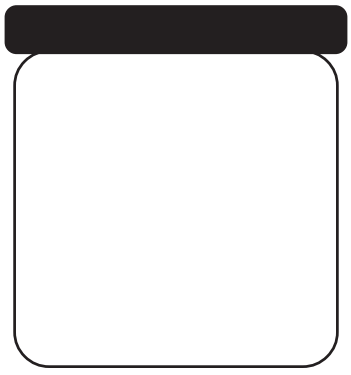
Scientific Salad Dressing

Cooks are chemists! Cooks investigate solids, liquids, and mixtures all the time. Make some tasty salad dressing to investigate what happens when solids and liquids are mixed.

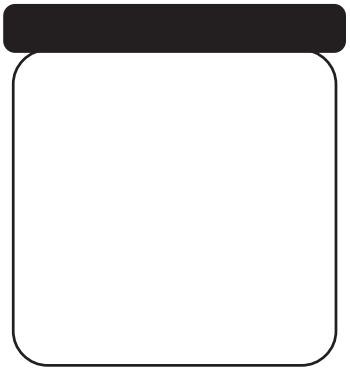
You will need a jar with a lid, salt, oil, pepper, vinegar, and a spice such as dried rosemary, tarragon, oregano, or basil.



1. Add 1/3 cup of vinegar to 1/2 cup of oil. Draw your observations.



2. Put on the lid and shake it up. Draw your observations.



3. Let it sit for 5 minutes. Draw your observations.

4. Add 1/2 teaspoon of salt and shake. What happens?

5. Add 1/2 teaspoon of pepper and shake. What happens?

6. Add _____ teaspoon of _____
Shake. What happens?

Now you can try your salad dressing on salad. How does it taste?