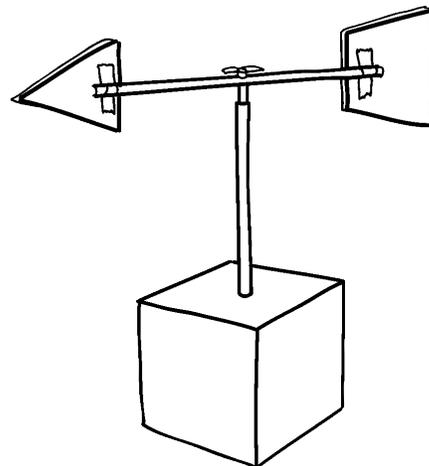


LETTER TO PARENTS

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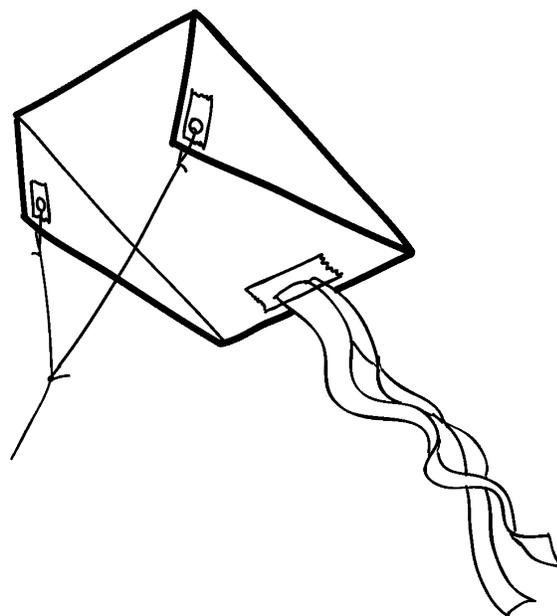
Our class is beginning a study of air and weather. Students will be looking for evidence that air is matter—that it is something real. They will explore the properties of air, using plastic syringes and tubes. They will capture air, compress air, and use air under pressure to move things around. They will observe daily and seasonal weather conditions such as temperature, rainfall, cloud cover, wind speed, and wind direction. They will learn that the sun warms the air, land, and water. They will be recording all of this information on a class calendar and in a science notebook.



You can help your child learn more about weather, too. You might discuss weather reports in the newspaper or on television. Point out wind vanes if you happen to see one perched on top of a house. If you have an indoor or outdoor thermometer, read and record the temperature at about the same time each day and look for patterns. Or you may want to watch the temperature change over the course of one day. Does it happen that way every day? Weather is ever-changing. You can guide your child's scientific inquiry by helping him or her make observations and by nurturing his or her natural ability to ask questions based on those observations. Don't be surprised if you end up with a list of questions much longer than the initial observations!

If you have any questions or comments, call or come in and visit our class.

Sincerely, _____



HOME/SCHOOL CONNECTION

INVESTIGATION 1: EXPLORING AIR

Look around home and see if you can find a toy that uses air to make it work. If you can't find one, see if you can invent one.

Draw a picture of the toy you found or the one you invented. Explain how it works.

HOME/SCHOOL CONNECTION

INVESTIGATION 2: OBSERVING WEATHER

MATERIALS

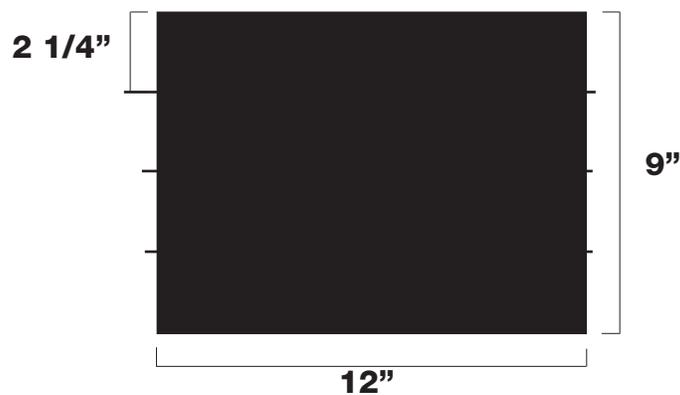
Dark construction paper, or shopping bag 9" × 12"

Scissors

Tape

Make a cloud window.

1. Cut a sheet of dark construction paper (a shopping bag will do) into four equal strips.



2. Form a rectangle with the four strips, lapping one edge over another about 1/4". Tape it together.



3. Tape the cloud window to a glass window in your house where you can see clouds in the sky.
4. Share your observations with the class next time you go to school.

HOME/SCHOOL CONNECTION

INVESTIGATION 3: WIND EXPLORATIONS

Make a whirligig.

Materials

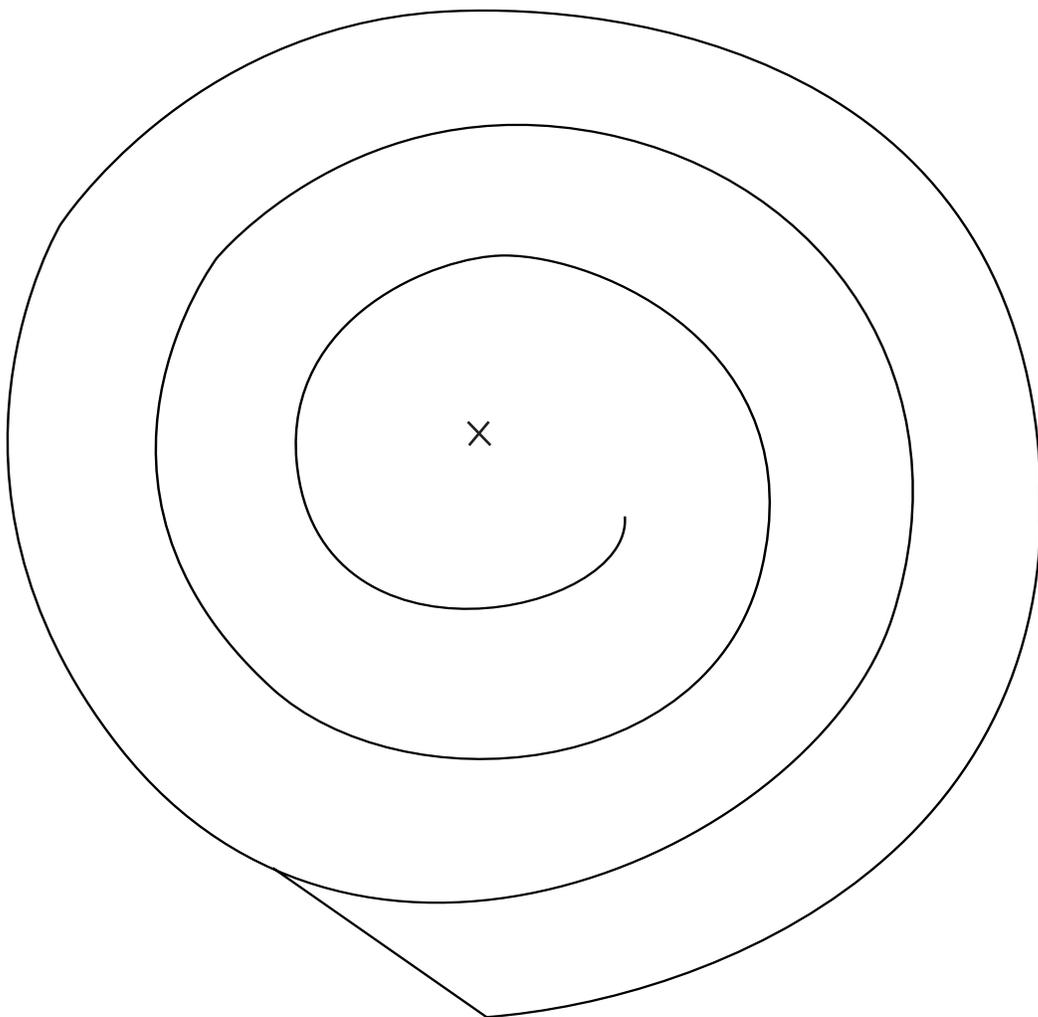
Scissors

Tape

Piece of string

Directions

1. Cut out the whirligig along the spiral line.
2. Tape a piece of string to the X in the middle of the whirligig.
3. Hang the whirligig by the string and blow on it. What does it do?
4. Use the whirligig to find places where the air is moving. Try outside, by a window, or in front of a fan. Where does it move the fastest?



HOME/SCHOOL CONNECTION

INVESTIGATION 4: LOOKING FOR CHANGE

Read this story with your child. Then have him or her draw a picture of Harry in his new clothes.

Harry was always wearing the wrong clothes. When he put on his raincoat, it was warm and sunny outside. When he wore his shorts, the outside temperature was cold. When he decided not to take a jacket with him to school, the wind blew hard.

So Harry decided he wasn't going to go outside. Soon Harry became very, very lonely. All of Harry's friends wanted to play outside. Harry was left alone, wearing the wrong clothes for the weather.

Then Harry got a grand idea! He would design a set of clothes that he could wear outside at any time and in any weather. If it was sunny and warm, Harry could wear his new clothes. If it was windy and rainy, Harry could wear his new clothes. Even if it was snowing, Harry could wear his new clothes!

So Harry set about designing his new wardrobe.

Ask your child to finish the story and draw a picture of Harry's all-weather wardrobe.

- What kind of clothing would Harry need?
- What kinds of weather would Harry need to think about?
- How can Harry wear the same thing in all kinds of weather?

LETTER TO PARENTS

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SCIENCE NEWS

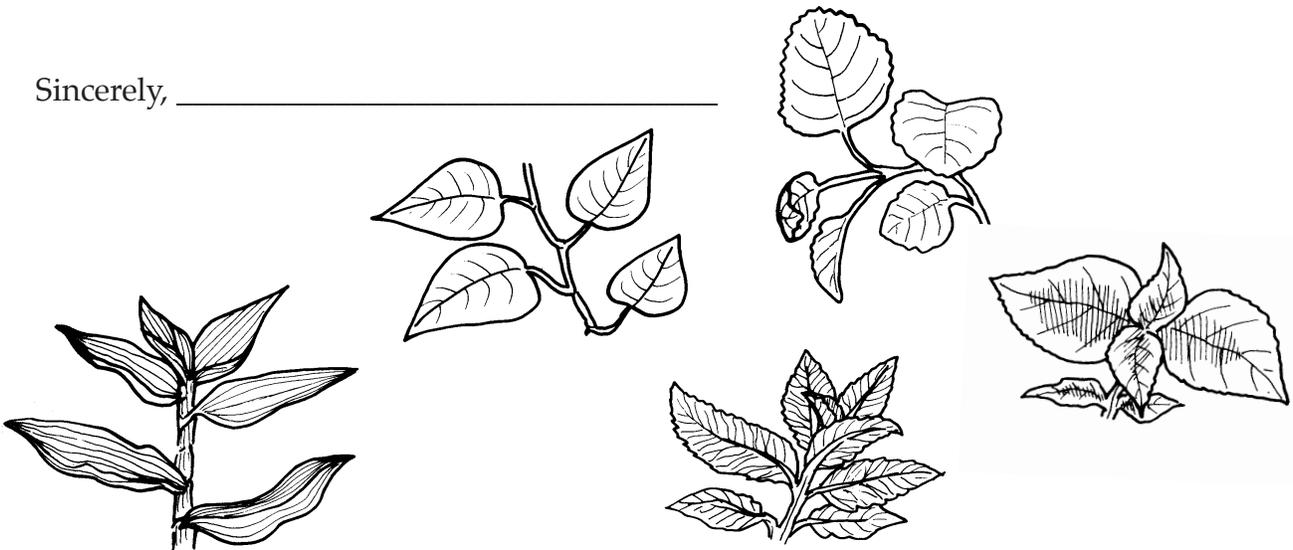
Dear Parents,

Our class is beginning a scientific study of plants and animals. We will be investigating several ways to propagate new plants, including growing plants from seed (wheat, rye grass, and alfalfa, a legume); bulbs (onions and garlic); stems (white potatoes and cuttings from various plants); and roots (carrots and radishes). The scientific thinking processes children will be using in their investigations include observing properties and structures of plants; communicating discoveries orally, in writing, and through drawing; comparing the development of plants over time; and organizing their findings in order to draw conclusions about how different plants reproduce. We will be making a terrarium and comparing the needs of plants and animals. We will be looking at features of different plants and animals and studying how those features help the plants and animals live in different environments. In addition, we will learn how animals use different teeth to bite, cut, and chew their food. I hope you will encourage your child to share his or her growing knowledge of plants and animals at home, and perhaps engage in a few plant-growing activities at home as well.

If your child has specific plant allergies, please let me know so I can plan accordingly.

We will root cuttings in a couple of weeks. If you have one or more plants that you could donate to the science program at that time, I would appreciate it. I could use Swedish ivy, English ivy, coleus, spearmint, or Wandering Jew plants. Thanks. We're looking forward to lots of fun and lots of learning as we explore a world full of plants and animals!

Sincerely, _____



Name _____ Date _____

HOME/SCHOOL CONNECTION
INVESTIGATION 1: GRASS AND GRAIN SEEDS

Wheat, corn, barley, rice, and oats are grass plants that are staple sources of nutrition for cultures around the world. The abundant seeds of those plants are the group of foods we call grains. You may have examples of grains in your kitchen, perhaps as whole grains of rice or a tortilla made from flour. Here are some places where another grain, corn, might be found in your kitchen.

tortillas frozen corn	cereal canned corn	bread popcorn	flour grits	muffins cornstarch
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Have your child look for examples of grains in your home. He or she can list the examples or bring in a small labeled sample for a class display.

Wheat		Corn		
Rice	Oats		Barley	

Name _____ Date _____

HOME/SCHOOL CONNECTION
INVESTIGATION 2: STEMS

In class, we are observing how stems grow and sprout. There are many plant stems that we enjoy at our table and see in the market.

Next time you go shopping with your child, please take this checklist and a pencil with you. Ask your child to check off any of the following stems that he or she can find. If you find others, write them down.

- asparagus
- brussels sprouts on a stem
- white potato
- red potato
- broccoli
- parsley
- celery
- artichoke (with stem)

HOME/SCHOOL CONNECTION

INVESTIGATION 3: TERRARIUMS

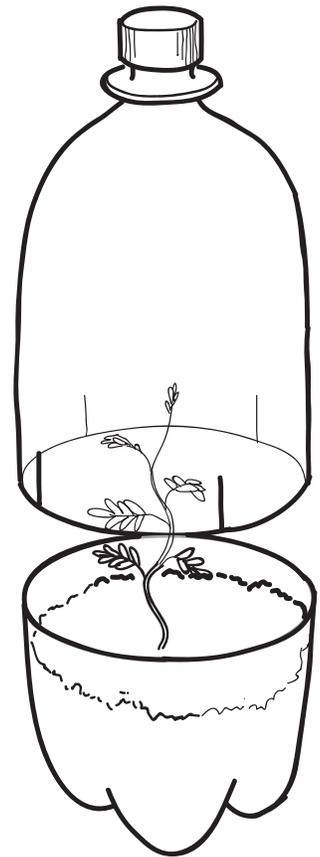
In class, we have been growing new plants from seeds and from the stems of some plants. By making a simple, low-maintenance terrarium at home, your child can continue to make plant observations. You could plant the terrarium with rooted stem cuttings, seeds, potatoes (a modified underground stem), or yard transplants. Everything the plants need to live is placed inside the terrarium before it is sealed: water, soil, and air. Placed in a well-lit area, out of the sun, the terrarium plants will live untended for a long time.

MATERIALS

- 1 2-liter plastic bottle
- Soil
- Stem cuttings with roots, seeds, or small plants
- Scissors
- Gravel or pebbles

DIRECTIONS

1. Remove the label from a 2-liter soda bottle. Have an adult cut the bottle about 4 inches (10 cm) from the bottom. Leave the cap on.
2. Cut four 1-inch (2.5-cm) slits along the bottom edge of the top part of the bottle.
3. Put a layer of gravel or small pebbles in the plastic base. Add a layer of soil. If you are planting seeds in the terrarium, fill the soil to near the top edge and plant your seeds.
4. Gently place your rooted cutting in the soil and fill more soil in around it.
5. Water the soil. Place the top section of your bottle on the bottom, fitting the slits over the base.
6. Place the terrarium in a well-lit area. Your terrarium plants have everything they need to live and grow.



HOME/SCHOOL CONNECTION

INVESTIGATION 4: BULBS AND ROOTS

Read the following story with your child. Then have him or her write an ending to the story, or dictate an ending for you to write.

Once upon a time there lived a poor family who worked hard every day. Papa would go to town and look for jobs. Peter would go to the nearby farms to milk cows, and his mother would mend clothes. Everyone worked hard to put food on the table for the evening meal. Everyone, that is, except Henry. Henry was too young to help Papa with his jobs, too afraid of cows to help his brother, and didn't know how to mend clothes.

One day Henry was sitting by the road to town when a farmer passed on his way to market. "Hello, Henry," called the farmer. "What are you doing sitting alone by the road?"

"Oh, hello," mumbled Henry. "I'm wishing I could help my family. Everyone works so hard so we can buy food for our supper. Everyone but me. I'm too young to help Papa, too afraid of cows to help my brother, and I don't know how to mend clothes with my mother. I'm afraid I'm rather useless."

"Now, Henry," replied the farmer, "no person is useless. We all have ways to help. Sometimes it is difficult to discover how." The farmer reached into his wagon and pulled out a small sack. He handed the sack to Henry and said, "Sometimes all we need is some help getting started and a little creativity. See what you can do with these to help your family. Good luck, Henry." The farmer continued on his way to market.

Henry looked into the sack. He saw a potato, a carrot, and a handful of seeds. "How will one potato, one carrot, and some seeds help me or my family?" Henry wondered. "It's not much of a meal." But as Henry sat and thought, and thought and sat, an idea began to form in his head. As the idea grew, so did his excitement. "I know what I'll do with these!" exclaimed Henry, as he jumped up and ran home.

What will Henry do?

How will it help his family?

LETTER TO PARENTS

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SCIENCE NEWS

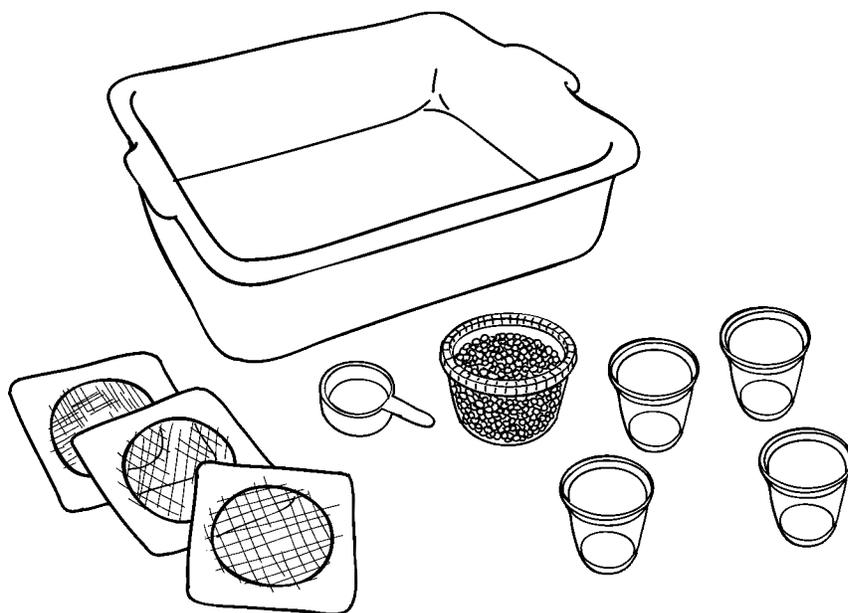
Dear Parents,

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,



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 dry beans. Then try the same materials on a different surface, such as plastic wrap or foil.

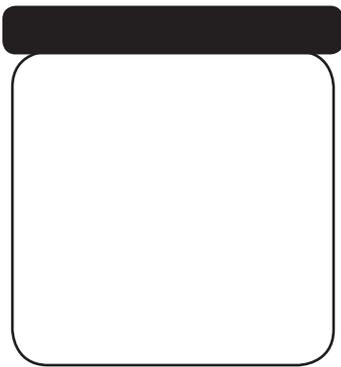
What did you observe?

Material	On paper towel	On other surface	Solid or liquid
Water			
Milk			

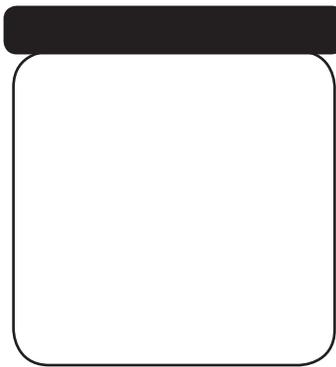
HOME/SCHOOL CONNECTION**INVESTIGATION 4: SOLIDS AND LIQUIDS WITH WATER****Scientific Salad Dressing**

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.

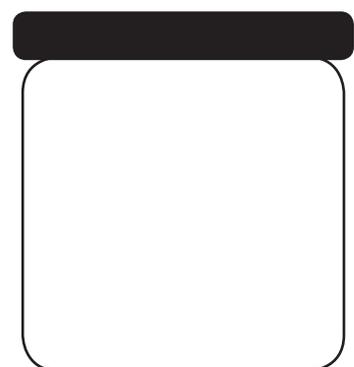
You will need a plastic container with a lid, salt, oil, pepper, vinegar, and a spice such as dried rosemary, tarragon, oregano, or basil.



1. Add $\frac{1}{3}$ cup of vinegar to $\frac{1}{2}$ 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

4. Add $\frac{1}{2}$ teaspoon of salt and shake. What happens?

5. Add $\frac{1}{2}$ 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?