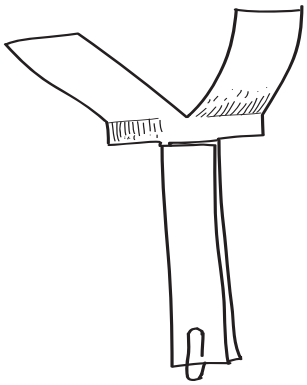
LETTER TO PARENTS

Cut here and paste on school letterhead before making copies.

SCIENCE NEWS

Dear Parents,



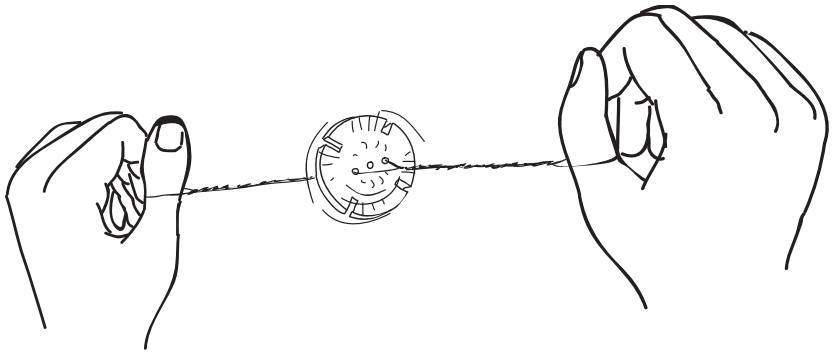
Balance and Motion is the new unit we are studying in science. We will be studying the motion of objects, including vibrations and sound. We will be observing, and comparing how objects balance, spin, and roll, and communicating orally and in writing the things we discover. The processes of observing, communicating, and comparing are important thinking processes that your child will be using during our investigation of motion.

We will start by learning metric linear measurement. We'll explore the need for standard units, and work with the metric units and tools used by scientists worldwide. Our goal is that the metric concepts will have their own frame of reference in your child's mind, and that in time he or she will think metric. For example, the meter is about the distance from the floor to a typical doorknob. A pinkie finger on a small person is about 1 cm wide.

Your child may be interested in trying some things at home. You might want to tie a string between two chairs and see how many paper cups, craft sticks, and other objects you can balance (use clothespins for counterweights). You could make a big mobile by suspending a broomstick and hanging things from it, or make spinning tops out of shafts and disks. Or make a zoomer as described on the Home/School Connection I'll be sending home in a few weeks. Check your local toy store for tops and other spinners. The possibilities are endless, and your child can be your guide.

We're looking forward to our new unit on balance and motion to provide lots of learning and lots of fun!

Sincerely,



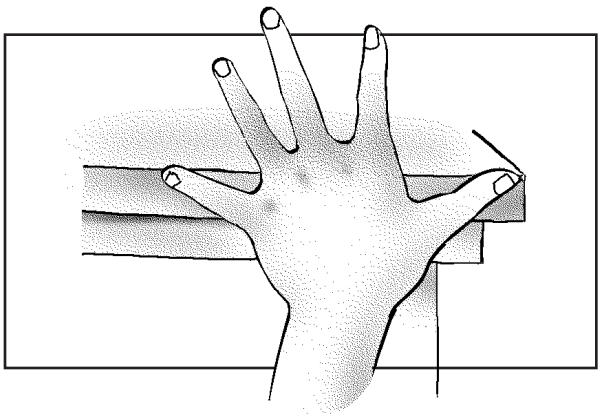
Name _____ Date _____

HOME/SCHOOL CONNECTION

INVESTIGATION 1: THE FIRST STRAW

Dear Parents,

This activity deals with the need for standard units of measure. Work with your child to make a list of five objects to measure. Then both parent and child measure each object using some part of a hand. One example, you might use a thumb-to-pinkie unit to measure the length of a table.



Have your child fill in the chart below, then answer the question at the bottom of the page. Be sure names are written in the column headings.

OBJECT	UNIT	(STUDENT)	(HOME PARTNER)

Look at the chart above. Do you think it's a good idea to use parts of your hand as a measuring unit? Why or why not?

_____

_____

_____

Name _____ Date _____

HOME/SCHOOL CONNECTION

INVESTIGATION 2: BALANCE

Dear Parents,

In class, we have been exploring balance. We've learned how to balance all kinds of shapes by adding clothespins, which act as counterweights. Here are some fun movements to explore together and some questions to ask your child that might lead to interesting discussions about balance, weight, and counterbalance.

Try this!

- Compare standing on one foot with your eyes closed and with your eyes open.

  Which is easier? Why do you think that might be?

- Compare standing on one foot, standing on two feet, and sitting on the floor.

  Which do you think is the most stable—easiest to maintain balance without falling over? Why do you think that might be so?

- Stand with your heels against a wall. Now bend over to pick up an object on the floor.

  What happens? Why do you think it happens?

- Try to get up from a chair without moving your hands or leaning.

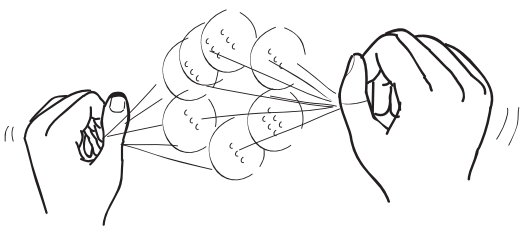
  What happens? What do you need to do to get up?

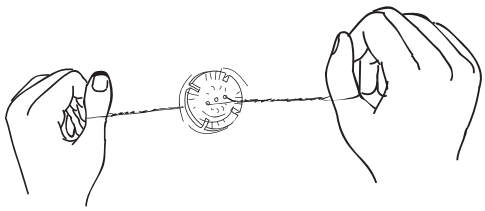
Name _____ Date _____

HOME/SCHOOL CONNECTION

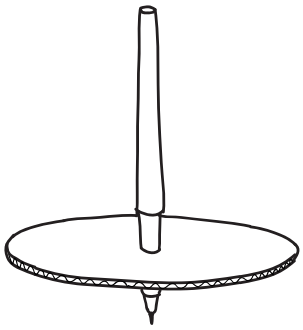
INVESTIGATION 3: SPINNERS

ZOOMERS: Traditional zoomers are made from a button and a piece of string. The string is strung through the button holes and tied to make a loop. When you twirl it around to put a twist in the string and pull it tight to unwind, the button will spin.





TOP: Cut a 13- or 15-cm (5- or 6-inch) circle from a piece of cardboard. Poke a hole in the center big enough for a pencil or felt-tipped pen.



Some things to try

- Add more cardboard disks to the top.
- Compare zoomers made with a big and a little button.
- Add a spinning design to a top or zoomer.

  (The best way to see the spinning design on a zoomer is to reorient the zoomer by bringing one hand in front of your face and moving the other hand away from you. Make the zoomer go fast or slow and watch the design change.)
- Make tops from different materials.
- Try anything you can think of—be curious!

What did you make?

What did you try?

What happened?

Name _____ Date _____

HOME/SCHOOL CONNECTION

INVESTIGATION 4: ROLLERS

Look for things that roll or spin in your home or neighborhood. Rollers and spinners might be found in any room of the house, in a tool box, in a toy box, or outside. Two examples are given to start off your hunt.

Rollers	Spinners
car wheels	**water going down the drain**

Name _____ Date _____

HOME/SCHOOL CONNECTION

INVESTIGATION 5: BACK AND FORTH

Make good vibrations. Put together a tinker's band with family and friends. Make as many different kinds of sounds and as many pitches as you can with everyday objects around the house. Try to make a diatonic scale.

do, re, mi, fa, sol, la ti, do.

Things to try out for the band might include

- Bottles, with and without water.
- Bowls, glasses, and pitchers.
- Tin cans.
- Cook pots and fry pans.
- Lids for cook pots and fry pans.
- Bolts or pieces of pipe hanging from strings.
- Pieces of wood.
- Strings, wires, or ropes pulled tight.

Make a list of the items you used to make each sound.

Play some tunes, either solo or in a combo with friends and family. Turn on the radio or some recorded music and play along. Make a sound recording of your own musical efforts. Bring the recording to class and have other students analyze the different sounds they hear and record them on a chart.