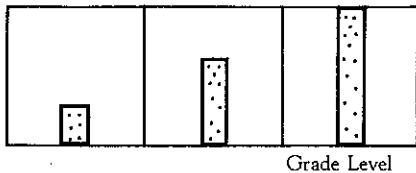


Making a Fraction Kit



Why

To see and understand the relative values of fractions by making physical representations

TOOLS

Pencil

Scissors

Strips of 3" x 18"
construction paper

For Kit I you need 4
strips of different colors

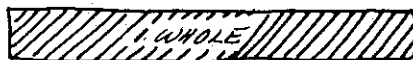
For Kit II you need Kit I
plus 3 more strips of
different colors

- ▶ When young children are learning simple arithmetic, it is essential that they have many experiences with concrete materials, such as blocks, before they can truly understand the difference between three \square \square \square and five \square \square \square \square \square . In the same way, making a physical model of fractions provides reinforcement for understanding the relative values of fractions. ◀

How

To Make Kit I

- Take 5 strips of different colors. With your children, compare the strips to be sure they are all the same length. Talk about the fact that the strips each represent "1 WHOLE" and that you will be cutting some into fractional parts.
- Label one strip "1 WHOLE." (Note: It is often convenient to use a black strip for your whole.)



- Take another strip and fold it carefully in half.
 - Fold by first lining up the edges of the strip and then creasing the fold.



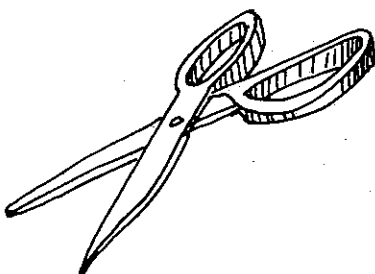
How many sections will you have when you open your folded strip?

Open it and count.

- Label each part $\frac{1}{2}$ and cut on the fold line.



- Take another strip and fold carefully in half two times.

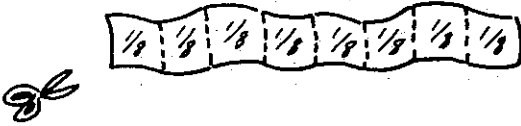


Guess how many sections you will have when you open it.
Count the sections.

- Label each part $\frac{1}{4}$ and cut them apart.



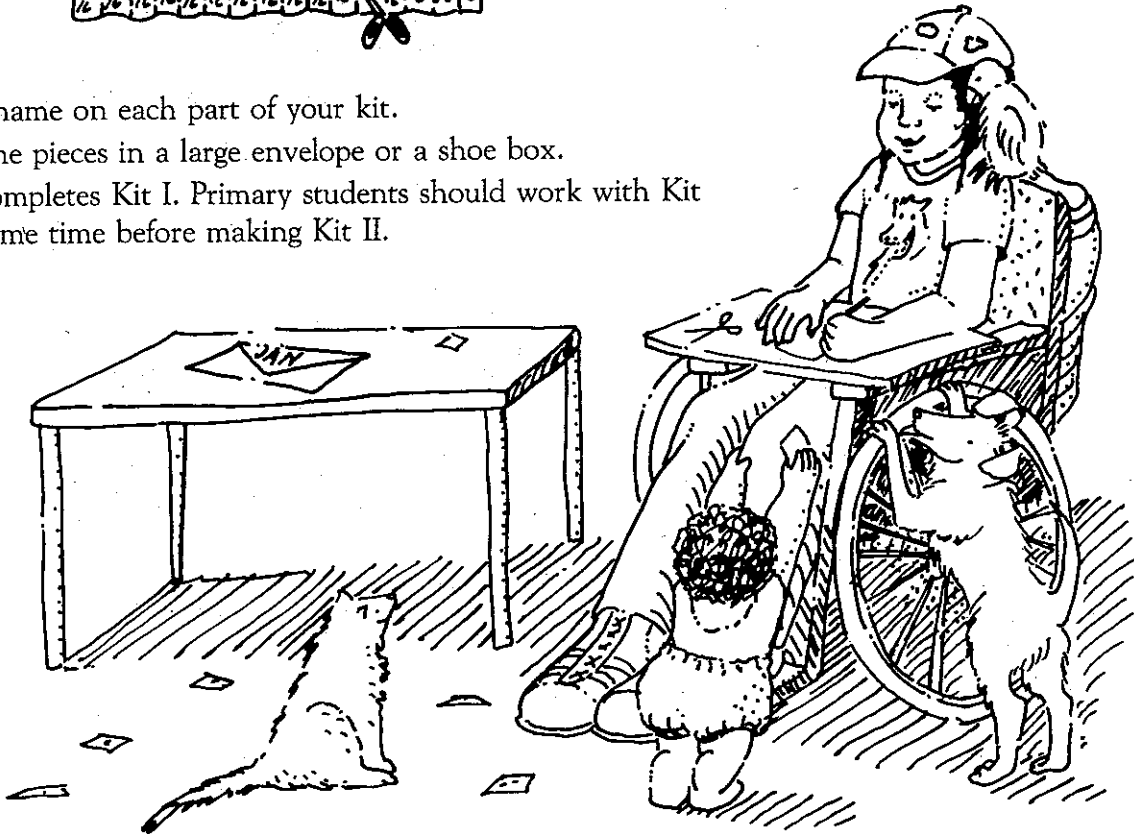
- Take another strip. This time fold it in half **three** times.
Again, be very careful to fold accurately.
How many sections will there be this time?
Count to check.
- Label each part $\frac{1}{8}$ and cut them apart.



- Continue with the last strip. Fold **very** carefully **four** times.
This time you will get one-sixteenth ($\frac{1}{16}$) for each section.

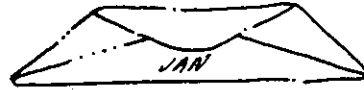


- Put your name on each part of your kit.
 - Keep the pieces in a large envelope or a shoe box.
 - This completes Kit I. Primary students should work with Kit I for some time before making Kit II.

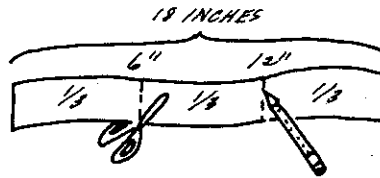


To Make Kit II:

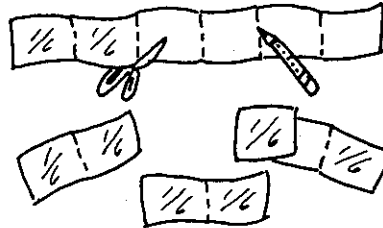
- Kit II consists of Kit I plus the pieces made from three more 18-inch strips.



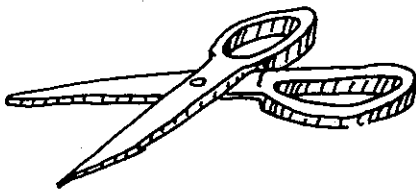
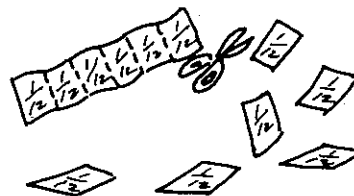
- Make Kit I.
- Take the next strip, measure and mark it with a pencil at 6" and 12" along the edge. Fold on these lines.
 - You will have three sections.
 - Label each $\frac{1}{3}$ and cut them apart.



- Take the next strip. Make thirds and then fold each third in half.
 - How many sections do you have?
 - Label each section $\frac{1}{6}$ and cut them apart.



- Take the last strip. Make sixths and then fold each sixth in half. You will have twelve sections this time.
 - Label each section $\frac{1}{12}$ and cut them apart.



- Put your name on each part of your kit.
- Use your fraction kit to compare the sizes of different fractions and for Fraction Cover Up and other fraction activities.

More Ideas

Equivalent Fractions are easily shown with these kits. For example, 1 WHOLE is the same as $2/2$, $3/3$, $4/4$, etc. Explore with your children some other equivalent fractions, using your strips to check. Keep a record like this:

$1/2$ IS THE SAME AS $2/4$ OR $3/6$ OR $4/8$
 $2/3$ IS THE SAME AS $4/6$ OR $8/12$ OR $10/15$
 $3/4$ IS THE SAME AS $6/8$ OR $9/12$

