Measurement SOS

Dear Family,

This week your child is learning to read a clock to tell time to the nearest minute.

Children have learned that the short hand on a clock face shows the hour, and that it takes 1 hour for the short hand to move from one number to the next. They have learned that the long hand shows the minutes. This year they are learning to pay attention to and interpret the small marks that each show 1 minute.

They find the hour first: Because the short hand has gone past the 3 and isn't to the 4 yet, the *hour* on this clock is 3. (For children who don't often see analog clocks, reading the hour can be a little tricky.)

Then, to find the minutes past the hour, they learn to start at the 12 and count by 5s for each number (1, 2, 3, etc.) up to the number just before the minute hand (7). The number 7 marks 35 minutes past the hour. Then they count the 4 small marks past the 7 to the exact location of the minute hand, to get to 39. The time is 3:39.

Instead of counting by 5s to find the minutes, children can also practice using multiplication facts. They multiply 7 by 5 (because the space between each number is 5 minutes) and then add 4.

Sometimes it's more helpful to know how many minutes it is until the next hour. Your child is learning to count backward from the 12, first by fives and then by ones to read the time on this clock at 21 minutes *before* 4 o'clock.

Invite your child to share what he or she knows about telling time to the minute by doing the following activity together.

NEXT

Dear Family,

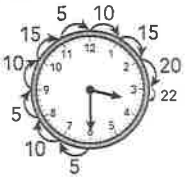
This week your child is learning to solve word problems involving elapsed time.

Elapsed time is the amount of time that has passed between a starting time and an ending time.

Your child might see a problem like this one, where you know the elapsed time and the starting time, and are asked to find the ending time.

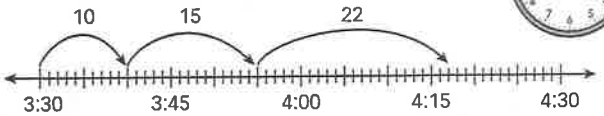
> Paul started his homework at 3:30. He spent 10 minutes on math, 15 minutes on reading, and 22 minutes on science. What time was it after he did those three parts of his homework?

The first clock shows the time Paul started his homework, 3:30. The arrows show the movement of the minute hand as it moves through the 10 minutes he spent on math, then 15 minutes for reading, and then 22 minutes for science.



The minute hand ends up at 17 minutes past the hour. Since it moved past the 12, the hour changed from 3 to 4. Paul finished his homework at 4:17.

A number line is another way to show this.



Starting at 3:30, the three jumps along the number line show how many minutes it took Paul to do the three parts of his homework. Where the last jump ends is the ending time, or the time that Paul finished his homework.

Invite your child to share what he or she knows about solving problems involving elapsed time by doing the following activity together.

NEXT

Dear Family,

This week your child is learning about measuring liquid volume using liters and milliliters.

Liquid volume is the amount of space a liquid takes up.

A **liter** is about the same amount as a quart.

the amount of water in a large water bottle

the amount of milk in 4 small milk cartons

the amount of milk in $\frac{1}{4}$ of a gallon

A milliliter is much smaller than a liter. There are 1,000 milliliters in 1 liter.

1 milliliter

the amount of liquid in a full eyedropper

5 milliliters

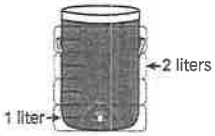
the amount of hot chocolate in 1 spoonful

1,000 milliliters

the amount of water in a 1-liter water bottle

Your child will use addition, subtraction, multiplication, and division to solve word problems related to liquid volume.

For example, the dotted lines on this water jug show sections that each hold 2 liters. There are 4 sections, so the container holds a total of 8 liters.



Invite your child to share what he or she knows about measuring liquid in liters and milliliters by doing the following activity together.

NEXT

Dear Family,

This week your child is learning about measuring the mass of objects using units of grams or kilograms.

When we talk about measuring the mass of an object, we mean we are measuring how heavy it is.

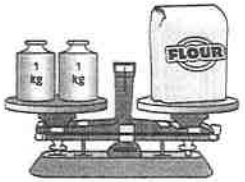
Two units commonly used to measure mass are **grams** and **kilograms**.

- The mass of a paper clip is about 1 gram.

- The mass of a wooden baseball bat is about 1 kilogram.

A kilogram is equal to 1,000 grams. So, it is also as heavy as 1,000 paper clips.

One way to find the actual mass of any object is to use a balance scale. In the picture, two 1-kilogram weights balance the bag of flour, showing that the mass of the flour is equal to 2 kilograms.



If you only want to estimate the approximate mass of something, one way to do that is to compare it to something else that you know the mass of. For example, if you lift these two books, they may seem to be about as heavy as the bag of flour. Since you know the bag of flour has a mass of 2 kilograms, you can estimate that the mass of the books is also about 2 kilograms. So, the mass of one book is about 1 kilogram.

Invite your child to share what he or she knows about measuring mass by doing the following activity together.

NEXT