

Math at Home Measurement Activities for K-5

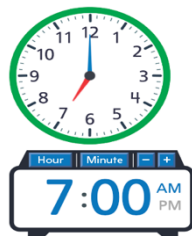
Below are math activities to do at home related to measurement. They provide an opportunity for you to engage in problem-solving with your child, using familiar contexts and materials found at home. Suggested grade levels are indicated for each activity, but students vary widely in what they find engaging and challenging. Many of these activities can be modified to be appropriate for both younger and older children.

While you work with your child, show curiosity about their ideas. Let them take the lead. Ask questions like “*What do you notice?*”, “*Why do you think that?*”, “*How did you figure that out?*”, and “*What do you think we should do next?*” Encourage your child to come up with new questions to ask in order to extend the activity.

Measuring Time

Calendar Explore the calendar as a tool for keeping track of time and events by showing your child how you use it. When you write in an appointment or a family event, or when you use it to find how many more days until a special event, talk with your child about what you’re doing. (Grades K-2)

Telling Time Work with your child on telling time. Vary your questions so that they get practice telling what time it is, writing that time, and figuring out what time it will be in a given amount of time. You can also sketch a clock with no hands and ask your child to draw the hands to show a given time. (Or ask older children to draw the clock.) For example, “*What time is it now? How do you know?*” or “*How would you write [4 o’clock]?*” or “*What time will it be in [an hour]?*” or “*What would the clock look like if it was [1:00]?*” Use these guidelines for telling time for different grade levels: to the hour and half hour (Grades 1-2); to the quarter hour (Grade 2); to the nearest 5 minutes and the nearest minute (Grade 3).



Grade 3 students can also work on questions about intervals of time that involve the starting and ending time of an activity. For example, *“We left the house at 8:10 and returned at 9:05. How long were we gone? If you started reading at 5:17 and read for 30 minutes, what time was it when you stopped?”* (Grade 3)

Measuring Length

Which Is Longer? Find opportunities to ask your child about the length of different objects; for example, *“What do you think the longest part of this shoe box is? Do you think the shoe box is longer than the puzzle box? How could we find out?”* (Grades K-1)

Shorter Than My Arm Your child can estimate which objects around the house are shorter than their arm and then measure the objects – with their arm – to make sure. As an extension, choose a different body part or compare two lengths. For example: *“Can you find something that is shorter than your leg but longer than your arm?”* (Grades K-1)

Measuring Shoes Your child may enjoy investigating the length of shoes at home. Trace shoe outlines on paper, and then use paper clips (or another same-sized item such as blocks or toothpicks) to measure the length of the outline from the heel to the toes. Ask your child to put the shoe lengths in order from the shortest to the longest. (Grades K-2)

Estimating Lengths Ask your child to help you estimate lengths in everyday situations. For example: *“How many chairs can fit along one side of a table? How many steps does it take to walk from the kitchen to the front door?”* (Grades K-2)

Measuring with Hands and Feet Your child can choose an object or distance and measure it with their hands (wrist to fingertip) or feet (heel-to-toe steps). Then your child can record each object as a specific number of hands or feet. As an extension, your child can compare the measurements that other members of your family get when using their hands or feet. (Grades K-2)

Measuring with Your Foot Length Use the shoe-length of different members of your family to measure the same distance in heel-to-toe steps and ask your child the following questions: *“How many parent feet is it from the door to the table?”*

How many little brother feet measure the same distance? Why are these numbers different?” You can also compare the lengths of the same count of different-sized feet. For example, each person does 10 heel-to-toe steps. “How far is 10 parent steps? How far is 10 second-grader steps?” (Grades 2-3)

Marking Heights If you mark your child’s changing heights regularly on the wall or a chart, look at that information with your child and talk about it or perhaps to start a chart if you haven’t been keeping one. (Grades K-5)

Practice Measuring with a Ruler Look closely at a ruler with your child. Notice the numbers and talk about what they represent. Use the ruler to first measure different objects around the house that are less than 12 inches. Then measure distances and objects that are greater than 12 inches. Compare measurements of the same object in centimeters and inches. (Grades 2-3)

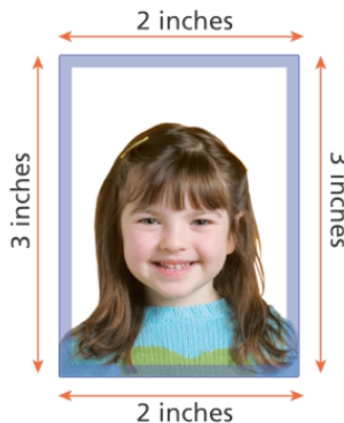
Body Benchmarks Encourage your child to use a ruler to find benchmarks for one inch, one foot, and one centimeter. For example, the width of your child’s thumb is a good benchmark for one centimeter. Experiment with using the benchmarks to measure. Measure an object with a body benchmark and then with a ruler. How close is the estimate made with a body benchmark to the measurement made with a ruler? (Grades 2-3)

Comparing Jumps This is a good activity for outdoors. Use chalk to mark a starting point and then measure how far different people jump. Talk about how to measure the jumps and compare the lengths. You might ask, *“How much longer is this jump than that one?”* or *“How much farther would this person need to jump to go the same distance as that one?”* (Grades 2-3)

Measuring Length Around the House Look for opportunities for you and your child to estimate and measure lengths and distances in real-life contexts, using both U.S. standard and metric units. Show your child how you use various measurement tools in your own measurement activities—hobbies like sewing and carpentry are a natural for this. You and your child can go outside to measure larger distances. How many yards is it to the end of the block? What’s the distance in feet between two trees? What would that same distance be in meters? (Grades 3-5)

Measuring Perimeter Around the House Estimating or calculating the perimeter of objects around the house is a good way to help your child use this concept in a variety of situations. There are many examples: the perimeter of a rectangular table, the perimeter of a room or rug, the perimeter of the refrigerator door or sink. You can measure perimeter in standard units of measure (such as inches or centimeters) or in nonstandard units (such as hand widths).

- Work with your child on estimating perimeters by measuring the perimeter of one object (for example, the sink), and then using this information to estimate the perimeter of a nearby object (for example, the refrigerator door).
- Look for objects to measure that are other shapes besides rectangles. Can your child begin to estimate the perimeter of circular objects, such as a round table? Find the perimeter of a round table by walking or measuring around the outside of the table. Compare this perimeter with those of rectangular objects such as tables and rugs. (Grades 3-5)

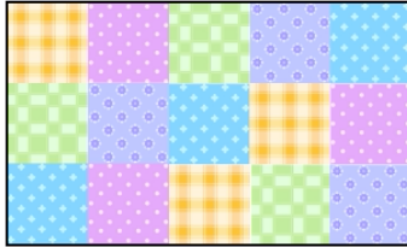


The perimeter of the picture frame is 10 inches.

Measuring Area

Measuring Area Around the House Look for opportunities at home to talk with your child about area—the two-dimensional measure of the size of a surface. If you have square tiles covering a floor or bathroom wall, ask, “*How many squares are there?*” Ask your child to help you figure out the area of a tabletop or the floor of a room by using different common objects as the unit of measure. For example: “*How many sheets of notebook paper would it take to cover the kitchen floor? How many index cards would it take to cover a table?*” Your child can

estimate the answer first and then use the sheets of paper or index cards to find the exact amount. (Grades 3-5)



15 square feet

Measuring Volume

How Many Packages in a Box? Many household items are packaged and sold in boxes. You and your child can take a large cardboard box and predict how many bars of soap (toothpaste, pudding, cereal boxes) would fit in that box. You might try a variety of boxes at (Grades K-5)

Volume of a Room Another activity for exploring volume is to compare the amount of space in different rooms. Volume can be found by multiplying the measures of length, width, and height. At home, your child can find the volume of various rooms. Which room do you think has the largest volume? Which room has the smallest volume? Why? Discuss how to compare rooms of unusual shapes (a slanted ceiling or an L-shape). (Grade 5)