

Measure in Inches and Centimeters



Dear Family,

This week your child is learning about measuring in inches and centimeters.

Your child will encounter measurements throughout his or her life, and it is important that he or she understands standard units of measurement.

Standard units are used to make sure that a measurement unit is always the same size and so that all measurements are consistent. Inches and centimeters are two examples of standard units.

A quarter is about 1 **inch** across.



about 1 inch

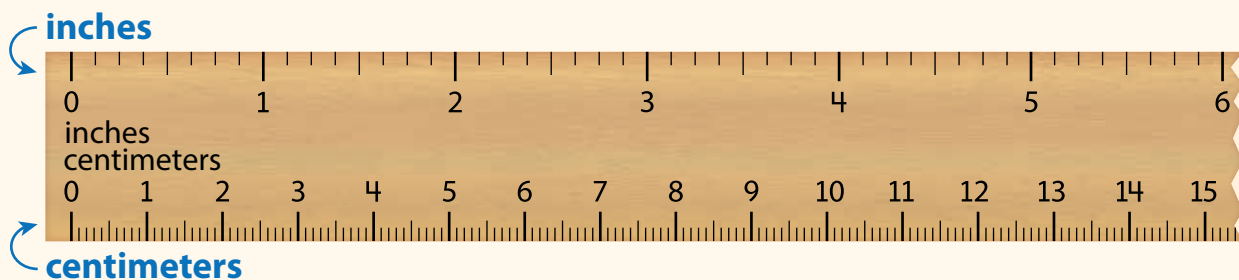
A stack of 6 quarters is about 1 **centimeter** (cm) tall.



about 1
centimeter

You can use a **ruler** to **measure lengths**. A ruler is a tool that measures using standard units. It is divided into equal parts, such as inches or centimeters.

This ruler shows inches on the top and centimeters on the bottom.



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

ACTIVITY EXPLORING LENGTH MEASUREMENT

Do this activity with your child to measure in nonstandard units.

Remind your child length can be measured by placing same-sized units alongside an object.

Materials paper clips, small sticky notes, or other small objects of the same length

- Review how to align the first measuring unit with the end of the object being measured.
- Measure several objects by lining up the nonstandard measuring units end to end with no gaps or overlaps from one end to the other end of the object being measured.
- Once your child understands how to use same-sized units to measure lengths of objects, go on a scavenger hunt for objects that are specific lengths: 1 paper clip, 1 sticky note, 3 paper clips, 3 sticky notes, 6 paper clips, and 6 sticky notes. Record the objects in the table.

Length	Object
1 paper clip	
1 sticky note	
3 paper clips	
3 sticky notes	
6 paper clips	
6 sticky notes	

Measure in Feet and Meters



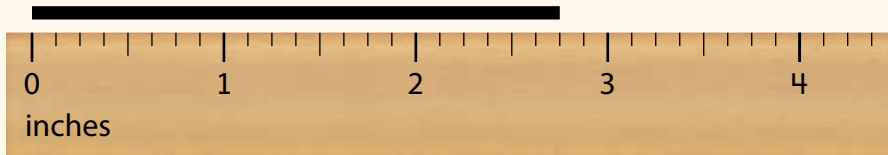
Dear Family,

This week your child is learning how to use different measuring tools to measure the lengths of objects.

Your child will continue to use a ruler and will be introduced to other measuring tools, such as a yardstick, a meter stick, and a measuring tape.

- A standard ruler is marked in inches and centimeters. It shows 12 inches and 30 centimeters. A 12-inch ruler is equal to 1 **foot**.
- A **yardstick** is a measuring stick that is one **yard** long and shows 36 inches.
- A **meter stick** is a measuring stick that is 1 **meter** long and shows 100 centimeters.
- A **measuring tape** is a flexible measuring strip that shows inches and centimeters.

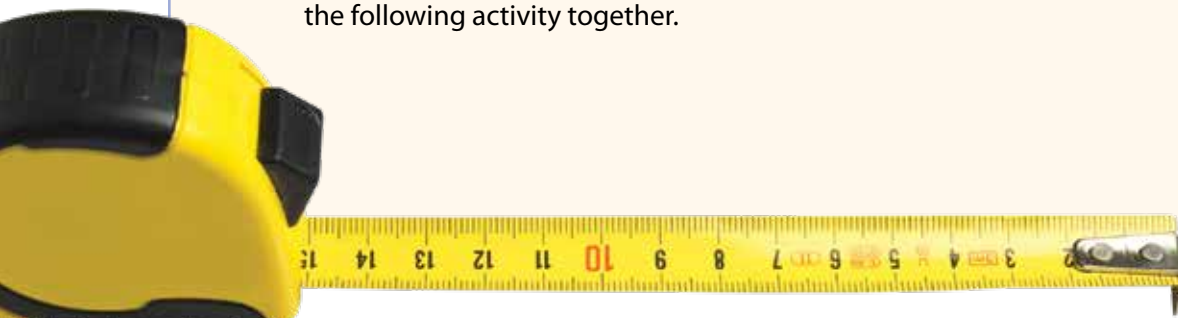
How long is this line to the nearest inch? You can use a ruler to measure the length.



Line up the 0 with one end of the line. The other end of the line is between the 2 and the 3, so 3 is the nearest inch. The line is about 3 inches long.

Different tools may be easier to use when measuring different objects. For example, it is easier to measure a crayon with a ruler than with a yardstick, but it's easier to measure the length of the couch with a yardstick than a ruler.

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



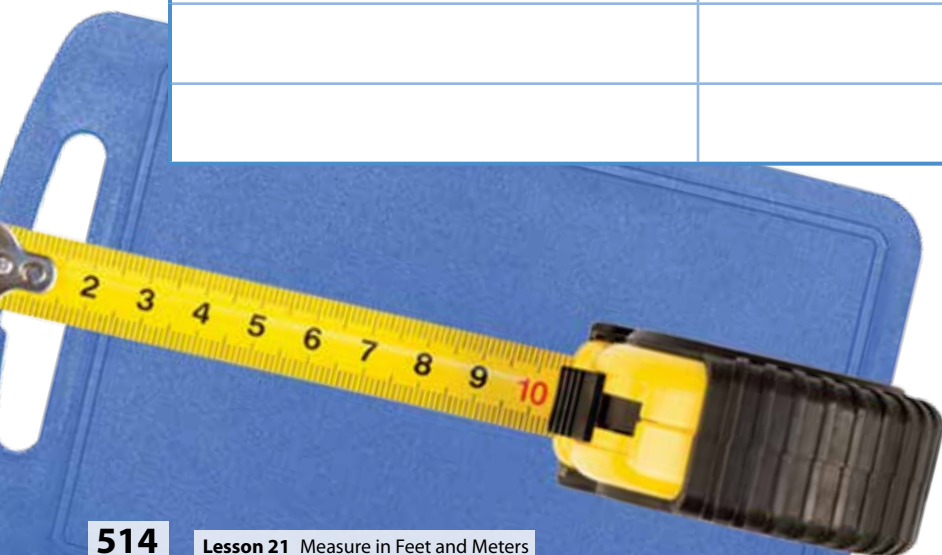
ACTIVITY MEASURING

Do this activity with your child to explore measuring in feet and meters.

Materials measuring tool (ruler, yardstick, measuring tape), household objects

- Work with your child to practice measuring items around the house. Use whatever measuring tools you have available or cut out the centimeter ruler to the right. Measure in inches or centimeters, depending on the tool you are using. Measure all objects to the nearest inch or centimeter. Explain to your child that if the length of an object falls between two inch or centimeter measurements, he or she should pick the one that is closer to the length of the object.
- Ask your child to explain how he or she is measuring each item. Challenge your child to measure at least one object in each room of your home.
- Remind your child to include the units of measurement when he or she fills in the table. For example, write the length of a pen as 6 inches, not 6.

Object	Length



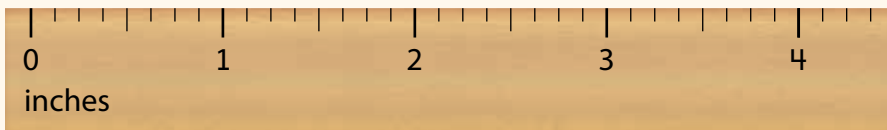
Understand Measurement with Different Units



Dear Family,

This week your child is exploring using different units to measure the length of an object.

An object can be measured using many different units of length, such as inches, feet, yards, centimeters, or meters.



The toy fire truck is 5 centimeters long.
The toy fire truck is about 2 inches long.

It takes fewer inches than centimeters to measure the fire truck. An inch is longer than a centimeter, so you need fewer of them to measure an object. A centimeter is shorter than an inch, so you need more of them to measure an object.

Invite your child to share what he or she knows about measuring length with different units by doing the following activity together.

ACTIVITY EXPLORING DIFFERENT UNITS

Do this activity with your child to understand measurement with different units.

Materials ruler, household objects

Play the following game with your child to help him or her see the results of measuring with longer or shorter units.

- Have your child pick an object to measure. Give your child a choice between measuring in inches, centimeters, feet, or yards.
- Choose one of the remaining units for yourself.
- Measure the object together, once for each unit. Measure to the nearest whole unit. Complete the table.
- Pick another object and repeat with new units for each player.
- For each object, ask your child to circle the player who used fewer units to measure the object.

Object 1		
	Player 1	Player 2
Unit		
Measurement		

Object 2		
	Player 1	Player 2
Unit		
Measurement		

Tell your child that you are going to measure the height of the refrigerator and that you are going to use centimeters. Ask your child which unit they would pick to use fewer units to measure the refrigerator. Test your child's answer by measuring with the chosen units.



Estimate and Measure Length







Dear Family,

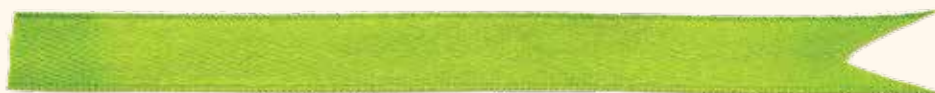
This week your child is learning about estimating lengths of objects using benchmark objects.

If you know the length of a common object, you can use that length to **estimate** the length of other objects.

Here are some helpful benchmarks you can use with your child to estimate length.

1 centimeter	1 inch	1 foot	1 meter
			
your little finger is about 1 centimeter across	a quarter is about 1 inch across	about the height of a notebook	a doorway is about 1 meter across

To estimate the length of this ribbon, your child might compare it to quarters and estimate that it would take 5 quarters to measure the ribbon. So, it is about 5 inches long.



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

ACTIVITY ESTIMATING LENGTH

Do this activity with your child to estimate and measure length.

Materials quarter, ruler, toys or household objects

- Have your child collect three of his or her favorite small toys.
- Work with your child to estimate the length of each toy in centimeters. Encourage your child to use his or her little finger as a benchmark measurement of 1 centimeter.
- Estimate the length of the toy in inches, using a quarter as a benchmark measurement of 1 inch.
- Fill in the table below with the estimates. Then use a ruler to measure the toys' lengths to the nearest inch or centimeter.
- Ask your child which of his or her estimates was closest to the actual length.

	Centimeters		Inches	
	Estimate	Actual	Estimate	Actual
Toy #1				
Toy #2				
Toy #3				

Keep an eye open for examples of benchmark lengths in your everyday life. Share these with your child. For example, the height of a tree might be a good example of 20 feet, and the length of a sidewalk square might be a good example of 1 meter.



Compare Lengths



Dear Family,

This week your child is learning to compare measurements and find the difference in lengths.

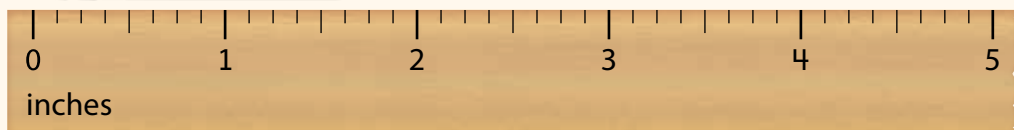
Your child might see a question like the one below.

Troy and Gus measure their pencils. How much longer is Gus's pencil?

Troy



The rulers on this page are not life-sized.



Gus



- One way to find how much longer one pencil is than the other is to find the difference between the lengths of the pencils.

Gus's pencil is 5 inches long and Troy's is 2 inches long.

Since $5 - 2 = 3$, you know Gus's pencil is 3 inches longer than Troy's pencil.

- Another way to find the difference is to simply measure the difference.

Gus



Troy



The ends of the pencils are at the same point. The ruler is placed at the end of the shorter pencil.

Gus's pencil extends to the 3-inch line. Gus's pencil is 3 inches longer than Troy's pencil.

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

ACTIVITY COMPARING LENGTHS

Do this activity with your child to compare lengths.

Materials ruler, uncooked spaghetti (or strips of paper)

Play the following game with your child to practice comparing lengths.

- Hold one end of a piece of uncooked spaghetti and have your child hold the other end.
- Break the spaghetti into two pieces.
- Compare the lengths to determine who has the longer piece.
- Help your child measure both pieces of spaghetti in centimeters and find the difference. (Measure all objects to the nearest centimeter. Explain to your child that if the length of an object falls between two centimeter measurements, he or she should pick the one that is closer to the length of the object.)
- The person with the longer piece gets 1 point for each centimeter of difference. (So, a difference of 3 centimeters = 3 points.) Record the winner's points in the table.
- Play the game two more times.
- Ask your child to add up the points to determine who won the game.

	Player A	Player B
Game 1		
Game 2		
Game 3		
Total		

