

Appropriate Measurement Tools

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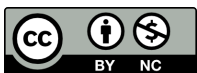
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CONCEPT

1

Appropriate Measurement Tools

Here you'll learn how to choose the appropriate tool given each measurement situation.

Remember the problem about Sasha from the last Concept? Have you ever tried to make a dress? Well, here is a second part of that problem.

Sasha has figured out that she needs to use meters to measure her dress. After a trip to the fabric store, she came home with two and a half meters of cloth and began to attach the pattern to the material that she bought. However, she began to have challenges when she realized that she would need to use a tool to measure. Sasha thinks she should use a meter stick, but she isn't sure.

This Concept is all about tools. By the end of it, you will know whether Sasha has made the correct choice or not.

Guidance

Whether you are measuring the length of items using the customary system of measurement or the metric system of measurement, you will still have to decide which measurement tool is the best one to use.

What kinds of tools can we use to measure length? We have already talked about a couple of different tools. Let's look at those and some that we haven't talked about yet.

- Rulers
- Tape measures
- Yard sticks
- Meter sticks

Rulers

Rulers are used all the time in mathematics. We can use a ruler to measure things that are small. Most rulers show both customary units of measurement like inches and metric units of measurement, such as the millimeter and the centimeter.

When you measure something that is small, a ruler is often the best tool to use.

You can measure the small item in customary units or metric units or both.





We can see that this barrette is about _____ inches long. The barrette can also be measured in centimeters. It is about _____ centimeters long. **If an item that is being measured fits on a piece of paper, a ruler is probably the best tool to use.**

Tape Measure

If we were going to measure the length of a table, we could use a ruler, but it is probably not the best tool to use. Think about it. A table is probably much longer than a ruler. We could line up ruler after ruler after ruler, but this would be a bit time consuming.

There is an easier way. We can use a tape measure.

Tape measures are used to measure many of the distances that are too long for a ruler to measure easily.

We use tape measures to measure the distance across a room or an object that is very long.

Tape measures show us length in inches and feet. We can see exactly how long something is by comparing the length of the object with the measurement on the tape measure.

Yard Stick

What about a **yard stick**?

A yard stick measures things by the yard. Since there are three feet in a yard, we can say that a yard stick could be used for things that are longer than a piece of paper, but not too long. Some of the things that we could measure with a tape measure we could also measure with a yard stick. Think about the table in the last example. We could also use a yard stick to measure it. **Sometimes, you have to use common sense.** If the table is really long, longer than the yard stick, then you would switch to the tape measure.

Meter Stick

A meter stick measures one meter.

We can use meter sticks to measure objects that are larger than a piece of paper. Remember that you can use centimeters and millimeters if the object is smaller than a piece of paper. Those items are easily measured with a ruler.

A meter stick is actually a little over 3 feet long, because a meter is approximately 3.2 feet. A meter stick compares to a yard stick.

For instances where we would use a yard stick for customary units, we can use a meter stick for metric units. If we were measuring a table length in metric units, a meter stick would probably be our best choice.

Now let's look at a few examples. What would be the best tool to use if we were measuring each item?

Example A

A toothpick

Solution: A ruler

Example B**The length of a room****Solution: Tape measure or meter stick****Example C****The Height of a Standing Lamp****Solution: Yard stick or meter stick**

Now back to Sasha and her dress dilemma. Here is the original problem once again.

Sasha has figured out that she needs to use meters to measure her dress. After a trip to the fabric store, she came home with two and a half meters of cloth and began to attach the pattern to the material that she bought. However, she began to have challenges when she realized that she would need to use a tool to measure. Sasha thinks she should use a meter stick, but she isn't sure.

If you look back through the Concept, you can use the descriptions of each tool to determine whether or not Sasha has chosen the best measurement tool for her project. A "meter stick is best used to measure objects that are larger than a piece of paper." Meter sticks also measure 1 meter which is approximately 3 feet, the same length as 1 yard.

Sasha is correct! She should use a meter stick while making her dress.

Vocabulary**Measurement**

using different units to figure out the weight, height, length or size of different things.

Length

how long an item is

Customary units of length

units of measurement such as inches, feet, yards and miles

Metric units of length

units of measurement such as millimeter, centimeter, meter and kilometer.

Inches

the smallest customary units of measurement, measured best by a ruler

Foot

a customary unit of measurement, there are 12 inches in 1 foot

Yard

a customary unit of measurement, there are 3 feet in 1 yard

Mile

a customary unit for measuring distances, there are 5280 feet in 1 mile

Millimeter

the smallest common metric unit of length

Centimeter

a small metric unit of length, best measured by a ruler

Meters

a unit compared with a foot or yard. 1 meter = a little more than 3 feet

Kilometer

a metric unit for measuring distances

Guided Practice

Here is one for you to try on your own.

Which unit would you use to measure the length of a bug that needs to be seen with a magnifying glass, and which tool would be the most helpful?

Answer

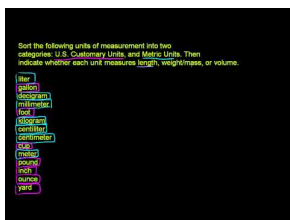
Let's think about this.

If the bug is so tiny that it needs to be seen with a magnifying glass then it is probably smaller than inches and centimeters.

A millimeter is the best unit to measure this bug.

What about tools?

Well, a bug this tiny is definitely smaller than a piece of paper, so it makes the most sense to use a ruler with metric measurements so that the measure of the bug is accurate.

Video Review**MEDIA**

Click image to the left for more content.

[KhanAcademy: U.S. CustomaryandMetric Units](#)

Practice

Directions: Choose the appropriate unit of length using metric units for each item listed below.

1. A grub collected from the garden
2. The width of a street
3. The length of a street
4. The size of a small worm
5. The distance from one town to the next

Directions: Choose the appropriate tool to measure each item in metrics and customary units.

6. The height of a light switch
7. The width of a refrigerator
8. The measurements of a placemat
9. The length of a pencil
10. The width of a chapter book
11. The length of a table cloth
12. An eyelash
13. The length of an ant
14. The width of a piece of paper
15. A television screen