

Cups, Pints, Quarts, and Gallons

Volume has to do with *how much space* something takes. A sandcastle takes a certain amount of space. A bottle of water takes space. A book takes space. But how much?

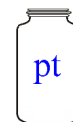
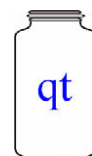
In this lesson you will learn to measure the volume of water (or other liquids) using cups, pints, quarts, and gallons.

You will need

- water in a bucket or other big container
- a few food containers
- a coffee cup
- a drinking glass



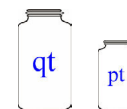
- a quart jar
- a pint jar



- a 1-cup measuring cup



1. Fill the pint jar with water. Pour it all into the quart jar. Then fill the pint jar again and pour it into the quart jar. Is it now full (or close to full)?



It should be. It takes _____ pints of water to fill 1 quart jar.

2. Pour out water from your full quart jar back into the pint jar until the pint jar is full.

Is your quart jar now half full? (It should be.)

How much water is left in the quart jar? _____ pint.

3. Find out how many times you need to fill the one-cup measuring cup with water and pour it into the pint jar until the pint jar is full. _____ times.

One pint is _____ cups.

4. Find out how many times you need to fill the one-cup measuring cup with water and pour it into the quart jar until the quart jar is full. _____ times.

One quart is _____ cups.

5. Find out if a coffee cup measures MORE or LESS than the 1-cup measuring cup—or exactly 1 cup. Do the same with a drinking glass.

6. (optional) At the next supper or breakfast time, do a little experiment. Before eating, measure exactly one cup of the food you are going to eat and then put it on your plate. Will it fill you up? Is it too much or too little food?

7. Find three different food containers. Measure water into them, cup by cup. Write how many whole cups of water fits into each. If you could still fit a little more, write YES.

| | Volume in whole cups | Can you fit a little more? |
|-------------|----------------------|----------------------------|
| Container 1 | | |
| Container 2 | | |
| Container 3 | | |

We use **gallons** when measuring large amounts of liquid. You might have heard about these things. Fill in some more items that you have heard the word “gallon” used with.

- A 5-gallon bucket.
- A 1/2-gallon carton of milk.
- A bathtub can hold so many gallons.



- _____
- _____
- _____



One gallon of water is so much that you can fill FOUR quarts with it.



It would be a lot to drink!

8. Test yourself! Put one gallon of water into a bucket, preferably a 5-gallon bucket.
(Four quarts make one gallon.) Can you carry it?

Put another gallon of water into the same bucket. Can you still carry it?

Now put 1 gallon of water into another bucket, and try to carry a one-gallon bucket in each hand. Can you?

How many gallons of water can you carry using two buckets?

Water can be pretty heavy!

How many quarts of water fit into a 5-gallon bucket?

Puzzle Corner