NPL

Measurement At Home

How much is a teaspoon?

#MeasurementAtHome
npl.co.uk/measurement-at-home

Are all teaspoons the same?

- Are teaspoons accurate enough for measurement in cooking and medicine?
- How does the number of measurements affect precision?
- When is a teaspoon full?

Estimated time: 20 minutes
No prior knowledge needed.

Instructions

Watch the video (https://youtu.be/vMIoINJvOZk)

1. Empty a teaspoon of water into an empty measuring jug. Take care not to spill water. Count 1. Do not worry that the water may be a little higher than a level teaspoon (due to surface tension).
2. With the same teaspoon, add another teaspoon of water into the measuring jug. Count 2.
3. Keep adding more teaspoons of water (as step 2), counting them until the water in the measuring jug is up to the 200 ml mark
4. Calculate your spoon's capacity by dividing 200 ml by the number of spoonfuls you counted.
5. Empty the measuring jug and repeat the experiment (steps 1-4) for other spoons.
6. Enter results below or into NPL webpage:

   npl.co.uk/measurement-at-home/how-much-is-a-teaspoon

Equipment required

- some different shaped teaspoons
- some water
- a measuring jug
- a calculator
- paper and pencil for results and calculation.

Risks

- Mop up spilt water immediately.

SI measurement units

- metre (m) cubed (m^3) for capacity
- A millilitre (ml) is one thousandth of a litre and 1 millionth of a m^3.

Challenge topics

- Measurement science, maths, capacity.

Thoughts, tips and information

- More measurements can increase an experiment's precision. In this case, counting more spoonfuls to reach a volume greater than 200 ml increases precision.
- In recipe books 'tsp' indicates teaspoons, while 'Tblsp' indicates tablespoons. Note the large T and extra b.

Description of spoon	
Number of spoonfuls used to make 200 ml	
Calculated spoonful capacity in ml (200 ml divided by number of spoonfuls)	