Busy at Maths 5 - Fifth Class - Teacher's Resource Book

Capacity

Home/School Links Sheet 32

Your child will be learning about capacity (the measure of the amount of liquid that a container can hold) over the coming days. S/he needs to know some of the language of capacity: capacity, container, litre (l), millilitre (ml), estimate, measure, fractions, decimals, change, graduated jugs, addition, subtraction, multiplication, division, volume, identical.

The litre jug

$1\text{ml} = \frac{1}{1000}\text{l} = 0{\cdot}001\text{l}$

$10\text{ml} = \frac{1}{100}\text{l} = 0{\cdot}01\text{l}$

$100\text{ml} = \frac{1}{10}\text{l} = 0{\cdot}1\text{l}$

Help your child practise reading the litre in both fraction and decimal form from the graduated jug, for example:

- *How many millilitres are in 0·2l?*
- *What is another name for $\frac{5}{10}$l?*
- *How many millilitres are in $\frac{7}{100}$l?*
- *What is 420ml in fraction and decimal form?*
- *How many millilitres are in $\frac{62}{1000}$l?*
- *How many millilitres are in 0·84l?*

Use a measuring jug

For this activity, your child will need a measuring jug, water and containers of different shapes and sizes. Ask your child to measure different amounts of water, *e.g. Pour 100ml / $\frac{2}{5}$l / 0·5l / 300ml /850ml into the jug.*

After measuring a specific amount of water (e.g. 500ml), invite your child to pour the water into a selection of containers of different shapes and sizes. This will demonstrate to him/her that 500ml can look very different in a large, wide container as opposed to a tall, narrow container. Some children think that tall, narrow containers contain more than small, wide containers.

What is the capacity of this container?

For this activity, find a selection of containers used in your home e.g. bowl, cup, spoon, jug, pot, kettle, jar, butter tub, shampoo bottle. Remove any labelling that might show the capacity of the container. Invite your child to estimate the capacity of each container. Then, using water and a measuring jug, encourage your child to measure the exact capacity of each container. Discuss how far/close his/her estimates were to/from the actual measures.

What does 200ml look like?

For this activity, you will need water, a measuring jug and a selection of containers from around your home. Pour 200ml into a measuring jug to show your child what it looks like. Now challenge your child to fill each container in front of him/her with what s/he thinks is 200ml – this is very tricky but your child will have good fun trying! 200ml will look very different in a kettle as opposed to in a bowl. When your child has finished, ask him/her to pour the liquid from each container into the empty measuring jug to assess how close each estimate was to the real measure.

Cooking and baking at home

Capacity measurements regularly appear in recipes. When you need to measure liquids in the home, encourage your child to complete the task for you, e.g. *Measure 280ml of milk/water, etc.*

Container hunt

Encourage your child to find a household container that holds between 100ml and 200ml of water. Use a jug and water to verify the answer.

Extension: Extend the search by looking for containers that hold different capacities, e.g. 300–500ml, about 1 litre, 800ml and so on.

Shopping trip

Bring your child to the supermarket. When picking out liquids, encourage your child to estimate the capacity of specific items, e.g. carton of milk, bottle of orange juice. Then compare the difference between his/her estimate and the actual capacity.

What is the cost of 1l?

When you get back from your shopping trip, give your child the shopping receipt. Ask him/her to study the price of a certain item, e.g. 90c for a 300ml bottle of sauce. Help your child calculate the cost of 1 litre of that specific item, for example:

300ml = 90c
100ml ($^{1}/_{10}$) = 30c
1,000ml ($^{10}/_{10}$) = €3·00

Your child could use a calculator for this activity, as it is more about the concept than the calculation.

Do this with a number of items.

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