

ACTIVITY 8**ELASTIC BANDS**

LEARNING OBJECTIVES

- 1 Choosing appropriate units of capacity and making sensible estimates with them in everyday situations.
- 2 Extending understanding of the relationship between units.
- 3 Converting one metric unit to another.
- 4 Choosing and using appropriate measuring instruments.
- 5 Interpreting numbers and reading scales to an increasing level of accuracy.
- 6 Developing mathematical strategies and looking for ways to overcome difficulties.

What you will need

The children will need a variety of containers which will hold more than 500 millilitres, and some large elastic bands.

What to do

Ask a group of children to:

- choose a container;
- place an elastic band round their container to mark where they think 500 millilitres of liquid will reach;
- pour in 500 millilitres of liquid to see how close they were.

The person whose liquid measures the closest to their elastic band wins the round. They could use one colour of elastic band for the estimates and another for the actual measure. There will probably be some discussion about who is the closest and how to check. Children may just choose to check by eye or to add or take out liquid until the level exactly matches the elastic band and compare differences. However, this is often a very difficult idea for the children to get to grips with.

Organisation

This activity really needs to be supervised for the children to get the most out of the discussion, while the rest of the class are engaged in one of the activities at the end of the section or another activity that the children can work at reasonably independently.

Activities that some children might need to do first

- 1 Use a clear container. Fill it to an elastic band. Add a plasticine ball and mark the new level. Try different sized plasticine balls. (SSM4a,b)
- 2 You need:
 - three different containers;
 - one larger, clear container;
 - elastic bands or a waterproof marker;
 - sand or water.
 Fill the three containers. Mark on the large container where you think the water or sand will reach when it is transferred. Try it and see how close you were. (SSM4a)
- 3 *Fill a pot.*

Reinforcing activities that some children might need

- 1 *Fill a litre.*
- 2 Use the same activity as described above, but expecting the children to estimate different amounts of liquid. (SSM4a)
- 3 *Sponges.*

Activities that some children might be ready to move on to

- 1 Extend the game by allowing children a second chance, by adjusting their amount of liquid by adding or removing liquid. (SSM4a)
- 2 *200 grams of plasticine.*

Similar activities for other measures

LENGTH

- The children will need a long piece of string each. Ask them to tie a knot at the place which they think is 50 centimetres from one end. The person who is closest wins the round. Try different lengths for each round. (SSM4a,b)
- *Metre mouse*
- *How high?*

AREA

- *Make a square metre*

MASS

- The children will need access to a selection of objects of different weights. Ask them to make a collection of objects which together they think will weigh 500 grams. Let them check. The person who is closest wins the round. Try different weights for each round. (SSM4a,b)

- Weigh yourself
- Popcorn
- How many stones?

TIME

- Ask a group of children to stand. Let one child use a timer, or watch the clock, and say 'Go' as they start to time one minute. The rest of the group should sit when they think one minute has passed. The person who is closest wins the round. Try different lengths of time for each round, e.g. thirty seconds, fifteen seconds, one-and-a-half minutes, etc. (SSM4a,b)

ANGLE

- The children will need to use paper circles for this game. Ask them to cut out a slice of the circle which they think has an angle of 60° . The person who is closest wins the round. Try different angles for each round. (SSM3c)

ACTIVITY 9 **FILL A LITRE**

LEARNING OBJECTIVES

- 1 Choosing appropriate units of capacity and making sensible estimates with them in everyday situations.
- 2 Extending understanding of the relationship between units. Converting one metric unit to another.
- 3 Choosing and using appropriate measuring instruments.
- 4 Interpreting numbers and reading scales to an increasing level of accuracy.
- 5 Developing mathematical strategies and looking for ways to overcome difficulties.

What you will need

The children will need:

- a container which holds 1 litre;
- a collection of pots which will hold a range of amounts of liquid.