



Story: The Snail and the Whale **Author:** Julia Donaldson **Illustrator:** Axel Scheffler

Teacher: Davinder Mankoo

Setting of the class / school: A mixed Years 4/5/6 class in a special needs school in Cambridge (UK)

Age group: 9-11 year olds

Number of children in the class: 11

Learning intention: To compare measurements using units of non-standard and standard

measurement

 $\textbf{Key mathematical vocabularies:} \ measure, \ compare, \ long, \ short, \ length, \ non-standard \ and \ standard$

units of measurement

Resources needed: non-standard units of measurement (e.g. lolly sticks, Unifix cubes, bead strings,

pencils), toy water animals, metre sticks, trundle wheel, masking tape

Synopsis by the publisher:

One little snail longs to see the world and hitches a lift on the tail of an enormous whale. Together they go on an amazing journey, past icebergs and volcanoes, sharks and penguins, and the little snail feels so small in the vastness of the world. But when disaster strikes and the whale is beached in a bay, it's the tiny snail's big plan that saves the day.

Starter / Teaching input (15 minutes):

I started the lesson by reading the story *The Snail and the Whale* to the class, and then asked the children to get into groups of three to find a real snail in the school playground. I then gave the children a toy humpback whale to recreate the image of the snail on the whale (see Figure 1) as I wanted the children to see the scale of the whale in relation to the snail. Despite this not being to scale, I found it useful to help children with special needs visualise the two animals together.

Main activity (30 minutes):

Children were then asked to use non-standard units of measurement (e.g. hand spans, Unifix cubes, bead strings, lolly sticks, pencils, etc.) to measure how long or short a range of toy animals were so that a simple comparison of lengths could be observed. To foster children's understanding of longer lengths, I gave the children metre sticks and asked them to first estimate how long different furniture items and spaces around the school are (e.g. tables, corridor windows, etc.) and to then measure them to the nearest metre using the metre sticks.

The next step was to introduce the children to the fact that the average length of a humpback whale is 16 metres. Children were given a trundle wheel and experienced how to use it for measuring longer lengths. With the help of masking tape, the children could roll their trundle wheel in a straight line to begin with (see Figure 2). I asked the children questions like, "What is the length of the classroom?" and "What is the length of the blue corridor?". Eventually, I asked the children in pairs to use a trundle wheel to show the length of the humpback whale at 16 metres. They were given a masking tape to show the length (see Figure 3). Children marked out the length of the humpback whale and lay on the ground alongside the masking tape to count how many of them made up the length of the whale. (The masking tape became a line of curiosity for other adults and children, especially when the word 'whale' was labeled above the line!)

Plenary (15 minutes):

We discussed why measuring lengths is important and children replied "... because we know how long things are". To consolidate their learning, I asked the children to measure the length and the width of the classroom using a trundle wheel. (They did a similar activity earlier in the lesson but using the metre stick). Then, we drew the outline of the classroom on a large sheet of sugar paper and children wrote down the measurement rounding up to the nearest 10cm. Children were so taken by the trundle wheel and in pairs went around the different areas of the school to measure the length of corridors, the hall, the gym and the main school playground. This learning opportunity gave them an idea of how long 1 metre is and how long rooms and spaces can be. Subsequently, when I showed them a metre stick, they knew instantly and shouted out aloud, "1 metre!".



Reflection:

On reflection, the story became a vehicle to meaningfully teach measurement of length, using non-standard and standard units of measurement. If I were to do this lesson again, I would also give children an opportunity to choose and use non-standard and standard units of measurement of their own choice. The next step of this lesson (to be implemented in the following lesson) is to record their measurements and to find out the height of the humpback whale so we can mark out how tall it would be in relation to ourselves.

Figures:



Figure 1: Using a real snail and a toy whale.



Figure 2: Measuring length in metres in the classroom using trundle wheel.



Figure 3: Marking 16 metre for the humpback whale using trundle wheel and masking tape.