



Willow Dene School Scheme of Work

MATHS: Length

About this Scheme of Work: This unit explores Length. Children will be working on developing perception skills, exploring objects of different lengths and sizes in lots of different contexts, before making comparisons between objects of different lengths and starting to measure them using non standard and standard units.

Measurement, in its simplest form, is about making comparisons. It is a key life skill, as it relates to activities such as comparing sizes, finding clothes that fit, estimating how long something will take, etc. In order to measure, a range of skills are required, including:

- *Using numbers*
- *Estimating or guessing*
- *Choosing the units of measurement needed in a certain situation*
- *Being reasonably accurate in measuring*
- *Understanding numeric processes, such as adding and subtracting*
- *Making decisions on measurements taken*
- *Using measuring tools, such as tapes measure, clock, watch, scales*

Measurement is therefore a very difficult concept to grasp. For children at very early stages of development, measurement is about developing sensory experiences related to measurement concepts (such as long and short) and perception skills that give them a better understanding of their world and their own activities.

- Flo Lonahorn (paraphrased)

VOCABULARY:

Own names, yes, no, more, finished, like, don't like, stop, go, ready

GENERAL

- Words related to terms for measuring, such as: measure, size, compare, guess, estimate, about, roughly, enough, not enough, too much, too few, too little, too many, nearly, close to, about the same as, just over, just under

LENGTH

- Words to describe length and size, such as: big, little, length, width, height, depth
- Words related to comparative terms, such as: long / short, longer / shorter, longest / shortest, tall, taller, tallest, narrow / wide, high / low, higher / lower, highest / lowest, deep / shallow, deeper / shallower, deepest / shallowest, thick / thin / thicker / thinner, thickest / thinnest
- Words related to distances, such as: close, near, far, further, furthest, distance between / apart, distance to / from
- Words related to units of measurement, such as: metre (m), centimetre (cm), kilometre (km), mile, millimetre (mm)
- Words related to the equipment of measuring length, such as: ruler, metre stick, tape measure

RESOURCES:

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| <ul style="list-style-type: none">• Large rubber bands, lycra• Noisy balls• Soft play bricks, wooden bricks, empty cardboard boxes, etc.• Strips of tissue, cellophane, space blanket, etc. | <ul style="list-style-type: none">• Switch operated cars / animals• Party popper, streamers• Dressing up and dolls clothes of various sizes• Reclaimed materials (boxes, tubes, pots etc. of various sizes) | <ul style="list-style-type: none">• Saucepans, pots or jars of various sizes• Wooden blocks and construction kits• Different sized pairs of shoes• Beads and threading string• Train tracks or road ways | <ul style="list-style-type: none">• Play dough, clay and plasticine• Paint and brushes of various widths• Ingredients for making sandwiches and biscuits• Rulers / metre sticks• Classroom objects of different lengths |
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LEARNING OBJECTIVES	POSSIBLE TEACHING ACTIVITIES
<ul style="list-style-type: none"> • Show recognition of the operation of direct comparison using big / small • Compare the size of two objects where there is a marked difference • Find big and small objects on request • Compare the overall size of objects where the difference is not great • Find long and short objects on request • Compare the length of two objects where the difference is not great. Indicate which is longer / shorter • Use the vocabulary long / short by saying, signing or indicating a symbol 	<ul style="list-style-type: none"> • Problem solving activities related to size, such as choose an appropriate sized tablecloth to put on the table / find a cloth to hide this toy / find a sheet of paper large enough to wrap up a box • Fit lids to various sizes of saucepans / jars / pots • Put all of the large animals in one field and the small ones in another • Dressing up: find appropriate sized clothes for teddy and for themselves, or for dressing dolls of various sizes • Find the “big” and “small” object from pairs (e.g. Can you find the big ball? Can you find the small plate? Can you find the big spoon? Can you find the small chair? etc.) • Can you make a model of a car that is bigger than this toy car? Can you make a model of a home that is smaller than your home? Who might live there? • Shoe sort – have a variety of shoes: baby, child, women’s and men’s. Can you pair the shoes? How can you tell which go together? Who would each pair fit? • Find the “long” and “short” object from pairs (e.g. Which pencil is the long one? Which ribbon is the short one? Which tube is the long one? etc.) • Make tall and short towers with construction toys. Who has made the tallest / shortest? Order the towers according to size. • Every piece model – supply various pieces of Duplo / Lego. Ask the children to make a model using all of these pieces. Can they describe their model using appropriate vocabulary? • Put ribbons / pencils / scarves in order of length • Make a long / fat / wide worm with play dough. Can you make one that is longer / shorter / wider than this one? Make snakes out of clay and paint and display them • Making necklaces with beads – can you make one for Dolly and one for your friend? Which one needs to be longer? • Painting long / short / wide lines / snakes. Can you paint one that is longer / shorter / wider than this one? • Car races – who can make their car go a long way? Who can make their car go the furthest? Whose went the shortest distance? • Train track race. Use a kitchen or sand timer and challenge two or three students to make the longest track they can before the timer finishes. Whose is longest? Whose is shortest? How can we tell? Try timing building a tower with bricks – whose is the tallest / shortest? • Make a train track as long as this...table / bench / cupboard / room • Draw long or short lines in art packages on the computer using a touch screen or tracker ball

<ul style="list-style-type: none"> • Compare directly two lengths and indicate 'the long one' and 'the short one' and describe it as such by saying, signing or indicating a symbol • Use long(er) / short(er) / tall to describe direct comparison of lengths 	<ul style="list-style-type: none"> • Whispering tubes – supply cardboard tubes and tape. What is the longest tube you can make and still hear your friend whisper through? • Russian Boxes – show the students Russian dolls / stacking cubes and ask them to make nesting boxes from reclaimed materials • Paper Snakes – tear a snake from this newspaper. Can you tear a longer one? • Monsters – can you make tall wide monster from playdough? Can you make a home from boxes which is big enough for your monster to fit inside? • Spaceships – supply two (or more) pots of single colour Multilink or Unifix, one with several cubes, the other with a few. Which pot would you choose to make a long spaceship? • Use a height chart or sugar paper taped to the wall to compare the heights of children in class. Draw around children on sugar paper, cut out and decorate. Put the children in order of height (exercise some sensitivity if anyone is particularly aware of their height) • Long jump – Stand on a start line and jump as far as you can. Mark where you land with tape or chalk. Who can jump the furthest? • Longer than a straw – give each child a straw and ask them to find things that are longer than a straw in the classroom. Repeat finding things that are shorter than the straw. Record the things that have been found by drawing or photographing them • Make sandwiches by cutting bread into thick and thin slices. Put lots of filling in the thick bread and less in the thin bread. Compare the thickness of the finished sandwiches • Make biscuits from dough. Make thick and thin biscuits by rolling out the dough different amounts. Compare the finished biscuits and ask children to choose a “thick” biscuit or a “thin” biscuit • Can you make a tower the same height as this cardboard tube? Can you make a tower that is shorter than this book?
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