Measure Prior Assessment Question 6 and 7

Objective: I can solve problems involving different measurements.

NC: M 1: solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.

Teacher Input Ideas:

6) Tom, Tia and Nevaeh run a total of 4500m.

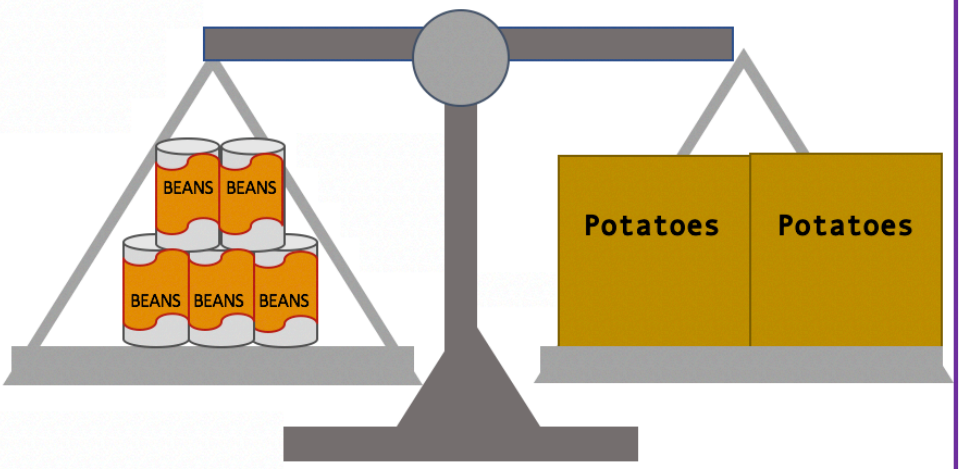
Tom runs 1.2km

Tia runs 2.75km

How far does Nevaeh run?

km

7) Look at the image below.



If one pack of potatoes weigh 1 kilogram, how many grams does a tin of beans weigh?

g

Discuss the problems presented in the prior learning assessment and provide opportunity for the children to discuss what information they used and what they needed to know about measure to help them. How did they approach the problems. What information and strategies did they use?

Model:

- How to find a starting point.
- Picking out what is being asked in the question
- Strategies and approaches that can be used.
- Picking out the key information.
- Applying use of other knowledge (such as 1.2kg is 1the same as 200g)

Practice Activities

Mastery 1: most suited for children who will benefit from using their knowledge of measure to investigate.

Practical: The children are presented with 2 investigative questions. Provide the children with talk and planning time as to how they are going to find the answer.

Key questions:

- What are you being asked to find out?
- Where will you start? What equipment will you need? Why?
- What will you do first? What information/facts do you know? How will this help you?
- What strategies are your friends using? How can this help you?
- Can you find another way to find the answer?

Provide plenty of opportunities for children to share their ideas/strategies and to review their process. There will be different approaches the children will take so encourage the children to reflect on their own and other approaches and make improvements if they need to.

Children may use a variety of strategies:

- Some children may make want to make a cube that uses 1000 cubes and weigh this.
- Some children may suggest that the cube does not need to be made as they know that 1000 cubes will be used and may suggest using 1000 cubes.
- Some children may suggest that if 1000 cubes are used and will weigh 1000g, then one cube should weigh 1 g and use this as a starting point, they may then see if 10 cubes weigh 10 g, 100 cubes weigh 100g etc. to help them to prove the answer.

<u>Mastery 2:</u> Most suited for children who made errors in Question 6 of the Prior Learning Assessment and will benefit from exploring word problems involving measure.

For the activity the children presented with a variety of word problems where they are required to convert different units of measure to solve the problems.

Encourage the children to demonstrate the following skills from the input:

- Find a starting point.
- Pick out what is being asked in the question
- Suggest strategies, methods and approaches that can be used.
- Pick out the key information.
- Apply use of other knowledge.

<u>Mastery 3:</u> Most suited for children who made errors in Question 7 of the Prior Learning Assessment.

The children are presented with visual problems in the third mastery task. The children are required to apply their knowledge of reading scales for the first question. The children should identify that 2 cans of soup = 650 ml. The children should then use this knowledge to work that one can will equal 325ml. They are asked to find the capacity of 5 cans, therefore they will need to calculate 325 x 5 .

For the second problem the children need to use their knowledge of converting units to understand that 1.2kg is the same as 1200g. They are also provided with the information that a large bag of cocoa weighs double the amount of a small bag .

Encourage the children to pick out the key vocabulary in the question and suggest that they can halve 1200g to work out that the bag of cocoa is 600g. So that means that 3 boxes of chocolates must weigh 600g to make the scales balance. So to work out one box of chocolates, 600g needs divide by 3. If children are finding this difficult you could use balance scales and weights to help the children to work this out with practical equipment.

Answers:

Mastery 1: children to present their ideas and prove if they are right or wrong to others. As a class draw a conclusion using ideas from each group.

Mastery 2:

1) 0.855L
2) 5 parcels
3) William because he will walk 4.5km in an hour (3lots of 20 mins is 1hr so 3 x 1500m = 4.5km)
   Sohil will only walk 4km (2 lots of 30 mins = 1hr 2 x 2km = 4km)

Mastery 3:

1) 1625ml
2) 200g

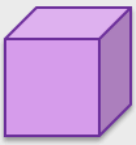
BRICKWORK Mathematics

Mastery 1

Investigate

Does a cube with the volume of 1000cm3 weigh the same as 1kg?

My plan:



Does a cube with the volume of 1000cm3 hold 1 litre of water?

My plan:

BRICKWORK Mathematics

Mastery 2

Word problems and reasoning

1) Class 3B are making smoothies in groups of 6 . Each group needs 125ml of milk per child and 35ml per 2 children.

Sara's group put all liquid ingredients into the jug for the whole group.

How many litres of liquid are there in the jug?

L

2) Taya has some parcels she wants to send to her friends. She **can** send a total of 7.5 kg. They are all different weights. The lightest parcel weighs 1300g and the heaviest is 2kg.

Find the most number of parcels she **can** send.

parcels

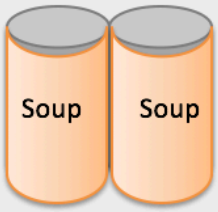
3) It takes William 20 minutes to walk 1500m. It takes Sohil 30 minutes to walk 2km. Who will travel the furthest after an hour?

Explain why:

BRICKWORK Mathematics

Mastery 3

1) Look at the image below to work out the answer:



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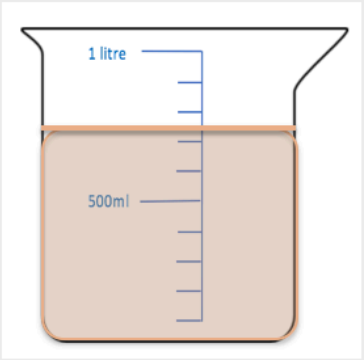

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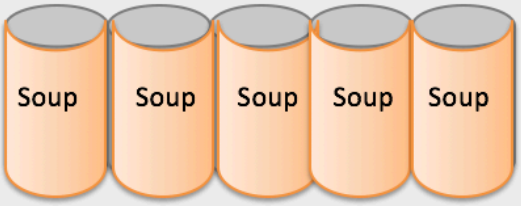

= _____ ml

2) A large bag of cocoa beans weighs 1.2kg. This is twice as heavy as a small bag of cocoa.

How much does one box of chocolates weigh?

_____ grams