BRONZE

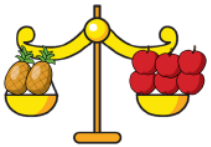
School name: **MATHS PLANNING YEAR A**

Teacher: **Class:** **Year:** **Term: Spring 2** **Week Commencing: Week 7**

Topic	NC Links: Pupils should be taught to:

Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	Activity	Objectives	Teaching	Activities	Key Vocabulary	Activity	
Mon	**L.O. Recall 12x table** **4896 ÷ 12 =** **207 x 12 =** **9004 - 2448 =** **7000 - 3991 =** **784cm = ?m**	TMM **L.O. To fill in the missing numbers**	**L.O. To Compare Mass** **Must:** use inequality symbols **Should:** Identify, explain and correct errors **Could:** Match mass to statement **Success Criteria**	Children build on Year 2 knowledge and use 'lighter' and 'heavier' to compare mass. They use their understanding that kilograms are used for heavier objects and will use this to help them compare mass. For example 500 g is less than 500 kg. Children compare mixed measurements using the inequality symbols. For example, 1 kg and 500 g <2 kg.	Use inequality symbols to compare mass Identify, explain and correct errors Match each mass to the correct statement **SEN – L.O.**	Lighter Heavier Mass Kg Grams Inequality symbols	Which item is heavier or lighter? How do you know? Using the symbols <, >or =, what can you tell me about each of the scales? If I added an extra item, what would happen?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Complete the sentences.

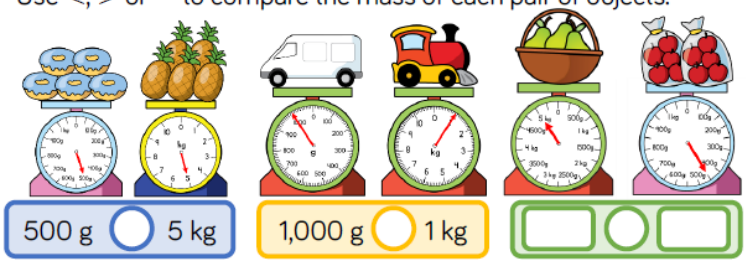


☐ pineapples are equal to ☐ apples.

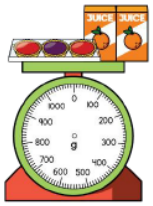
1 pineapple is equal to ☐ apples.

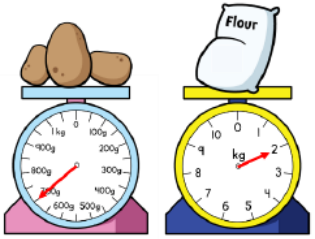
Can you write sentences using 'heavier' or 'lighter' about the image?

Use <, > or = to compare the mass of each pair of objects.



A pack of tarts weighs 220 g.
Two cartons of orange juice weigh 140 g.
Draw an arrow to show the weight of the 3 items.





Three children are weighing potatoes and flour.

Whitney: The potatoes weigh more because the arrow is further than the arrow on the flour scale.

Amir: The flour weighs less because 2 is less than 700

Alex: The flour weighs more because 2 kg is more than 700 g.

Who do you agree with?
Explain your answer.

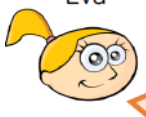
Here are three masses.

20 kg and 600 g | 20 kg | 18 kg and 500 g

Match each mass to the correct child.

Dora: My mass weighs more than $\frac{1}{2}$ of 40 kg.

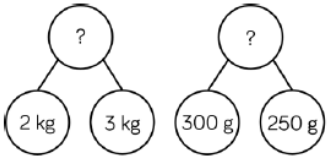
Mo: My mass is more than Eva's mass.



Eva: My mass weighs more than 18 kg but less than 20 kg.

Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	Activity	Objectives	Teaching	Activities	Key Vocabulary	Activity	
Tues	**<u>L.O. To recall 12x table</u>** **1298x12=** **651÷12=** **5793+295=** **2000-1845=** **95cm = ?mm**	**<u>TMM</u>** **<u>L.O. To identify multiples of 12</u>**	**<u>L.O. To add and subtract mass</u>** **<u>Must:</u>** Use part/whole models to add mass **<u>Should:</u>** Use pat/whole model to subtract mass **<u>Could:</u>** solve problems **<u>Success Criteria</u>**	Children add and subtract mass. They use a range of mental and written methods, choosing the most efficient one for each question. Children may use concrete resources to represent kilograms and grams. Children could also use bar models to support them to represent calculations.	Use part/whole models to add and subtract mass Solve problems **SEN – <u>L.O.</u>**	Add Subtract Part/whole Mass Grams kg	How many grams are in a kilogram? How could I represent this using concrete resources? What do you know about kilograms or grams that can help you solve this question? How can you represent this problem with a bar model?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Amir uses a part-whole model to add 2 kg and 300 g to 3 kg and 250 g. He partitions each mass into kilograms and grams and calculates them separately.



Use Amir's method to calculate:

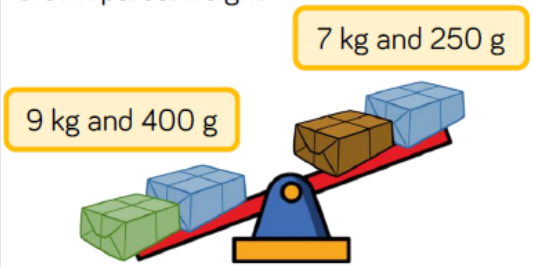
3 kg and 450 g + 4 kg and 200 g
4 kg and 105 g + 2 kg and 300 g
4 kg and 400 g − 2 kg and 100 g
8 kg and 600 g − 1 kg and 550 g

The jar of cookies has a mass of 800 g.
The empty jar has a mass of 350 g.
How much do the cookies weigh?

Choose an appropriate approach to solve:

- 7 kg − ☐ = $5\frac{1}{2}$ kg
- 3 kg and 200 g + ☐ = $4\frac{1}{2}$ kg
- 4 kg + ☐ − $1\frac{1}{2}$ kg = 3 kg

The green parcel weighs 5 kg.
Can you work out what the blue and brown parcel weigh?



How much would the green and brown parcel weigh altogether?

Dora buys two peaches and three pears.

One peach weighs 75 g.

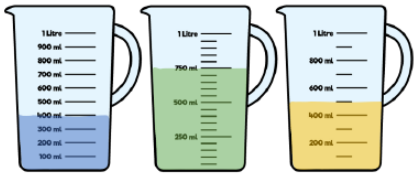
Three pears weigh the same as two peaches.

How much does one pear weigh?

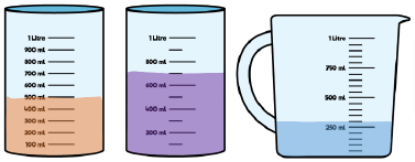
Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	Activity	Objectives	Teaching	Activities	Key Vocabulary	Activity	
Wed	**L.O. To recall the 12x table** **332x12=** **541÷12=** **5078 +1236=** **3000-1245=** **8m = ?cm**	TMM L.O. To fill in the missing gaps	**L.O. To Measure capacity** **Must:** know the difference between capacity and volume. **Should:** Estimate capacity accurately **Could:** Solve problems **Success Criteria**	Use litres, millilitres and standard scales to explore capacity. In this step, children focus on the capacity in either litres or millilitres and not as a mixed measurement, for example 5 l and 500 ml before moving on to mixed measures. Children continue to use place value skills to explore scales. Children recognise that capacity is the amount of liquid a container can hold, volume is how much liquid is in the container.	Exercise that shows difference between capacity and volume. Use containers to estimate capacity, then measure. Use clues to match statements Solve problems **SEN – L.O.**	Volume Capacity Estimate Litres Millilitres	What does capacity mean? What does volume mean? What do we measure capacity and volume in? How many millilitres are in 1 litre? If we know this, what else do?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Use the sentence stem to describe the capacity and volume of each container.

The volume of liquid is ____.
The capacity of the container is _____.



Identify what the scale is going up in to find out the volume in each container. Use the stem sentence.

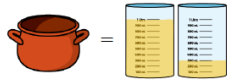


The increments are in ____.
The volume is _____.

Use a variety of containers.
Can you estimate how much liquid they hold?
Check your estimates using measuring jugs and cylinders to see how accurate you were.

Use equipment and liquid to count in increments of 100 ml. Discuss what happens when you reach 1,000 ml. Explore other connections linked to this. For example, 2 l = 2,000 ml.

Complete the missing information.



The pot's capacity is _____ l and _____ ml

The barrel's capacity is _____ l and _____ ml

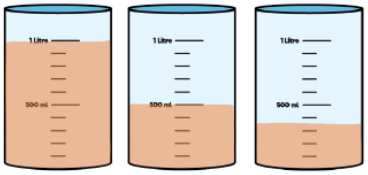
The capacity of the full fish bowl is 8 l and 750 ml.
Hannah pours 5 l of water out of the bowl.
Show how much water is left in the measuring jugs.

Use the clues to work out who has which container.

Annie: I have exactly half a litre

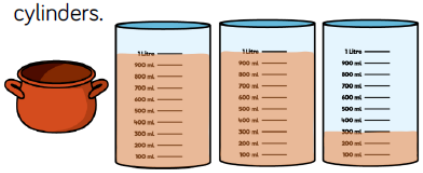
Amir: I have 1,000 ml

Eva: I have more than 300 ml but less than 400 ml



A B C

Amir and Alex work out the capacity of the pot by filling it with water, then pouring the water into the measuring cylinders.



Amir: The capacity of the pot is 302 ml

Alex: The capacity of the pot is 2 l and 300 ml.

Who do you agree with?
Explain why.

True or False?

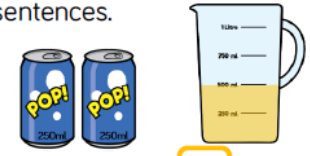
The tallest container has the largest capacity.

Use containers to decide whether the statement is true or false.

Record the capacity of the different containers in a table.

Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	Activity	Objectives	Teaching	Activities	Key Vocabulary	Activity	
Thurs	**<u>L.O. To recall 12x table</u>** **9010-547=** **3998+2779=** **174x12=** **963÷12=** **3.5m = ?cm**	**<u>TMM</u>** **<u>L.O. To work out the values of each shape</u>**	**<u>L.O. To Compare Capacity</u>** **<u>Must:</u>** use inequality symbols **<u>Should:</u>** solve problems **<u>Success Criteria</u>**	Children continue to build on Year 2 and use 'full' and 'empty' to compare capacity. They use their understanding that litres are used for larger containers and will use this to help them compare capacity. For example, 500 ml is less than 5 l. Children also compare actual numerical measures, including mixed measurements using the inequality symbols. For example, 1 l and 500 ml <2 l.	Use inequality symbols to make statements true. Solve problems **SEN – <u>L.O.</u>**	Inequality symbols Millilitres Litres Full Empty	Which container is the most full? Which container is the least full? Which has the most liquid in it? What does the liquid measure? Which has the least liquid in it? What does the liquid measure?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Complete the sentences.



☐ cans of pop are equal to ☐ jug of orange juice.

1 can of pop is equal to ☐ jug of orange juice.

Use <, > or = to compare the volume of liquid in each pair of containers.

800 ml ◯ 1 l

__l and __ml ◯ 750 ml

☐ ◯ ☐

Whitney has 3 bottles of water with 500 ml in each.
Sophie has one bottle of water with 1 and a half litres in it.
Who has the most water?
Can you prove it?

Rosie has a litre bottle of water.

She pours a drink for herself and two friends. Their glasses can hold up to 250 ml.

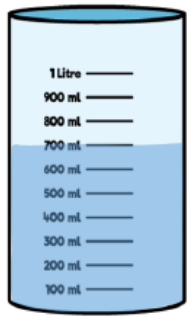
Teddy has more than Amir.
Rosie has the most.

How much could each child have in their glass?

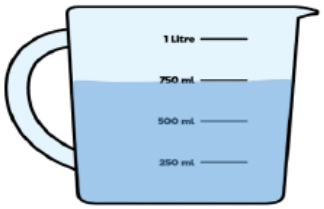
How much would be left in the bottle?

Eva

I know container 1 has more than container 2 in it because the water goes further up the side.



Container 1

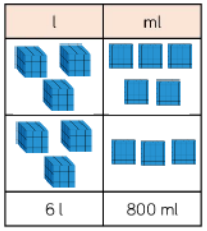


Container 2

Is Eva correct? Explain your answer.

Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	Activity	Objectives	Teaching	Activities	Key Vocabulary	Activity	
Fri	**<u>L.O. To recall 12x table</u>** **156x12=** **491÷12=** **2679+3989=** **5105-789=** **15cm=?mm**	**<u>TMM</u>** **<u>L.O. To fill in a web</u>**	**<u>L.O. To add and subtract capacity.</u>** **<u>Must:</u>** Add and subtract capacity **<u>Could:</u>** Solve problems **<u>Success Criteria</u>**	Children add and subtract volumes and capacities. They can apply their understanding of different methods such as column addition/subtraction, finding the difference etc. Children should choose the correct method depending on the context of the problem. They continue to use mixed measures. Children may use concrete resources to represent litres and millilitres. Children could also use bar models to represent calculations.	Use Base 10 and place value chart to add and subtract capacity. Use column method to add and subtract capacity Solve problems **SEN – <u>L.O.</u>**	Add Subtract Litres Millilitres	How many litres are there in total? How many millilitres are there in total? What methods can we use to add volumes or capacities? What methods can we use to subtract volumes or capacities?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Teddy uses Base Ten and a place value chart to add 3 l and 500 ml and 3 l and 300 ml



Use the same approach to calculate:

- 4 l and 600 ml + 2 l and 100 ml
- 7 l and 320 ml + 1 l and 125 ml
- 3 l and 950 ml – 3 l and 50 ml
- 800 ml – 375 ml

To make Summer Punch for 2 people:

- 300 ml of pineapple juice
- 250 ml of orange juice
- 500 ml of lemonade

- How much liquid is used in total to make Summer Punch for 2 people?
- How much orange juice would be need to make enough for 4 people?
- Would a 1 l bottle of lemonade be enough to make drinks for 6 people?

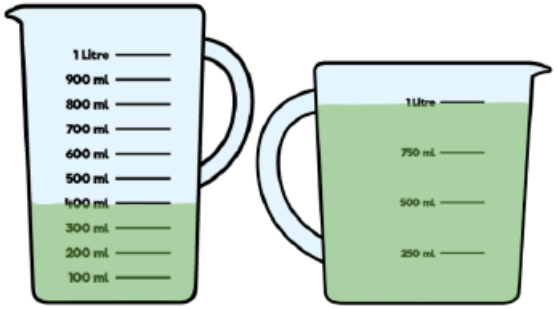
Rosie keeps a record of how much milk she has in her café.
Work out how much milk is used for each order.

Amount of milk to start	Amount of milk used	Amount of milk left
1 l and 430 ml		1 l and 100 ml
1 l and 100 ml		890 ml
890 ml		545 ml

Tommy is pouring drinks using these jugs.
A drink is 125 ml.

Tommy

If I pour three more drinks using jug 2, both jugs will have the same amount of juice in.

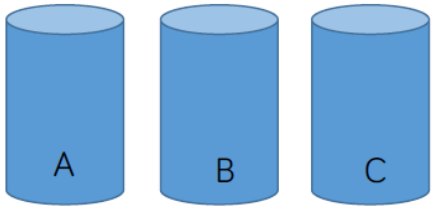


Jug 1 Jug 2

Is Tommy correct?
If not, how much juice will be left in jug 2?

Here are some measuring cylinders.
The total liquid in all three cylinders is 400 ml.

Cylinder A has half of the total amount in it.

Cylinder B has 67 ml less than Cylinder A.

How much liquid does each cylinder contain?