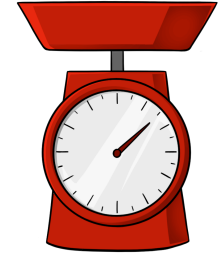# Maths
w/c 29.06.2020

This week you will be learning more about measuring mass and also about how we measure volume. Your lessons are linked to the videos at www.whiterosemaths.com.

You are all amazing mathematicians, so I know that you will be able to do all the work. However, to help you, there are some 'Learn Screens' and key skill activities to look at along the way.

Please note: If the links to the websites mentioned don't work, please type them into your web browser.

We ❤ Maths

We practise and explore.
We have a go.
We make mistakes and learn from them.
We talk about what we are doing.
We think about what we are doing.
We write about what we are doing.
We say 'I can't do that yet'.
We don't waste time.
We celebrate our efforts.
We keep going when it is difficult.

What will you do this week?

Don't forget to start your maths work with the '**Daily Revision**' activities **on pages 4 – 13. This week there are some more games to practise your key skills.**
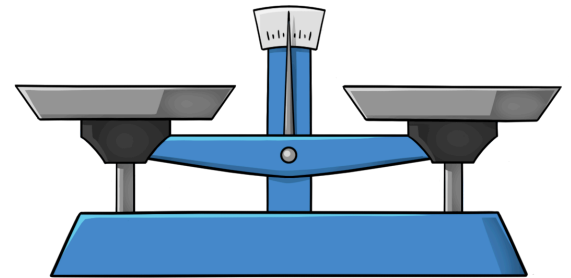
Lesson 1: Measuring mass in grams

Lesson 2: Measuring mass in kilograms

Lesson 3: Comparing volume

Lesson 4 : Measuring in millilitres

Lesson 5: Test your skills

There are some additional activities for you to try for some of the lessons and lots of Learn Screens to help you along the way.

Daily Fluency and Recall Tasks

Challenge:

Choose a number sentence from any times table and write the fact family

e.g.

2 x5= 10

5x 2 = 10

10 ÷2 = 5

10÷5 =2

Try to learn your:

2 times table

5 times table

10 times table

3 x table

Why not try Hit the button at https://www.topmarks.co.uk/maths-game/hit-the-button
You could practise your number bonds, division facts and doubles/halves as well.

It's really important that you practise your times tables every day as they will help you with lots of the maths you will meet in KS2.
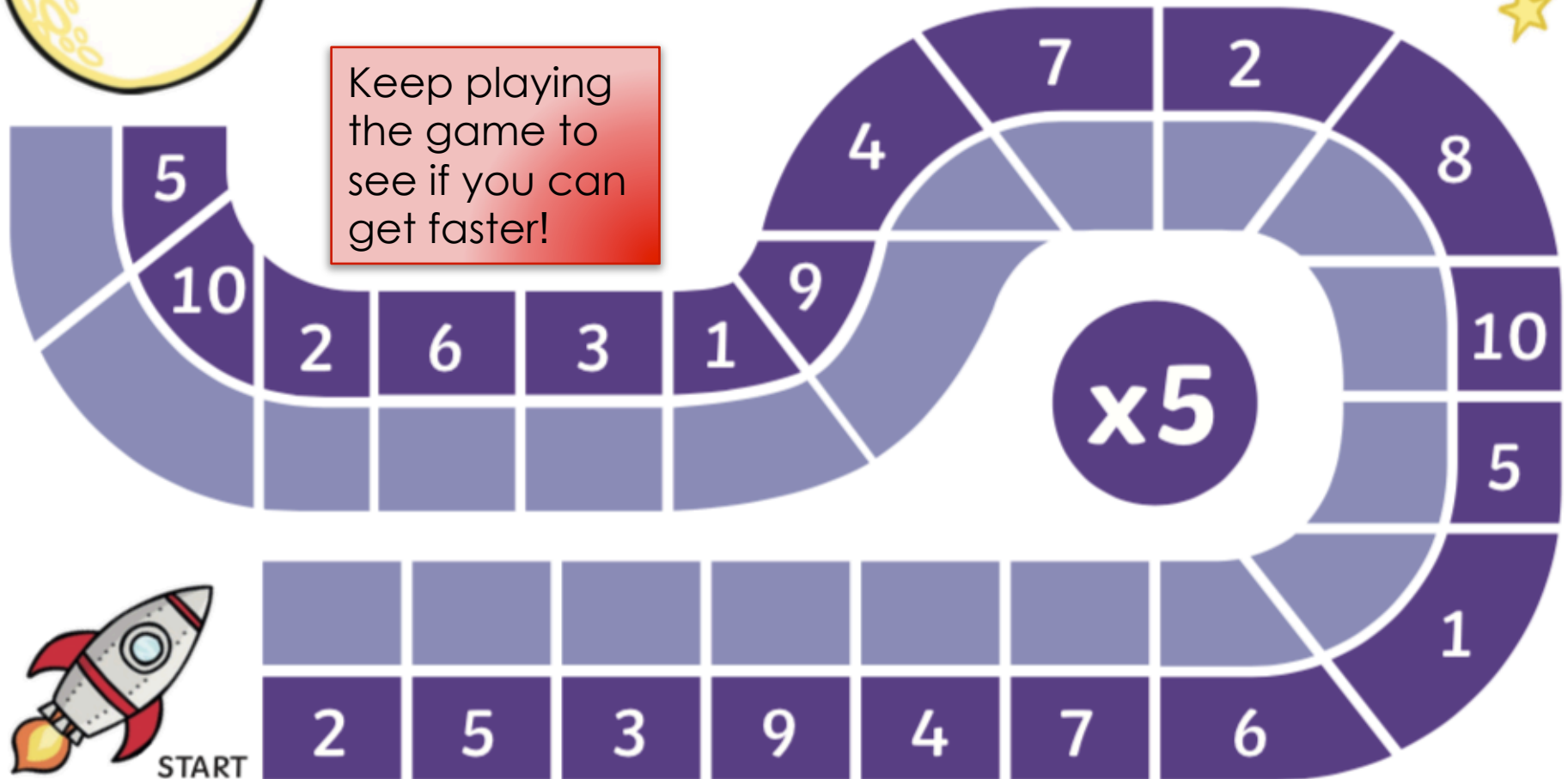
Monday Revision

5 Times Table Space Race

Multiply the numbers on the track.
Write them down as you go around.
Use a timer to see how long it takes you to finish the race!

Keep playing the game to see if you can get faster!

Tuesday Revision

3 Times Table Space Race

Multiply the numbers on the track.
Write them down as you go around.
Use a timer to see how long it takes you to finish the race!

Keep playing the game to see if you can get faster!

x3

4 · 10 · 2 · 6 · 3 · 1 · 5

7 · 9 · 8

4

7 · 5 · 1

6 · 7 · 2 · 4 · 3 · 4 · 2
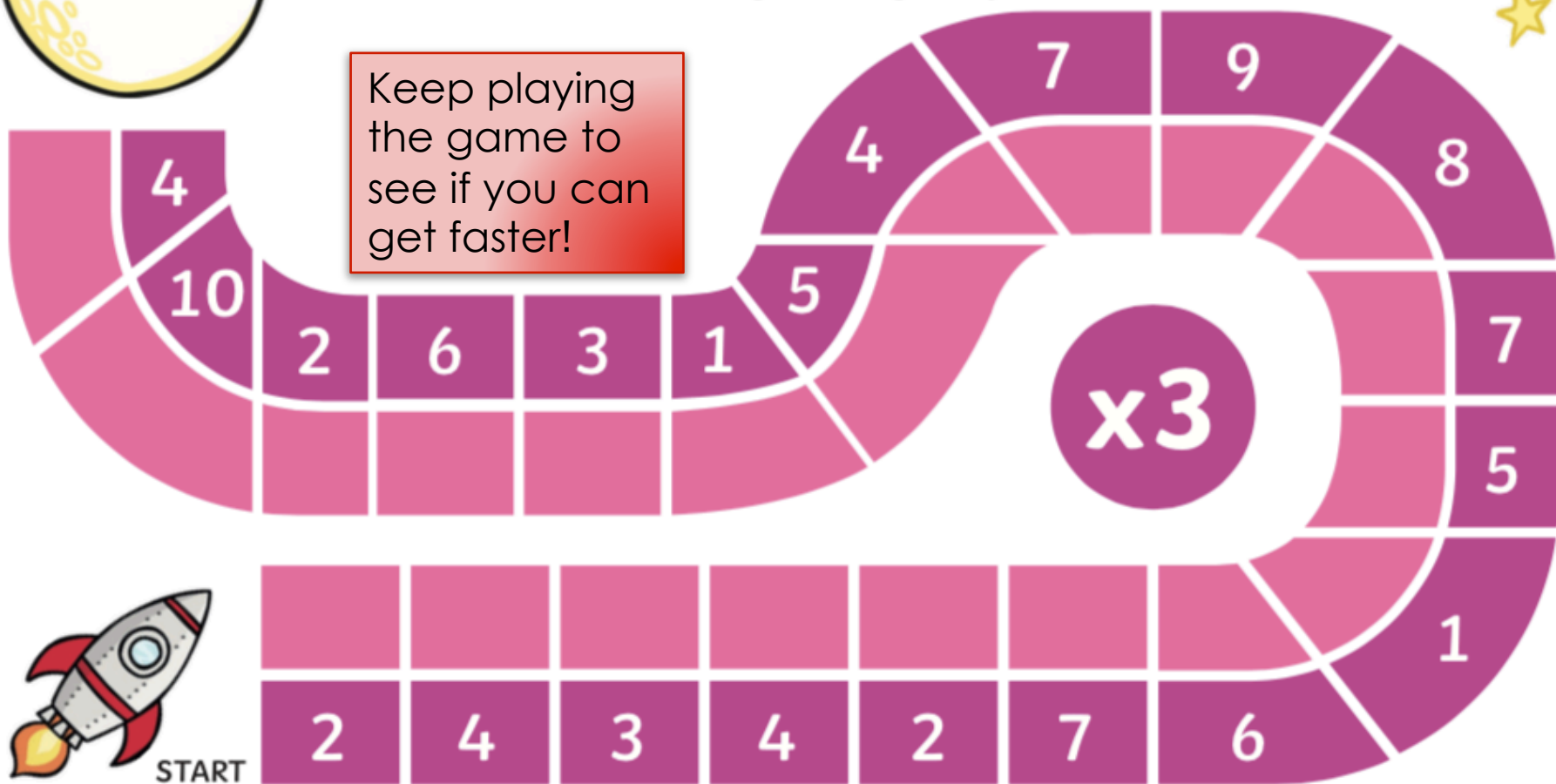
START

The Cautious Caterpillar Multiplication Mosaic

Solve the calculations to reveal the hidden picture.
Each answer has a special colour.

20, 30, 40 = black   5, 10, 15 = red

		10 x 2					5 x 4		
			3 x 10			10 x 4			
	6 x 5			2 x 10	5 x 6			3 x 10	
	5 x 4	8 x 5	1 x 5	5 x 2	3 x 5	5 x 1	4 x 10	2 x 10	
		1 x 10	5 x 8	3 x 5	2 x 5	6 x 5	10 x 1		
10 x 4	5 x 6	3 x 5	2 x 5	10 x 2	3 x 10	1 x 10	1 x 5	8 x 5	5 x 6
5 x 8		5 x 1	8 x 5	5 x 2	5 x 3	4 x 10	5 x 3		2 x 10
		3 x 10	10 x 1	3 x 5	2 x 5	10 x 1	4 x 5		
	10 x 4	5 x 4				10 x 2	6 x 5		

Wednesday Revision

What picture will you make?

Wednesday Answers

		10 x 2					5 x 4		
			3 x 10			10 x 4			
	6 x 5			2 x 10	5 x 6			3 x 10	
	5 x 4	8 x 5	1 x 5	5 x 2	3 x 5	5 x 1	4 x 10	2 x 10	
		1 x 10	5 x 8	3 x 5	2 x 5	6 x 5	10 x 1		
10 x 4	5 x 6	3 x 5	2 x 5	10 x 2	3 x 10	1 x 10	1 x 5	8 x 5	5 x 6
5 x 8		5 x 1	8 x 5	5 x 2	5 x 3	4 x 10	5 x 3		2 x 10
		3 x 10	10 x 1	3 x 5	2 x 5	10 x 1	4 x 5		
	10 x 4	5 x 4					10 x 2	6 x 5	

Were you right?
Did you make a ladybird?

Wednesday Answers

		10 x 2					5 x 4		
			3 x 10			10 x 4			
	6 x 5			2 x 10	5 x 6			3 x 10	
	5 x 4	8 x 5	1 x 5	5 x 2	3 x 5	5 x 1	4 x 10	2 x 10	
		1 x 10	5 x 8	3 x 5	2 x 5	6 x 5	10 x 1		
10 x 4	5 x 6	3 x 5	2 x 5	10 x 2	3 x 10	1 x 10	1 x 5	8 x 5	5 x 6
5 x 8		5 x 1	8 x 5	5 x 2	5 x 3	4 x 10	5 x 3		2 x 10
		3 x 10	10 x 1	3 x 5	2 x 5	10 x 1	4 x 5		
	10 x 4	5 x 4					10 x 2	6 x 5	

YOU CAN DO IT

Thursday Revision

| 4 + 3 =
 5 + 4 = | 15 − 2 =
 38 − 7 = | 2 × 2 =
 6 × 2 = | 20 ÷ 2 =
 8 ÷ 2 = | ½ of 14 =
 ½ of 18 = |

What are the missing numbers?
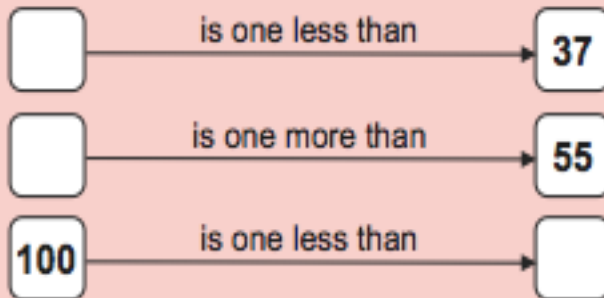
☐ is one less than → 37

☐ is one more than → 55

100 is one less than → ☐

Find the calculations that have the same answer.

11 + 3	16 + 10
21 + 5	34 − 20
25 − 10	56 − 4
32 + 20	12 + 3

Thursday Answers

4 + 3 = 7 5 + 4 = 9	15 − 2 = 1 38 − 7 = 31	2 × 2 = 4 6 × 2 = 12	20 ÷ 2 = 10 8 ÷ 2 = 4	½ of 14 = 7 ½ of 18 = 9

What are the missing numbers?

36 — is one less than → 37

56 — is one more than → 55

100 — is one less than → 101

Find the calculations that have the same answer.

11 + 3   16 + 10

21 + 5   34 − 20

25 − 10   56 − 4

32 + 20   12 + 3
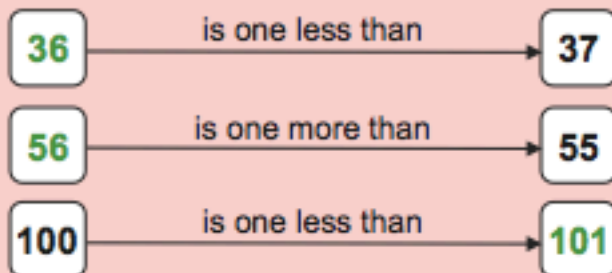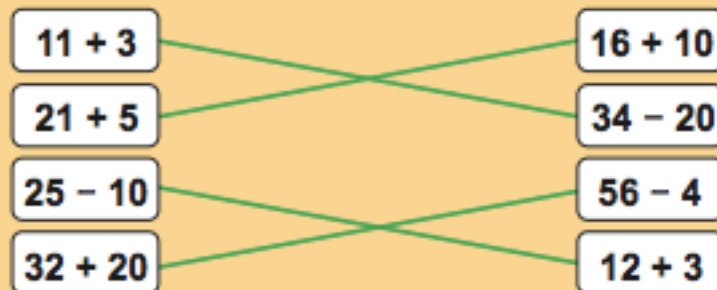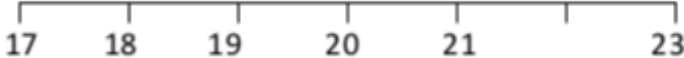
Friday
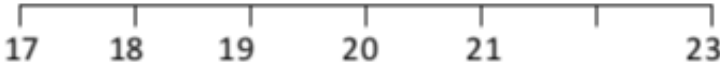
1)	3 + 9	
2)	Write down the next number: 18 19 20 21 22 23 24 ___	
3)	How many sides?	
4)	11 − 5	
5)	Which number is missing from the number line? 17 18 19 20 21 23	
6)	How many fish?	
7)	What number comes **after** 26?	
8)	How much money?	p
9)	I have 10 bananas. I eat 3 of them. How many are left?	
10)	Sally has 5 cakes. She makes 2 more. How many does she have now?	
11)	Draw the next shape in the sequence.	
12)	Which number comes **before** 18?	

These questions are called mental maths questions. That means you can work out the answer quickly in your head. Have a go and see how quickly you can solve these problems.

Friday

Answers

1)	3 + 9	**12**
2)	Write down the next number: 18 19 20 21 22 23 24 ___	**25**
3)	How many sides?	**4**
4)	11 − 5	**6**
5)	Which number is missing from the number line? 17 18 19 20 21 23	**22**
6)	How many fish?	**8**
7)	What number comes **after** 26?	**27**
8)	How much money?	**12p**
9)	I have 10 bananas. I eat 3 of them. How many are left?	**7**
10)	Sally has 5 cakes. She makes 2 more. How many does she have now?	**7**
11)	Draw the next shape in the sequence. △ □ △ □ △ □	△
12)	Which number comes **before** 18?	**17**

This Week

This week we will be learning how to measure and compare mass and volume. Our lessons will be linked to the videos at www.whiterosemaths.com Year 2 Week 10 Lessons 1-4.

Check out the Learn Screens that will help you complete the tasks.

I know you will be amazing and I can't wait to see what you do.

Please note: If the links to the websites mentioned don't work, please type them into your web browser.

Key Vocabulary

When we talk about **weight**, we also use the term '**mass**'.

Measurement Terms

These are the words we use when describing size. We use these terms when comparing animals, people, and things.

Measurement

Length	Height	Capacity	Weight
long longer longest short shorter shortest	tall taller tallest short shorter shortest	holds more holds less	heavy heavier heaviest light lighter lightest
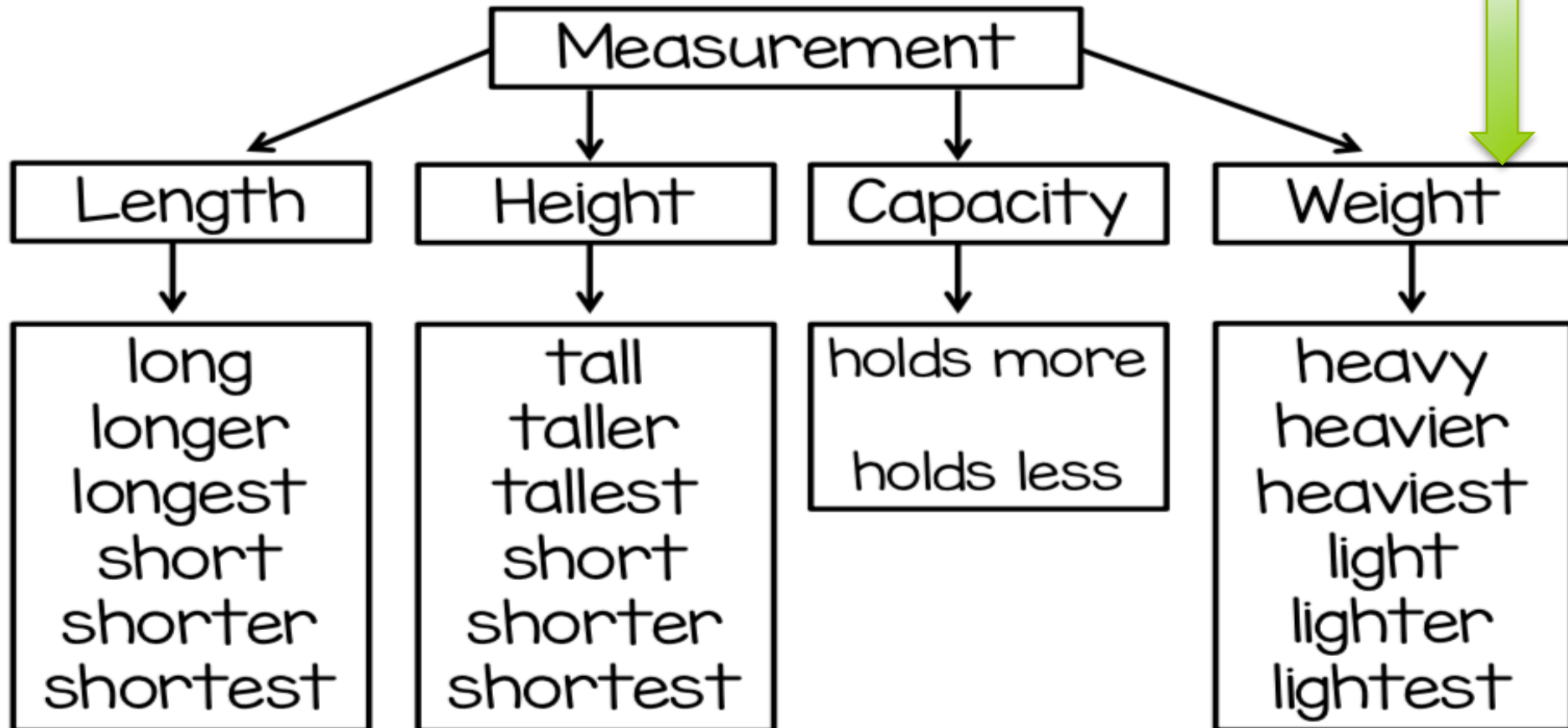
Lesson 1

Measuring mass

This lesson is all about using measuring mass in grams.

Look at the Learn Screens, to remind your self of the units of measure that we use when measuring mass and how to measure in grams on pages 17 to 20. Then complete the practice tasks on pages 21 and 22 before going to White Rose Maths Home Learning Year 2. Click on **Year 2 Summer Term Week 10 lesson 1**. After you've watched the whole video, complete the tasks on pages 24 and 25.

Learn Screen

Units of Mass

Mass or weight is measured in *grams* and *kilograms*.

Grams (g) are small units of mass. We use grams to measure lighter things...

This **bag of crisps** weighs about 30g.

Learn Screen

Units of Mass

Kilograms (kg) are larger units of mass. We use kilograms to measure heavier things…

This **sack of potatoes** weighs about **2 kg**.

Learn Screen

All about mass

Units of Mass

There are **1000g** in **1 kilogram...**
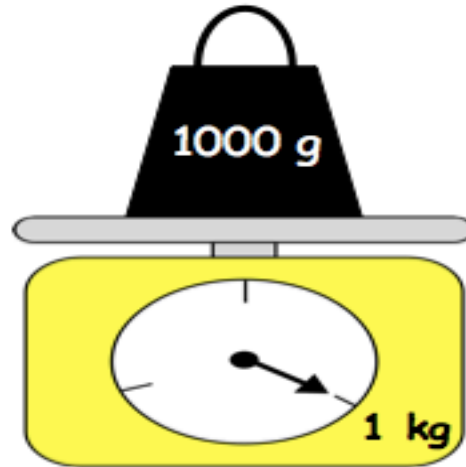
1 kilogram (kg) = 1000 grams (g)

Learn Screen

How to read a scale

We can use scales to help us to accurately measure weight in grams.
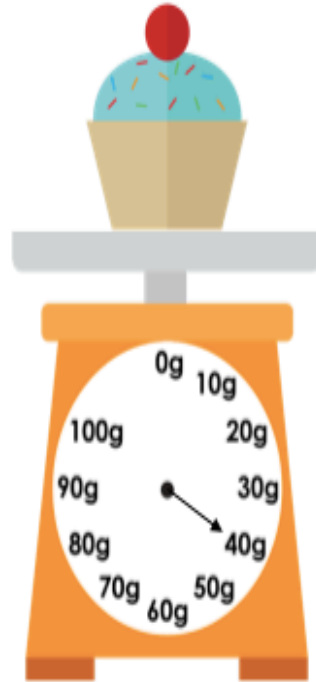
Look carefully at where the arrow is pointing. The arrow tells you how many grams the cake weighs.

The scale is a number line going in a circle. The arrow is pointing to 40. This means the cake weighs 40 grams.

Have a go!

Write the weights of the items using the stem sentence.

The mass of the _____ is _____ grams.
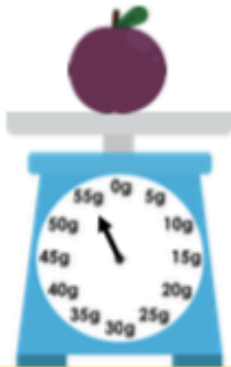
The mass of the _____ is _____ grams.

Add the arrow to the scale to show the mass.
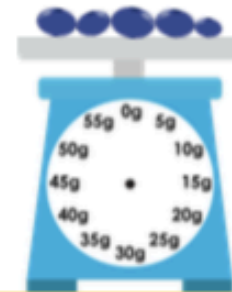
The mass of the blueberries is 30 grams.

The mass of the carrot is 45 grams.

Now try these!

a Mass of a 50p coin:

_____ g

b Mass of a battery:

_____ g

c Mass of a spoon:

_____ g

d Mass of a cube:

_____ g

e Mass of a doughnut:

_____ g

f Mass of a golf ball:

_____ g

g Mass of a lemon:

_____ g

h Mass of a bear:

_____ g

What is the mass of each object?

Answers

a Mass of a 50p coin: 8 g

b Mass of a memory stick: 18 g

c Mass of a fork: 35 g

d Mass of a cube: 20 g

e Mass of scissors: 30 g

f Mass of a egg: 45 g

g Mass of a bear: 80 g

h Mass of a lemon: 90 g

Fluency 1

The mass of the plum is 55 grams.

The mass of the tomato is 15 grams.

Fluency 2
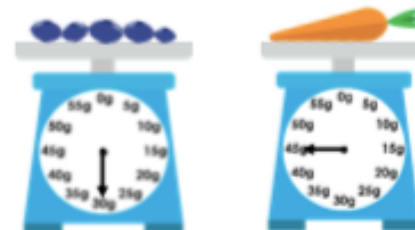
Fluency 3

The mass of the dog is 9 kilograms.

The mass of the bowling ball is 6 kilograms.

Fluency 4

Your Task

Measure mass in grams

1. What is the mass of each object?

a)

The pencil has a mass of ☐ g.

b)

The teddy has a mass of ☐ g.

c)

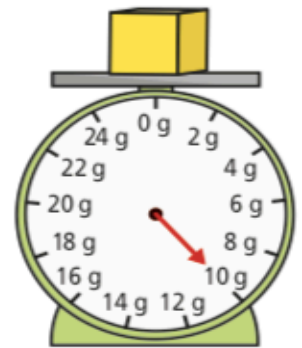The apple has a mass of ☐ g.

2. How many grams does the ruler weigh?

☐ g

3. What is the mass of each 3D shape?

a)   b)

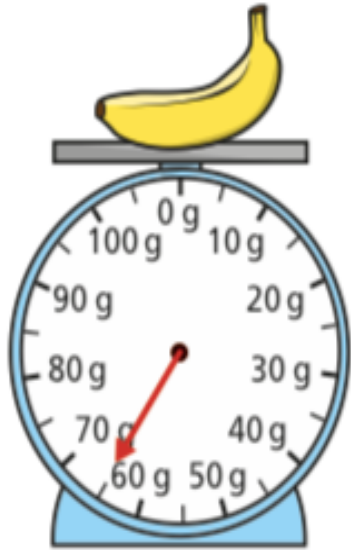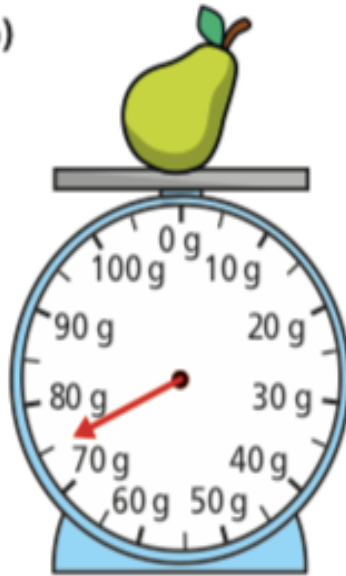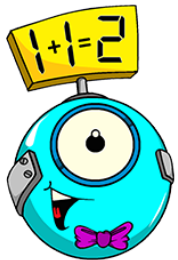☐ g   ☐ g

4 What is the mass of each piece of fruit?

a)

☐ g

b)

☐ g

Which piece of fruit is heavier?

Time for a challenge!

Jane is reading a scale covered in paint.

She says...

If the scale goes up in ones, then the arrow is pointing at 7 kilograms.

Is she correct?

Explain your reasoning!

Answers

Measure mass in grams

1 What is the mass of each object?
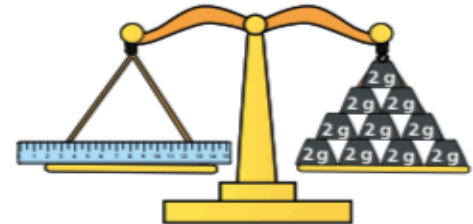
a)

The pencil has a mass of **15** g.

b)

The teddy has a mass of **80** g.

c)

e apple has a mass of **75** g.

2 How many grams does the ruler weigh?

20 g

3 What is the mass of each 3D shape?

a)

18 g

b)

10 g

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Answers

SUPER STAR

4 What is the mass of each piece of fruit?

a)

b)

The pear is the heaviest piece of fruit. It weighs 10 grams more than the apple.

6 5 g
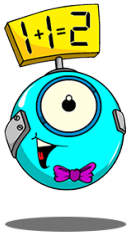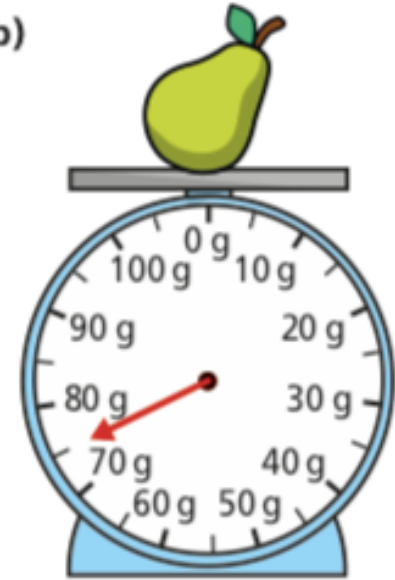
75 g

D – Jane is correct.

A – If the scale is going up in ones, then the arrow is pointing at 7kg.

B – There are 10 intervals on the scale and the arrow is on the 7th. Another way to check is that the arrow is 3 intervals from 10kg.

Lesson 2
All about kilograms

This lesson is all about measuring mass using kilograms

Look at the Learn Screens and complete the task on page 31. Then go to:
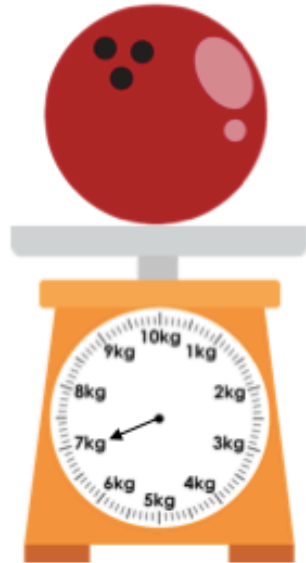[White Rose Maths Home Learning Year 2](#)

Click on **Year 2 Summer Term Week 10 lesson 2.** After you've watched the whole video, complete the tasks on pages 33 and 34. There's also a challenge you might want to try out on page 35 !

Learn Screen

To measure heavier items we weigh in **kilograms**.

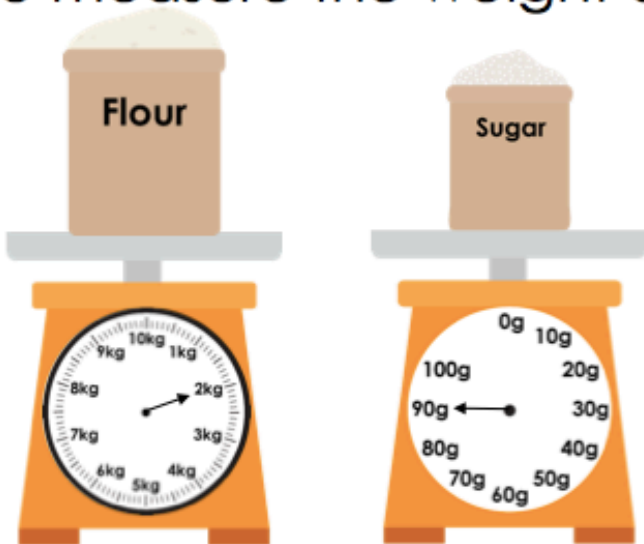Did you know 1000 grams is the same as 1 kilogram (kg)?

The scales work the same way but the unit is different and the object will weigh more.

The bowling ball weighs 7 kilograms.

Learn Screen

Grams and Kilograms

To measure the weight of lighter objects we can use grams.
To measure the weight of heavier objects we can use kilograms.

It is important to look at the scales carefully to know what unit they are showing.

Flour

Sugar

The flour is heavier than the sugar.

Comparing objects

Circle the best estimate for the picture.

1g or 1kg	70g or 7kg	5g or 5kg
4g or 4kg	60g or 6kg	25g or 2.5kg

Circle the best unit of measurement for the objects below.

Pencil	Grams	Kilograms
Car	Grams	Kilograms
Dog	Grams	Kilograms
Feather	Grams	Kilograms
Pumpkin	Grams	Kilograms
Spoon	Grams	Kilograms
Chair	Grams	Kilograms
Person	Grams	Kilograms
Cookie	Grams	Kilograms

Your Task
Choose your unit of measurement

Decide whether you would measure the mass of these objects in grams or kilograms.

Answers - Comparing objects

Circle the best estimate for the picture.

(1g) or 1kg	(70g) or 7kg	5g or (5kg)
4g or (4kg)	60g or (6kg)	(25g) or 2.5kg

Circle the best unit of measurement for the objects below.

Pencil	(Grams)	Kilograms
Car	Grams	(Kilograms)
Dog	Grams	(Kilograms)
Feather	(Grams)	Kilograms
Pumpkin	Grams	(Kilograms)
Spoon	(Grams)	Kilograms
Chair	Grams	(Kilograms)
Person	Grams	(Kilograms)
Cookie	(Grams)	Kilograms

Your Task

Measure mass in kilograms

1 What is the mass of each object?

a)

The case has a mass of ____ kg.

b)

The robot has a mass of ____ kg.

c)
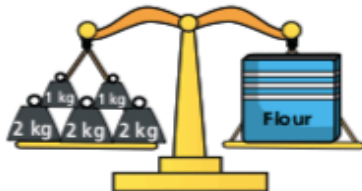
The box of flour has a mass of ____ kg.

2 How many kilograms does Amir weigh?
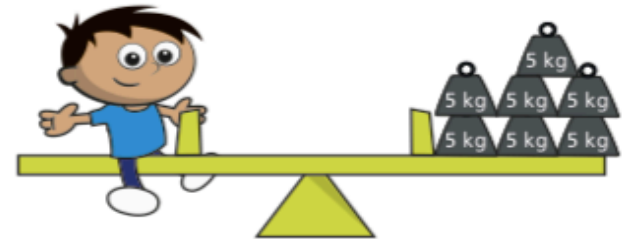
____ kg

3

40 kg

a) Circle the weights that will balance the scale.

50 kg   20 kg   10 kg   10 kg   10 kg   5 kg   5 kg

b) Find another way. Circle the weights.

50 kg   20 kg   10 kg   10 kg   10 kg   5 kg   5 kg

Now try these

Reading scales

4 What is the mass of each object?

a)

b)

Remember

Work out what the scale is jumping in by looking at the spaces between the numbers.

a) ☐ kg   b) ☐ kg

6 Mark the mass on each scale.

a) 15 kg   b) 27 kg

Challenge

Remember

To find the difference between two numbers, you need to subtract.

Make up some similar problems for your grown up to solve.

Mo weighs his dog in January and June.

January	June
15 kg	28 kg

How much heavier is the dog in June?

kg

Answers

SUPER STAR

White Rose Maths

Measure mass in kilograms

1 What is the mass of each object?

a)

10 kg 5 kg

The case has a mass of **15** kg.

b)

2 kg
50 kg 10 kg

The robot has a mass of **62** kg.

c)

1 kg 1 kg
2 kg 2 kg 2 kg

Flour

The box of flour has a mass of **8** kg.

2 How many kilograms does Amir weigh?

5 kg
5 kg 5 kg 5 kg
5 kg 5 kg 5 kg

35 kg

3

40 kg

a) Circle the weights that will balance the scale.

e.g

50 kg 20 kg 10 kg 10 kg 10 kg 5 kg 5 kg

b) Find another way. Circle the weights.

e.g.

50 kg 20 kg 10 kg 10 kg 10 kg 5 kg 5 kg

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Answers

4 What is the mass of each object?

a)

0 kg
10 kg
2 kg
8 kg
4 kg
6 kg

[7] kg

b)

0 kg
100 kg
20 kg
80 kg
40 kg
60 kg

[55] kg

6 Mark the mass on each scale.

a) 15 kg

0 kg
30 kg
20 kg
10 kg

b) 27 kg

0 kg
30 kg
20 kg
10 kg

Answers
page 35

5 **a)** Mo weighs his dog in January and June.

January	June
15 kg	28 kg

How much heavier is the dog in June?

13 kg

SUPER STAR

Lesson 3

Comparing volume

This lesson is all about comparing volume.

Use the Learn screens on pages 40 and 41 to help you then go to:

White Rose Maths Home Learning Year 2

Click on **Year 2 Summer Term Week 10 lesson 3**. After you've watched the whole video, complete the tasks on pages 42 and 43.

Learn Screen

What is capacity?

Capacity

Capacity is the amount of liquid a container holds.

The capacity of the watering can is **6** cups. This means 6 cups of water will fill the watering can.

The capacity of the bottle is **2** cups. This means that 2 cups of water will fill the bottle

Learn Screen

What is volume?

The **volume** is the amount the container is **actually holding**.

The jug is half full.

The volume of liquid is half a jug.

We can use the words full, empty, half, quarter, three quarters, more than , less than, equal to to describe the volume of a container.

Your Task

Compare volume

1 Here are three glasses.

A   B   C

a) Which glass is empty? _____

b) Which glass is half full? _____

c) Which glass is full? _____

2 Tommy has some milk in a glass.

Circle all the glasses that have more milk than Tommy's.

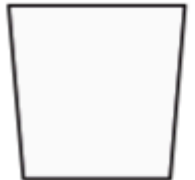**3** Eva, Ron and Amir have some juice.

Eva — This is my juice.

Shade the glasses to show how much juice Ron and Amir could have.
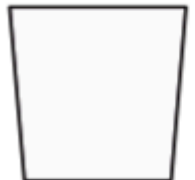
Ron — I have more juice than Eva.
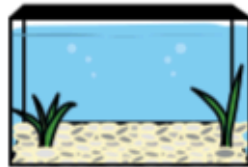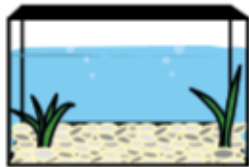
Amir — I have less juice than Eva.

Compare answers with a partner.

Your Task

4) Which fish tank contains less water?
Tick your answer.

Can you help Jerry order these containers from the largest to smallest capacity?

5) Tick the object with the greater capacity.

Can you use these symbols?

6) Tick the object with the greatest capacity.

< = >

Answers

SUPER STAR

Compare volume

White Rose Maths

1 Here are three glasses.

A   B   C

a) Which glass is empty?   C

b) Which glass is half full?   B

c) Which glass is full?   A

2 Tommy has some milk in a glass.

Circle all the glasses that have more milk than Tommy's.

3 Eva, Ron and Amir have some juice.
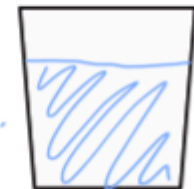
This is my juice.

Eva

Shade the glasses to show how much juice Ron and Amir could have.

I have more juice than Eva.

Ron

e.g.

I have less juice than Eva.
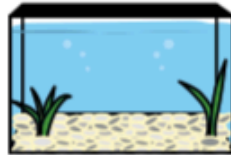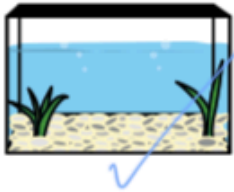
Amir

e.g.

Compare answers with a partner.

Answers
page 43

4 Which fish tank contains less water?
Tick your answer.

5 Tick the object with the greater capacity.

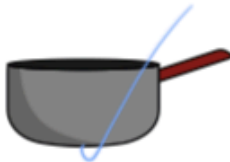**6** Tick the object with the greatest capacity.

Pupil responses should show that the bath has the largest capacity then the pot, the mug and finally the spoon.

Possible solutions using the symbols could include:

$>$ $<$ $=$ x10

Lesson 4

Reading scale in millilitres

This lesson is all about reading a scale in millilitres.

Look at the Learn Screens then have a go at the task on page 49 and the investigation on page 51. This will help you with the remaining tasks.

Then go to:

White Rose Maths Home Learning Year 2

Click on **Year 2 Summer Term Week 10 lesson 4.**

Watch the video and then complete the tasks on pages 52 and 53.

Learn Screen

All about millilitres

Let's learn

Around the world people need to measure capacity accurately.

To do this we use a **standard unit** called <u>millilitres</u> (ml).
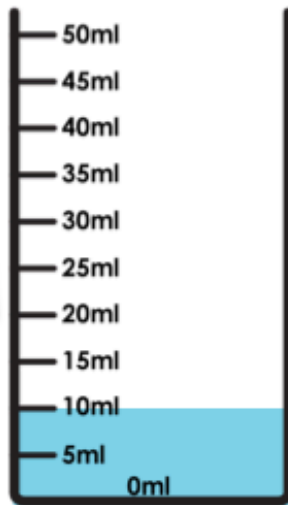
A millilitre measures small amounts.

5 millilitres

100 ml

Apple Juice

50 ml

Learn Screen

Millilitres

We can read scales to help us know the capacity and volume of containers.
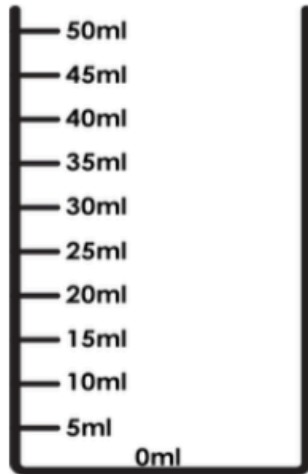It is just like reading a vertical number line.

This is the scale

Look carefully at the scale to see how much water is in the measuring cylinder.

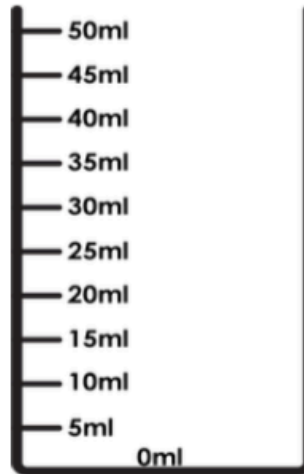The volume of water is **10** millilitres.

50ml
45ml
40ml
35ml
30ml
25ml
20ml
15ml
10ml
5ml
0ml

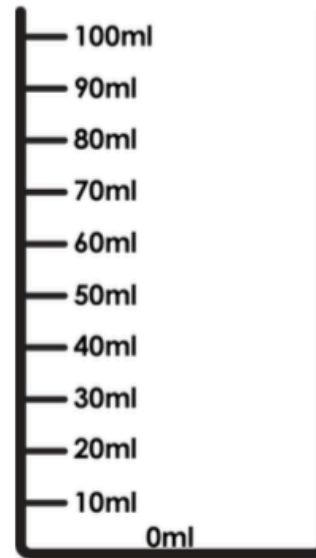# Have a go!

Draw on the amounts each child has asked for.
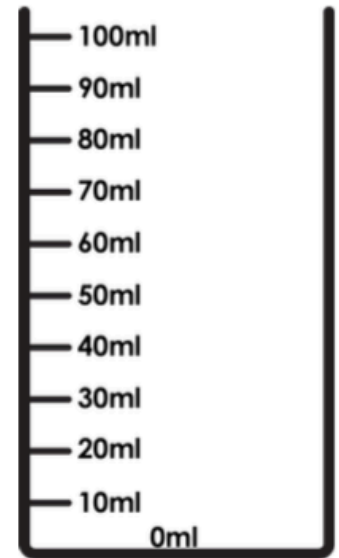
Jerry says...
35ml of apple juice please!

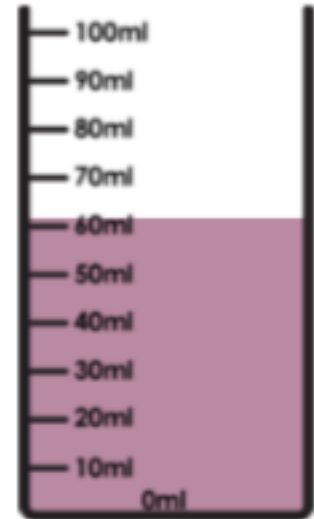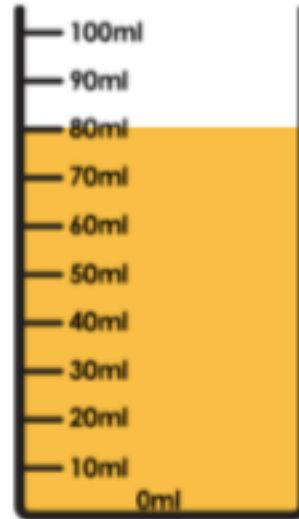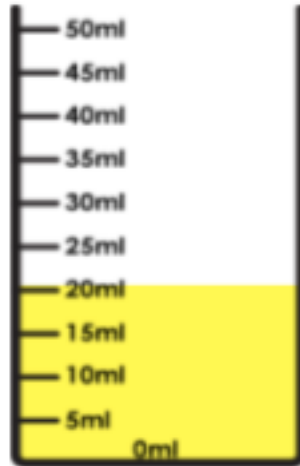**Alfie says...**
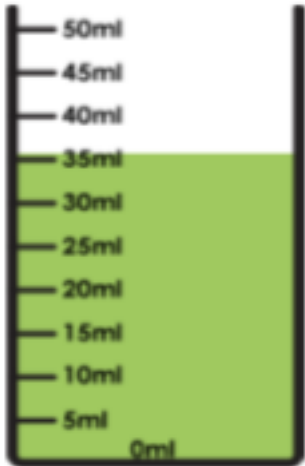20ml of banana smoothie please!

Jane says...
80ml of orange juice please!

Ranjit says...
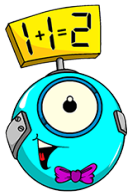60ml of grape juice please!

Answers

Your Task

Time to investigate

Your Task:

Let's look at millilitres

What to do

Look around your house. How many items can you find that are measured in millilitres?

Can you order them from biggest to smallest?

I'd love to see what you find, so please send lots of photos to me at info@st-jo-st.dudley.sch.uk
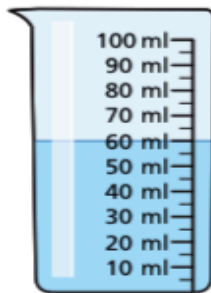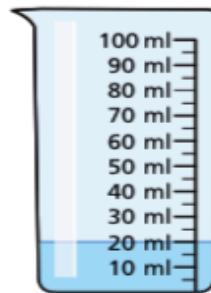
Your Task

Millilitres
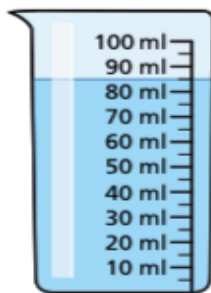
1 How much water is there in each beaker?

a)

100 ml
90 ml
80 ml
70 ml
60 ml
50 ml
40 ml
30 ml
20 ml
10 ml

[ ] ml

c)

100 ml
90 ml
80 ml
70 ml
60 ml
50 ml
40 ml
30 ml
20 ml
10 ml

[ ] ml

b)

100 ml
90 ml
80 ml
70 ml
60 ml
50 ml
40 ml
30 ml
20 ml
10 ml

[ ] ml

d)

100 ml
90 ml
80 ml
70 ml
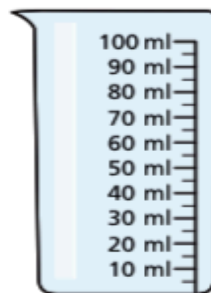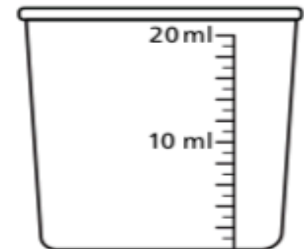60 ml
50 ml
40 ml
30 ml
20 ml
10 ml

[ ] ml

2 Jack pours 12 ml of water into a measuring container.

20 ml
10 ml

Draw a line to show where the water reaches.

3 A teaspoon holds 5 ml.
A tablespoon holds 15 ml.

5 ml   15 ml
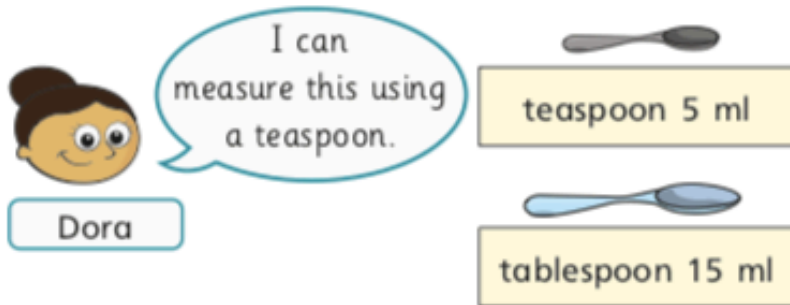
Work out the total capacity of the spoons.

a) [ ] ml

b) [ ] ml

c) [ ] ml

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Your Task

4 A recipe includes 45 ml of lemon juice.

I can measure this using a teaspoon.

Dora

teaspoon 5 ml

tablespoon 15 ml

a) How many teaspoons is 45 ml?

b) Find another way of measuring 45 ml.
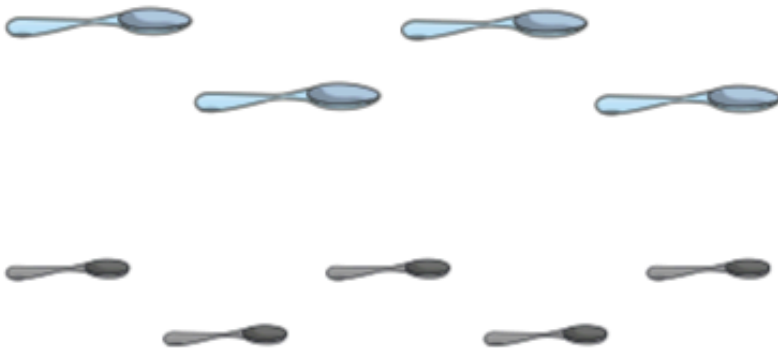
Circle your answer.

6 Draw a line on the jug to show where 500 ml of juice would reach.

1,000 ml

7 Mo opens a can of drink.

He pours it all into a measuring jug.

POP!

100 ml

50 ml
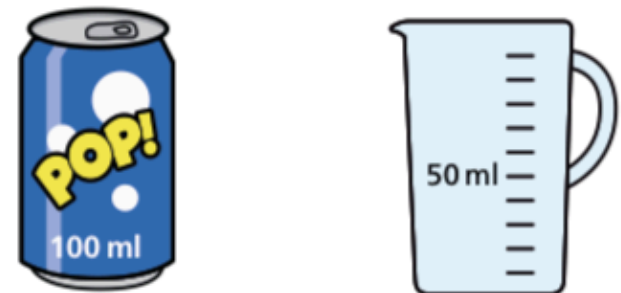
Draw a line to show where the drink will reach.

Answers

Millilitres

1 How much water is there in each beaker?

a)

100 ml
90 ml
80 ml
70 ml
60 ml
50 ml
40 ml
30 ml
20 ml
10 ml

60 ml

c)

100 ml
90 ml
80 ml
70 ml
60 ml
50 ml
40 ml
30 ml
20 ml
10 ml

20 ml

b)

100 ml
90 ml
80 ml
70 ml
60 ml
50 ml
40 ml
30 ml
20 ml
10 ml

85 ml

d)

100 ml
90 ml
80 ml
70 ml
60 ml
50 ml
40 ml
30 ml
20 ml
10 ml

0 ml

2 Jack pours 12 ml of water into a measuring container.

20 ml

10 ml

Draw a line to show where the water reaches.

3 A teaspoon holds 5 ml.

A tablespoon holds 15 ml.

5 ml   15 ml

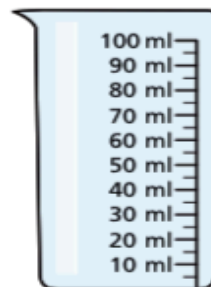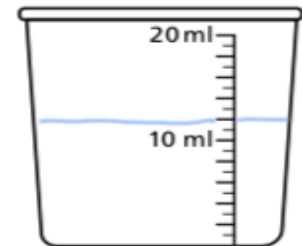Work out the total capacity of the spoons.

a)

25 ml

b)

30 ml

c)

35 ml

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Answers

SUPER STAR

4 A recipe includes 45 ml of lemon juice.

I can measure this using a teaspoon.

Dora
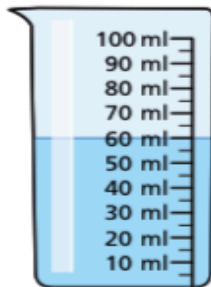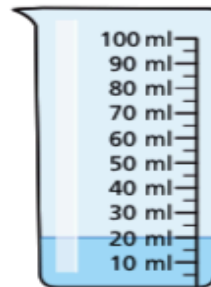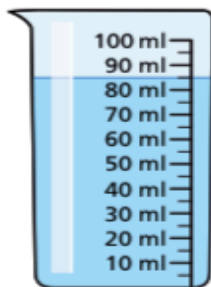
teaspoon 5 ml

tablespoon 15 ml
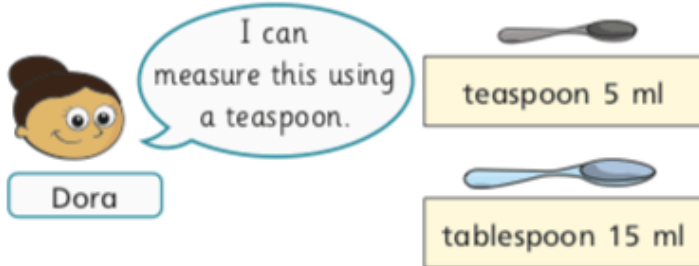
a) How many teaspoons is 45 ml?

9

b) Find another way of measuring 45 ml.
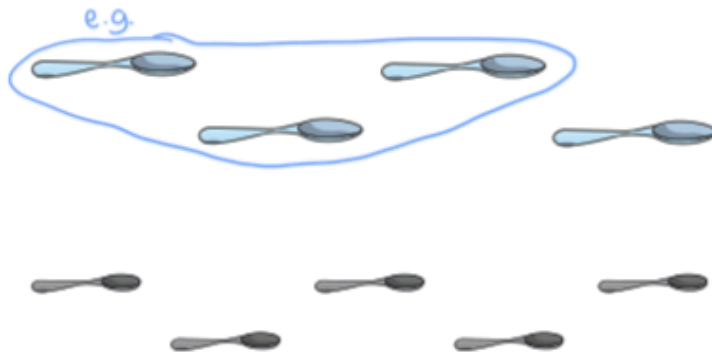
Circle your answer.

e.g

6 Draw a line on the jug to show where 500 ml of juice would reach.

1,000 ml

7 Mo opens a can of drink.

He pours it all into a measuring jug.

POP!

100 ml

50 ml

Draw a line to show where the drink will reach.

Lesson 5

Let's get practical!

Today's activities are a chance for you to try out your new skills.

The activities are all linked to our learning from this week.

Have fun!

Your Task

Try out your measuring skills by making a cake. This is a great way to practise measuring mass. Remember to weigh the ingredients carefully.

You must ask your grown up for permission to do this.

A bit of fun

How full is your cup?

Have fun with water and learn about capacity.

You can fill a bowl of water or play in the bath or paddling pool.

You will need one measuring jug (with litres and millilitres) and lots of different sized containers:

cups, buckets, tubs, bowls – in fact, anything that holds liquid!

Use this vocabulary to compare the amount of liquid in each container.

twice as full   half empty   more than...   less than...

full   empty   half full   quarter full
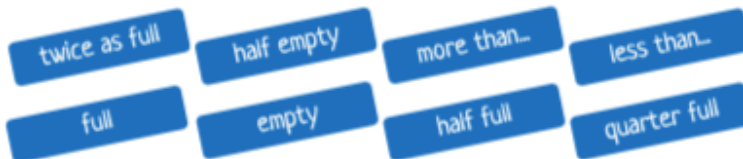
Let's do this!

Fill one of your containers and estimate how much water there is. Now, pour it into the measuring jug to check. Were you correct?

Now, fill your containers and line them up in order of amount. Check with the jug. Were you correct?

Challenge

How many jugs would it take to fill a bathtub?

How many teaspoons would it take to fill a jug?

How many teaspoons will it take to fill a bathtub?

Year 2, you are amazing and are working so hard. Well done.

You know how much Mrs. Hounsell and I love to see your work, so please send lots of photos to info@st-jo-st.dudley.sch.uk