

The cap has the same mass as 3 cubes.



Non-standard units should have an equal mass.

Use lighter non-standard units to measure the mass of lighter objects.

Use heavier non-standard units to measure the mass of heavier objects, such as a water bottle.

None of the statements are true.



The red book is lighter than the green book and the green book is heavier than the red book.

The robot and the bear have the same mass because one blue block has the same mass as three red blocks.

Purple cup = 2 cubes

Yellow cup = 3 cubes. Heavier than the purple cup.

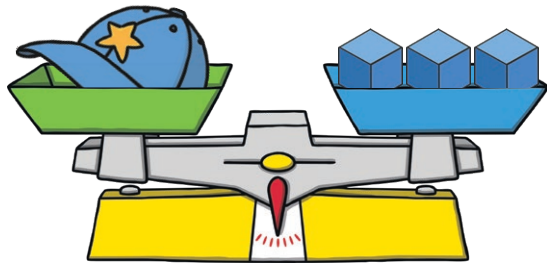
Green cup = 3 cubes. Same mass as the yellow cup.



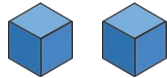
Measure Mass



The cap has the same mass as ____ cubes.

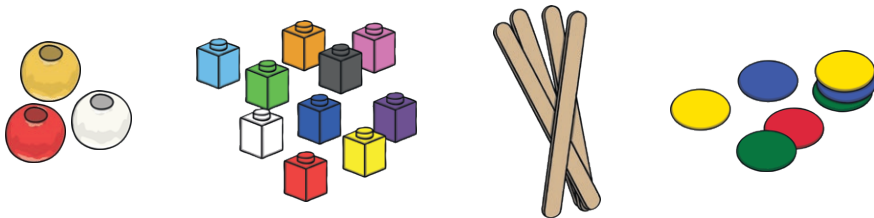


Choose a toy. How many cubes balance it?



Choose something new to measure your toy with.

Do you need the same amount of them?



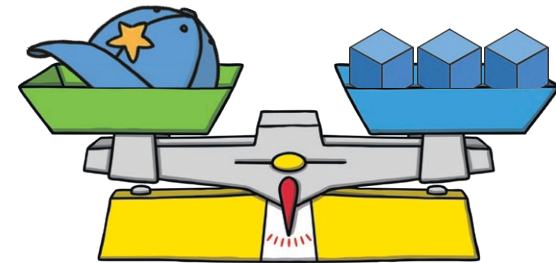
What would you use to find the mass of a full water bottle?



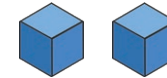
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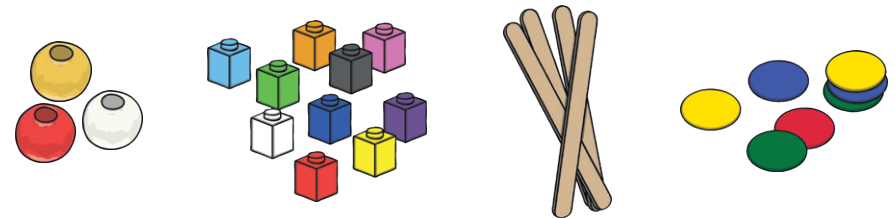


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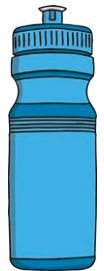


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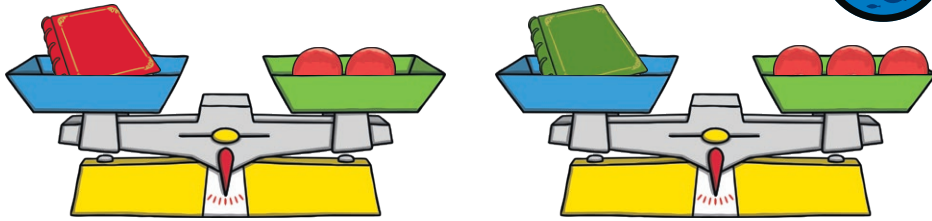
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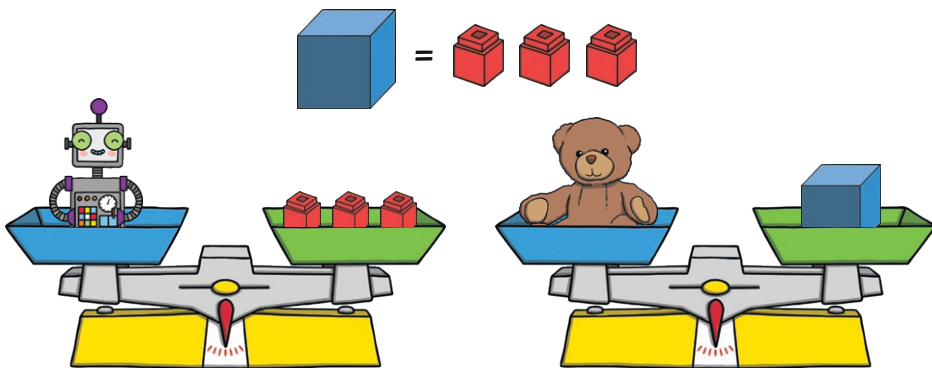


True or False?

The red book is heavier than the green book.

The green book is lighter than the red book.

The books have the same mass.



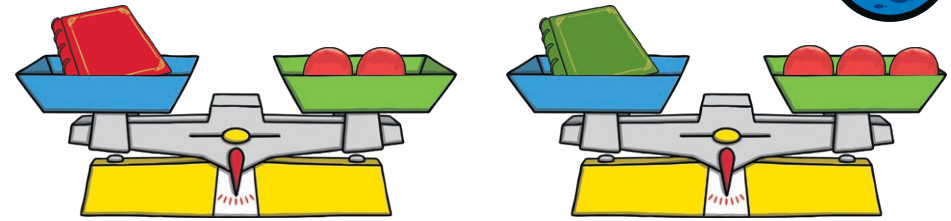
The robot is heavier than the bear.

They have the same mass.

What do you think?



Measure Mass

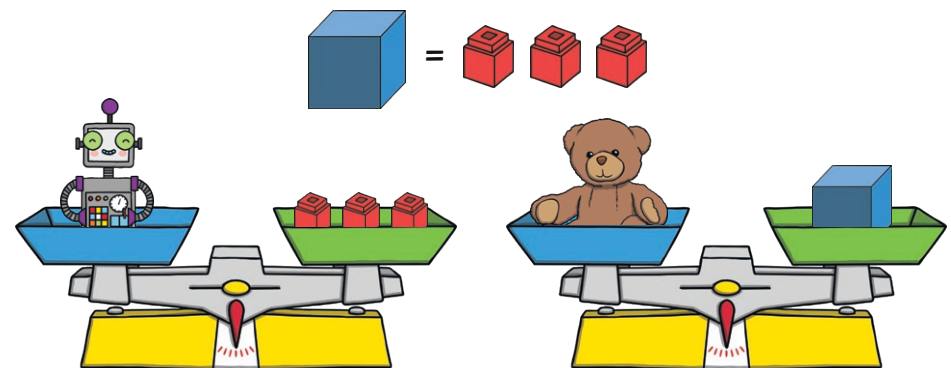


True or False?

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The robot is heavier than the bear.

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What do you think?

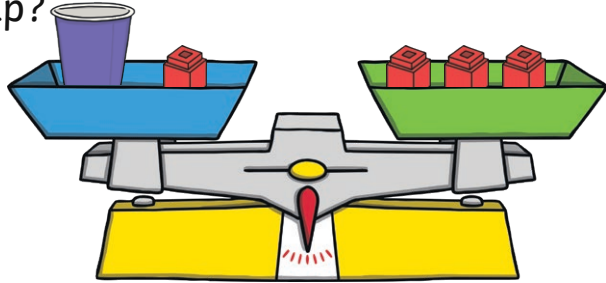


Measure Mass



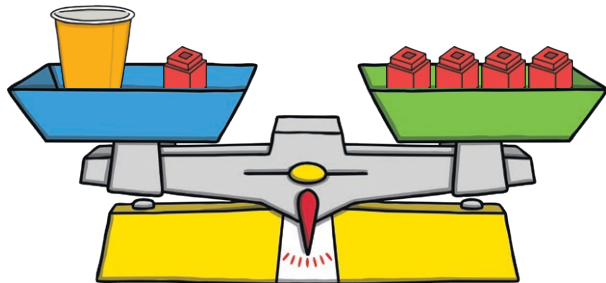
How many cubes have the same mass as the purple cup?

How can you find out?



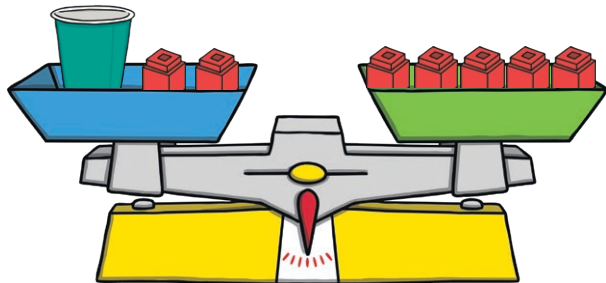
Is the yellow cup lighter than the purple cup?

How can you find out?



Is the green cup heavier than the purple cup?

How can you find out?

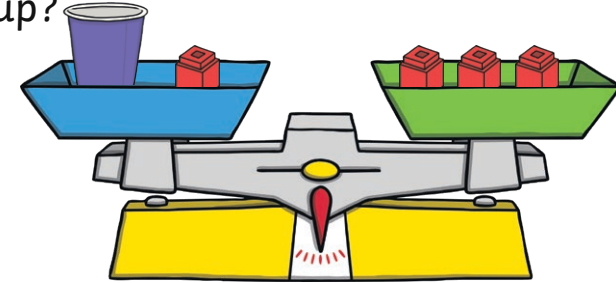


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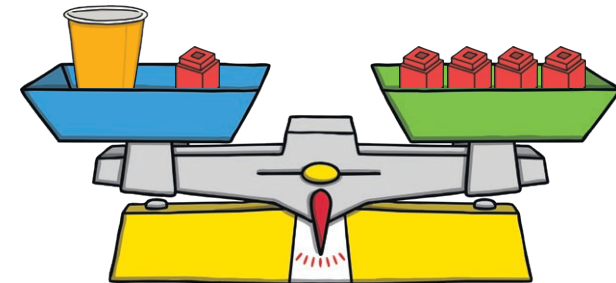
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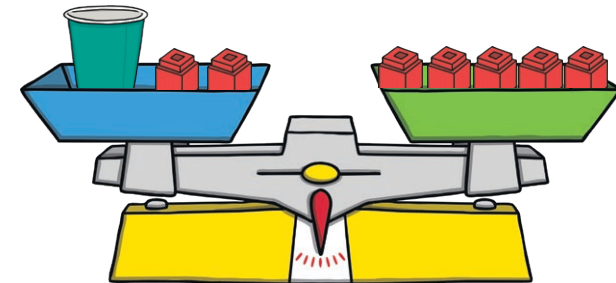
Is the yellow cup lighter than the purple cup?

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Is the green cup heavier than the purple cup?

How can you find out?



Measure Mass

Adult Guidance with Question Prompts



Check that children understand that when scales are balanced, the mass is equal. They then start to use non-standard units such as cubes to measure the mass of an object. Children learn that the mass of an object can be determined by the number of units used to balance it. They discover that it can be tricky to balance objects accurately with non-standard units. They begin to make decisions about what units to use to measure the mass of an object.

How many cubes balance the cap?

How many cubes will you need to balance your object?

Can you add one cube at a time?

How many cubes have the same mass as the blue cap?

What will happen if you add one more cube or take one away?

Try using some different non-standard units to measure the mass of your object.

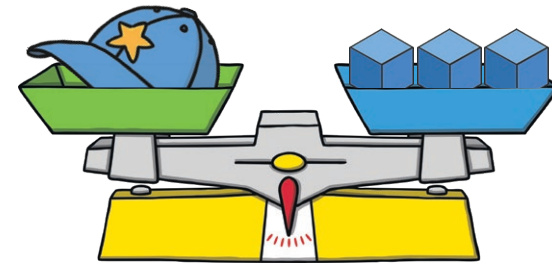
Which work well? Which are tricky? Why?

Which non-standard units would you choose to measure the mass of a full water bottle? Why?

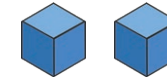
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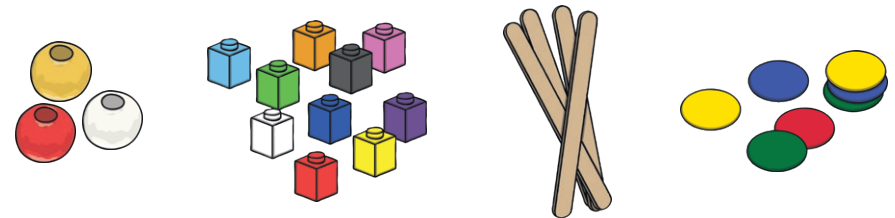


Choose a toy. How many cubes balance it?



Choose something new to measure your toy with.

Do you need the same amount of them?



What would you use to find the mass of a full water bottle?



Measure Mass

Adult Guidance with Question Prompts



Check that children understand that when scales are balanced, the mass is equal. They then start to use non-standard units such as cubes to measure the mass of an object. Children learn that the weight of an object can be determined by the number of units used to balance it. Children compare two sets of balance scales and explain why they agree/disagree with the accompanying statements.

How many apples have the same mass as the red book?

How many apples have the same mass as the green book?

Which book is the heaviest?

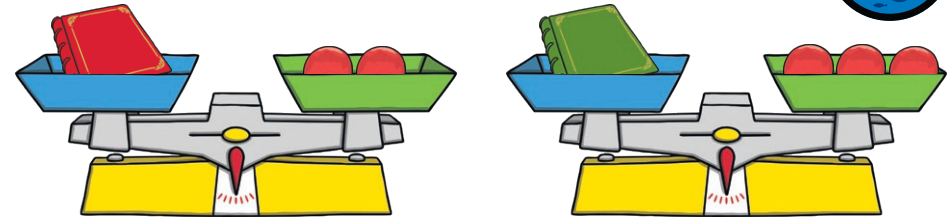
Is this sentence true or false? How do you know?

What can you find out about the mass of the toys?

Do you agree with either of the children? Why?

Can you make a question like this for your friend?

Measure Mass

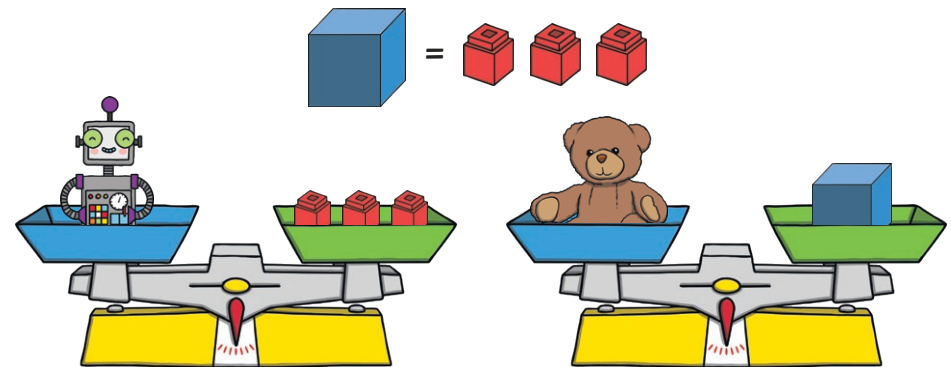


True or False?

The red book is heavier than the green book.

The green book is lighter than the red book.

The books have the same mass.



The robot is heavier than the bear.

They have the same mass.

What do you think?



Measure Mass

Adult Guidance with Question Prompts



Check that children understand that when scales are balanced, the mass is equal. They then start to use non-standard units such as cubes to measure the mass of an object. Children learn that the mass of an object can be determined by the number of units used to balance it. They use non-standard units to solve problems involving comparing the mass of objects.

Does the purple cup have the same mass as 3 blocks? Why not?

What happens if you take the cube away from the purple cup?

How can you make the scales balance again?

How many cubes have the same mass as the purple cup?

What can you do to work out the mass of the yellow cup?

Is the yellow cup lighter than the purple cup?

Can you find out how many cubes balance the green cup?

Is it heavier than the yellow cup?

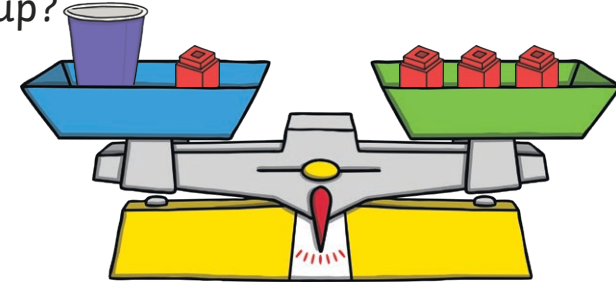
Can you make a question like this for your friend?

Measure Mass



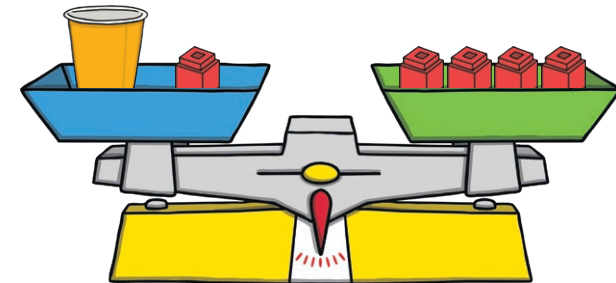
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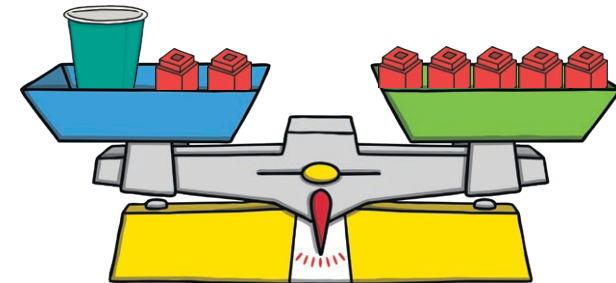
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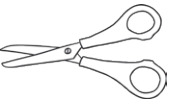
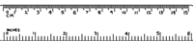




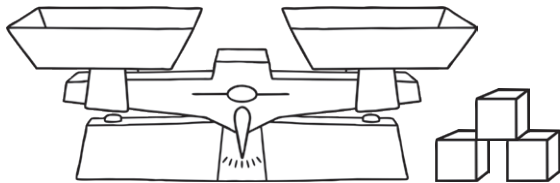
Measuring Mass

To measure mass.



Use blocks to measure the mass of objects.

Object	glue 	scissors 	ruler 	cup 	spoon 			
Number of Blocks								



Find more objects to measure with blocks.

Which was the lightest?

The had a mass of blocks.

Which was the heaviest?

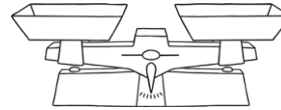
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Measuring Mass


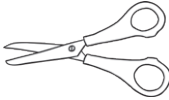
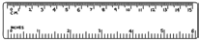




To measure mass.



Measure the mass of objects with blocks then with beads.



Find more objects to measure with blocks then with beads.

Object	glue 	scissors 	ruler 	cup 	spoon 			
Number of Blocks 								
Number of Beads 								

Did you use more blocks or beads?

Why?

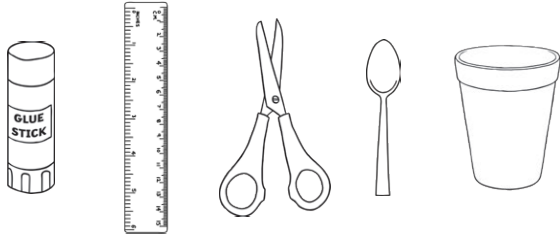
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Measuring Mass

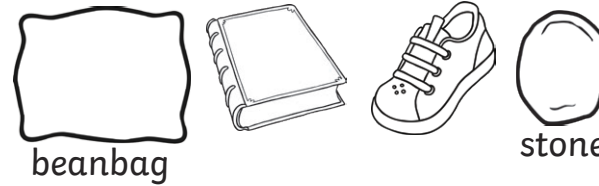
To measure mass.




Pick a light object from your classroom.




Pick a heavy object from your classroom.



Choose different units to measure the mass of it.

Unit	blocks		
			
Number of Units			

Choose different units to measure the mass of it.

Unit	blocks		
			
Number of Units			

What was the best unit to measure lighter object?

Why?

What was the best unit to measure heavier object?

Why?