Class 5 Home Learning

MONDAY 15TH NOVEMBER 2021

Maths

This week in maths we are starting a new unit looking at multiplication and division. We are focusing on multiples, factors, prime numbers and square numbers in our first week. Please continue to revise your times tables, in school we are revising the 3s, 4s and 5s.

Follow the slides to complete your maths activity.

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1) Which number is not in the 4 times table?

4 12 14 20 24

2) Which number is in the 5 and 7 times tables?

5 7 25 50 70

3) Fill in the missing numbers in the sequence.

____ 15 ____ 21 24

4) Fill in the missing numbers in the sequence.

30 ____ 20 ____ 10

1) Which number is not in the 4 times table?

4 12 **14** 20 24

2) Which number is in the 5 and 7 times tables?

5 7 25 50 **70**

3) Fill in the missing numbers in the sequence.

12 15 18 21 24

4) Fill in the missing numbers in the sequence.

30 25 20 15 10

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Have a think

What do all these numbers have in common?

3 123 72 6

12 27 60

They are all in the 3 times table.

They are all **multiples of 3**

Have a think

Which of these numbers are in the 7 times table?

35 84 5 70

15 43 79

The circled numbers are all **multiples of 7**

Multiples of 2

0 2 4 6 8 10 12 14

Multiples of 4

0 4 8 12 16 20 24 28

Multiples of 6

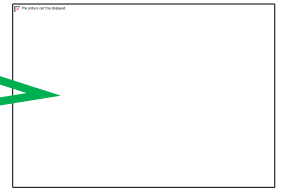
0 6 12 18 24 30 36 42

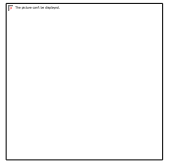
Have a think

1) Give an example of a number which is a multiple of 2, 4 and 6 12 0

2) All the multiples of an even number are _____ even _____ .

All the multiples of an even number are even, so all the multiples of an odd number must be odd.



Have a think 

Explain how you know that Tiny is incorrect.

Use an odd multiplication table to help you.

5 is odd and has odd multiples (for example 15) and even multiples (for example 20).

11 is odd and has odd multiples (for example 55) and even multiples (for example 88).

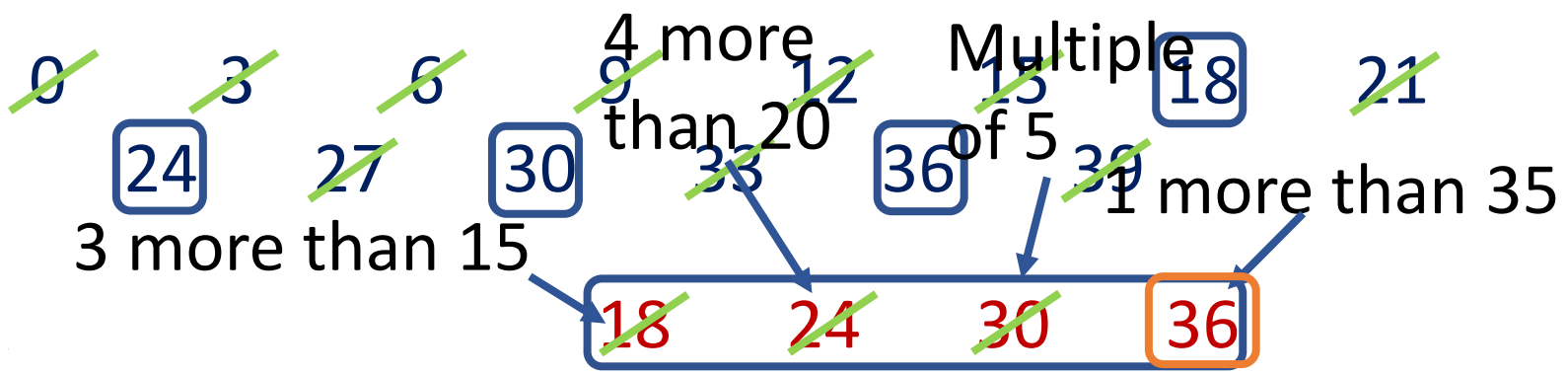
Annie’s granddad gives her some money for her birthday.

He gives her between £15 and £40

The amount Annie receives is a multiple of 3 and 6

The amount Annie receives is one more than a multiple of 5

How much money does Annie receive? £36



Choose at least 3 activities from the slides below to complete on paper. There are 10 questions and each is a bit harder than the one before.

Remember that you can start from whichever question you like and can move on if you want more of a challenge.

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English

In English we are starting our new writing sequence which is all based on narrative. We are doing our immersion lesson in school today which is focusing on reading exciting stories!

For your lesson today please complete the following:

- Have a fun session reading! Pick a few short stories that you have at home or on the computer. Think about what makes it exciting- Is it the characters? Or the actions?

Science

Today we are going to be learning about Isaac Newton and gravity. In class we are going to be using newton meters to measure the weight of objects, whilst you won't be able to do this at home it's important to know how you could measure using this instrument and we will make sure you get chance to experiment when you return to school!

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Aim

- To explore the effect that gravity has on objects and how the first theory of gravity was developed.

Success Criteria

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  - Sub

- I can explain the effect of gravity on unsupported objects.
- I can explain Isaac Newton’s role in developing a theory of gravity.
- I can accurately measure the force of gravity pulling on objects.

Falling Down

Watch your teacher let go of a bouncy ball. What does it do?

These children are discussing why the bouncy ball falls down rather than falling up, sideways or staying still.

Which child or children do you agree with?

There is no air resistance acting on the ball, so it can go straight down.

The ball falls downwards because gravity is pulling it down.

The ground exerts a force on the ball so the ball is magnetically attracted to the ground.

The bouncy ball falls downwards because it is heavy. If it were lighter, it would float away.

Falling Down

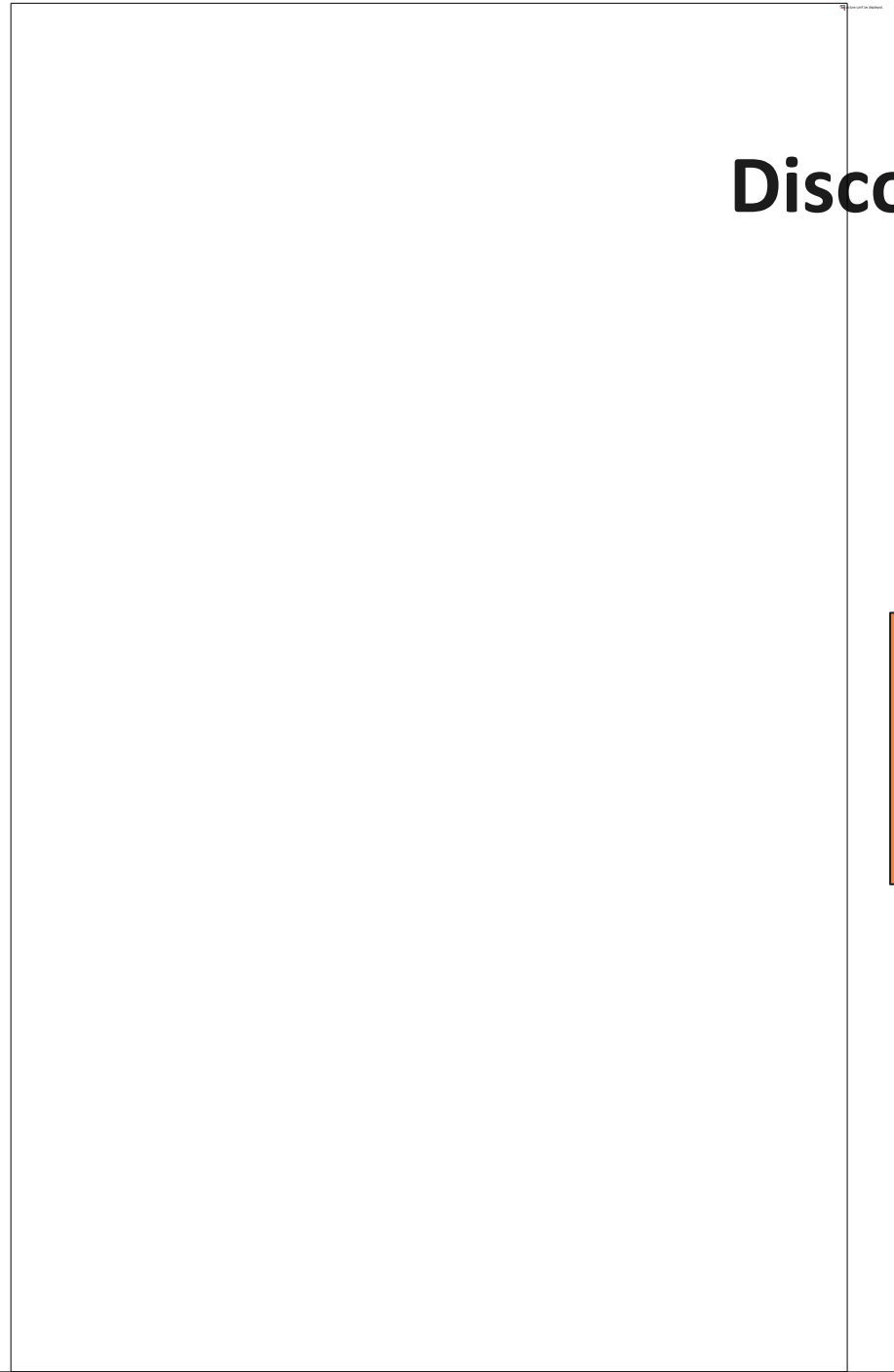
Did you agree with this boy?
Gravity is the force that means that objects are pulled towards the centre of the Earth.

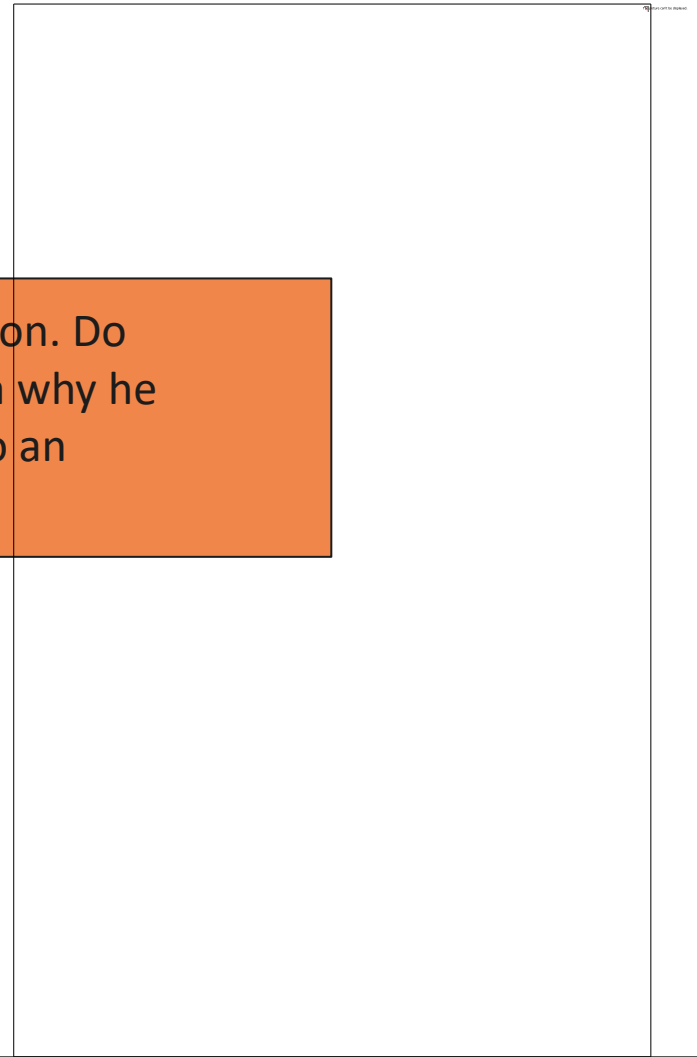
All objects exert a **gravitational pull**. However, the strength of an object's gravitational pull depends on its **mass**. The Earth is a huge object with an extremely high mass, so its gravitational pull is very strong.

The force of gravity keeps us on the ground. Gravity also causes objects to fall down if they are dropped.

Gravity pulls the bouncy ball downwards so it falls down.

Discovering Gravity

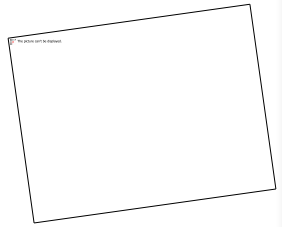




This is Isaac Newton. Do you have any idea why he is pictured next to an apple tree?

Discovering Gravity

Isaac Newton famously developed his theory of gravity when he saw an apple fall to the ground from an apple tree.



Read your **Newton and Gravity Fact Sheet** about his life and his theory. Then answer the questions on the **Newton and Gravity Activity Sheet**.

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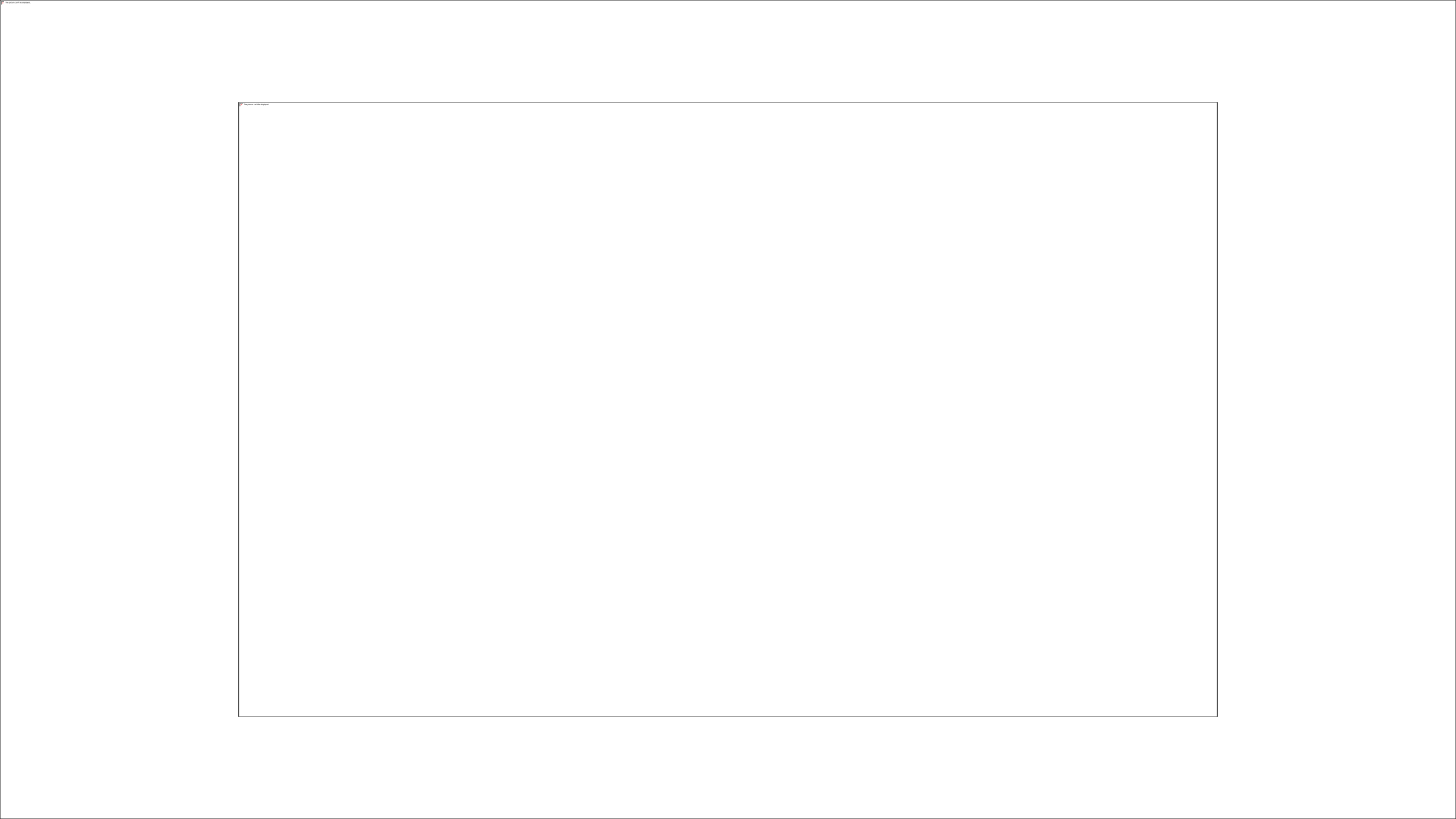

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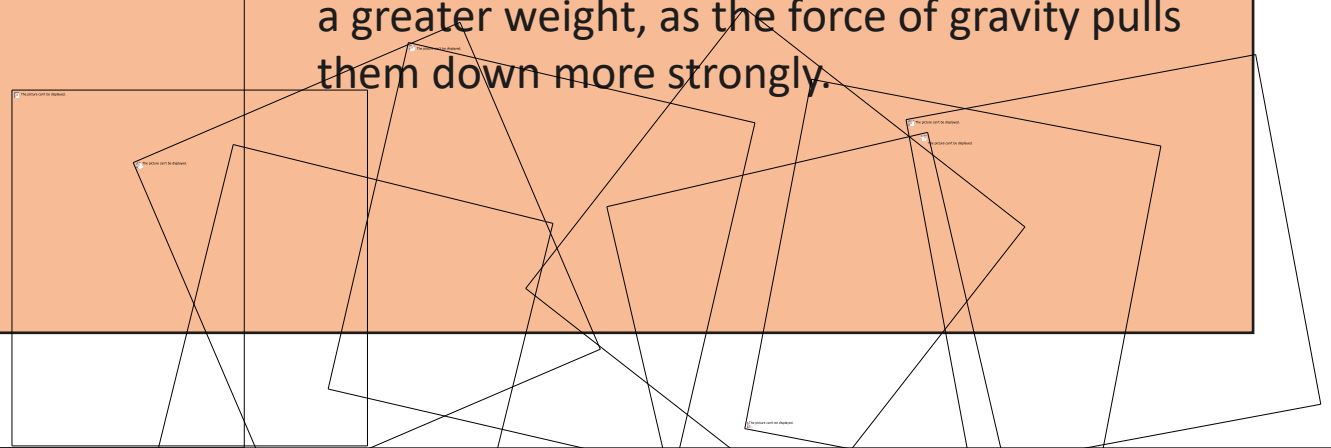
Weight and Mass

People often use the words weight and mass to mean the same thing.

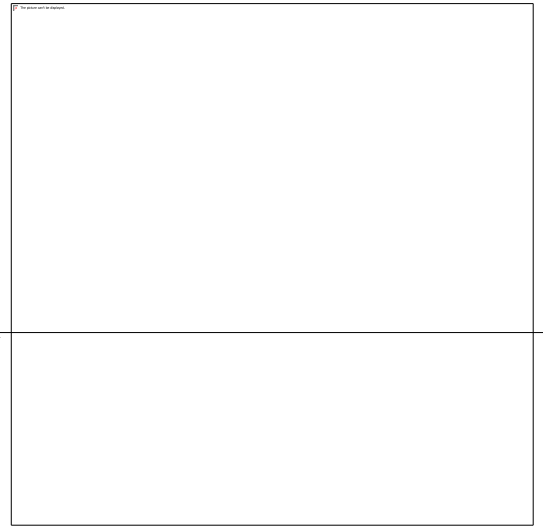
Mass is a measure of the amount of ‘stuff’ inside an object, and is measured in **kilograms** (kg).

Weight is actually a measure of the strength of gravity acting on an object. It is measured in **newtons** (N).

The **weight** of an object is caused by **gravity** pulling it down. Objects with more **mass** have a greater weight, as the force of gravity pulls them down more strongly.



Weight and Mass



Weight and Mass

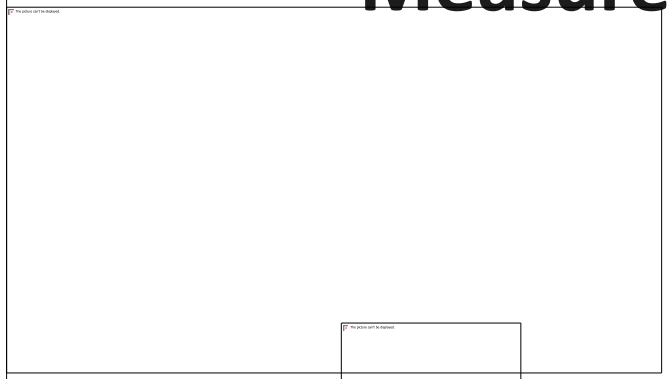
Weight and Mass

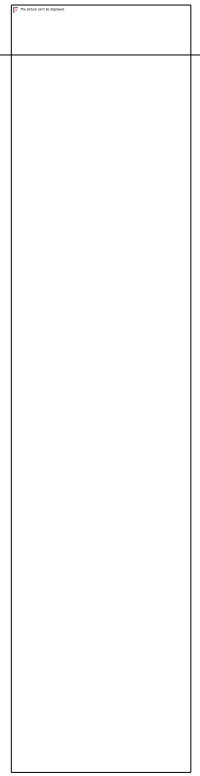
Remember

Mass is how much **matter** (or ‘stuff’) is inside an object. It is measured in **kilograms** (kg).

Weight is how strongly **gravity** is pulling an object down. It is measured in **newtons** (N).

Measure the Force of Gravity





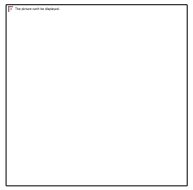
You are going to measure the **weight** and **mass** of different objects.

The weight of an object is measured using a **newton meter**. Remember, weight is a measure of how strongly gravity is pulling on the object.

The mass of an object is measured using a set of **scales**. Remember, mass is a measure of how much matter (or ‘stuff’) is in the object.

You can find an object’s weight by placing the object in a bag and hanging the bag from the newton meter to measure how strongly gravity is acting on the object.

Measure the Force of Gravity



Do you think that there will be a link between an object's **weight** and its **mass**?

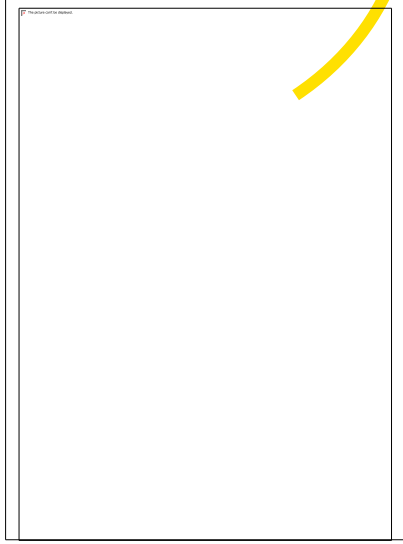
Complete your **Measuring Gravity Activity Sheet** with your prediction, then conduct your investigation. Complete the table with your results. Then use your results to form a conclusion.

Did you measure the weight and mass of each object accurately?

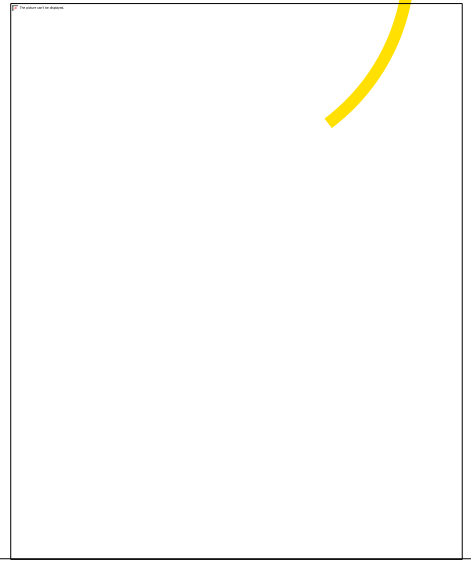
Was it easy or hard to get an accurate measurement?

Finding a Link

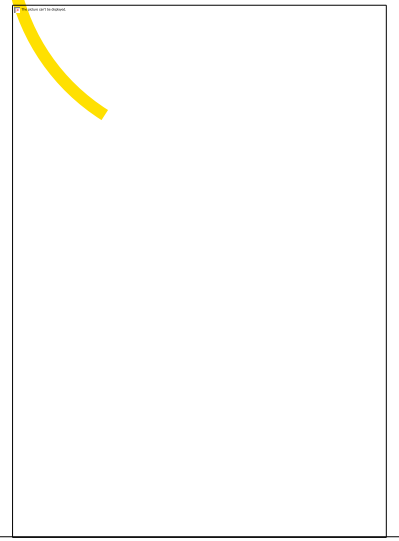
Did you notice a link between each object's **weight** and its **mass**?



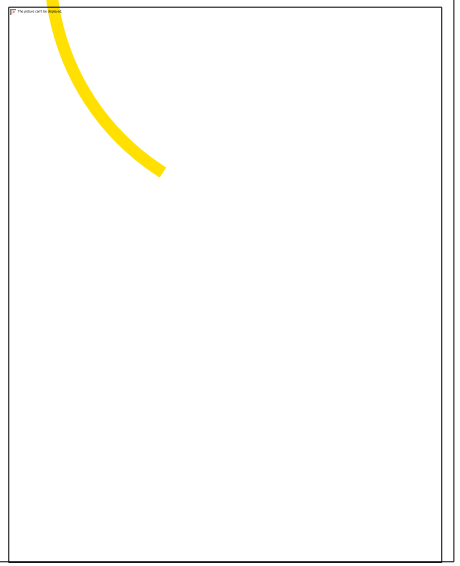
Talk to a partner about the link you spotted.



Did they see a similar link?



Can you explain any results that don't follow this link?



Finding a Link

You should have discovered that gravity pulls objects down with a force of approximately 1N for every 100g.

So if an object weighs 200g, gravity will pull it down with a force of 2N.

If an object weighs 1kg, gravity will pull it down with a force of 10N.

Have another look at your results. Do they follow this pattern?

PSHE

Last week we looked at how to recognise when we are feeling angry and to think before we act. We also learned some strategies that we could use if we start to feel angry and that it's ok to get cross.

In today's session we are going to explore why it's ok to disagree

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Aim

- I understand that people have different opinions that should be respected.

Success Criteria

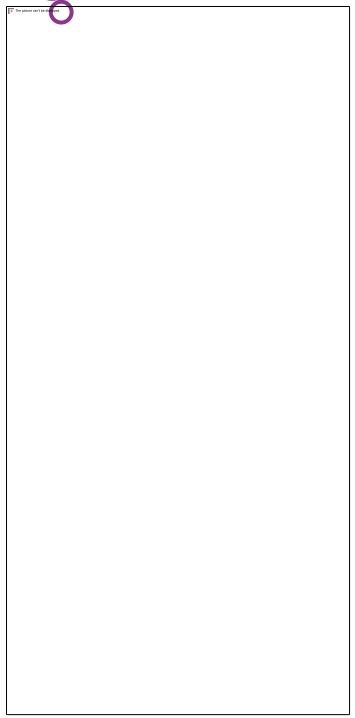
- I can express an opinion while being polite and respectful.
- I can work with others to explore ways to resolve a disagreement without falling out.

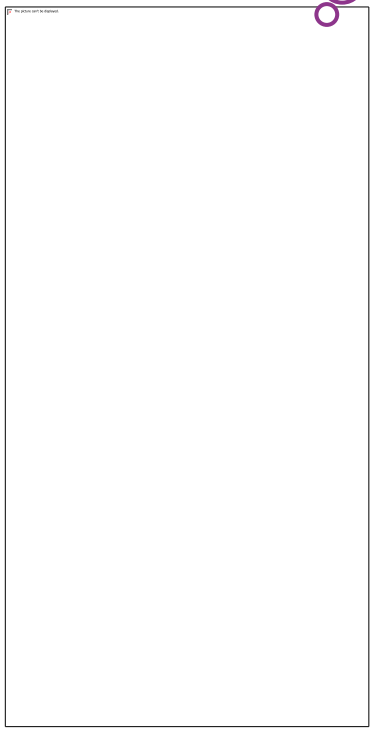
This resource is fully in line with the Learning Outcomes and Core Themes outlined in the PSHE Association's Programme of Study.

The Big Questions

Do people who care about each other always have to agree?

How can we resolve disagreements without falling out?





Reconnecting

Disagreeing

What does ‘disagreeing’ mean?

Disagreeing is when people express different opinions.

In our lives we will have friends or acquaintances who have very different traditions, beliefs or lifestyles to our own. It is important to be able to respect these but without necessarily needing to agree with them.’

We will sometimes have different opinions from our friends in life and it is important to feel we can voice our own opinion. However, we need to know how to do this without falling out with our friends.

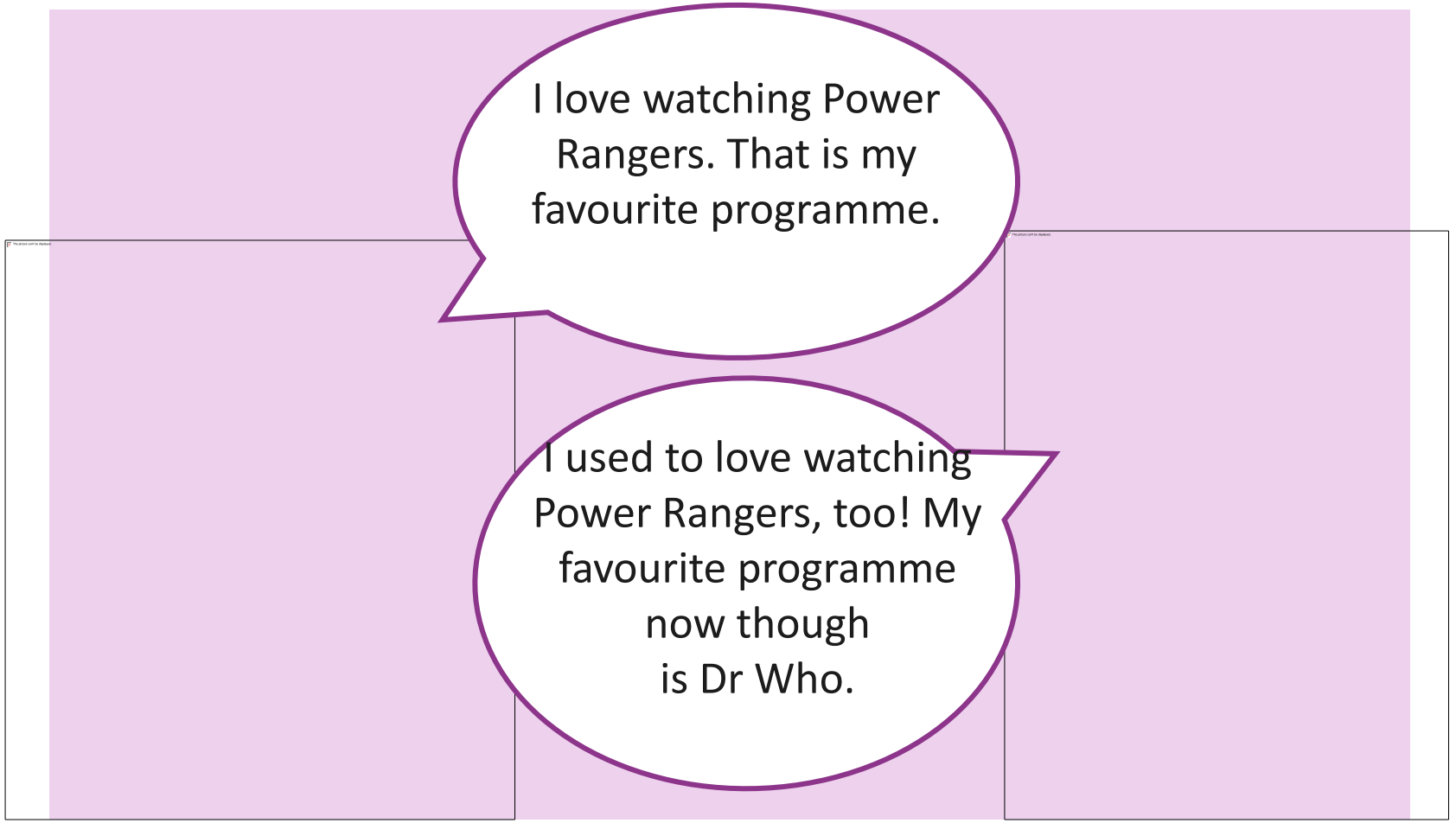
Exploring

Differing Opinions

Daniella and Yumiko are talking about their favourite football teams.

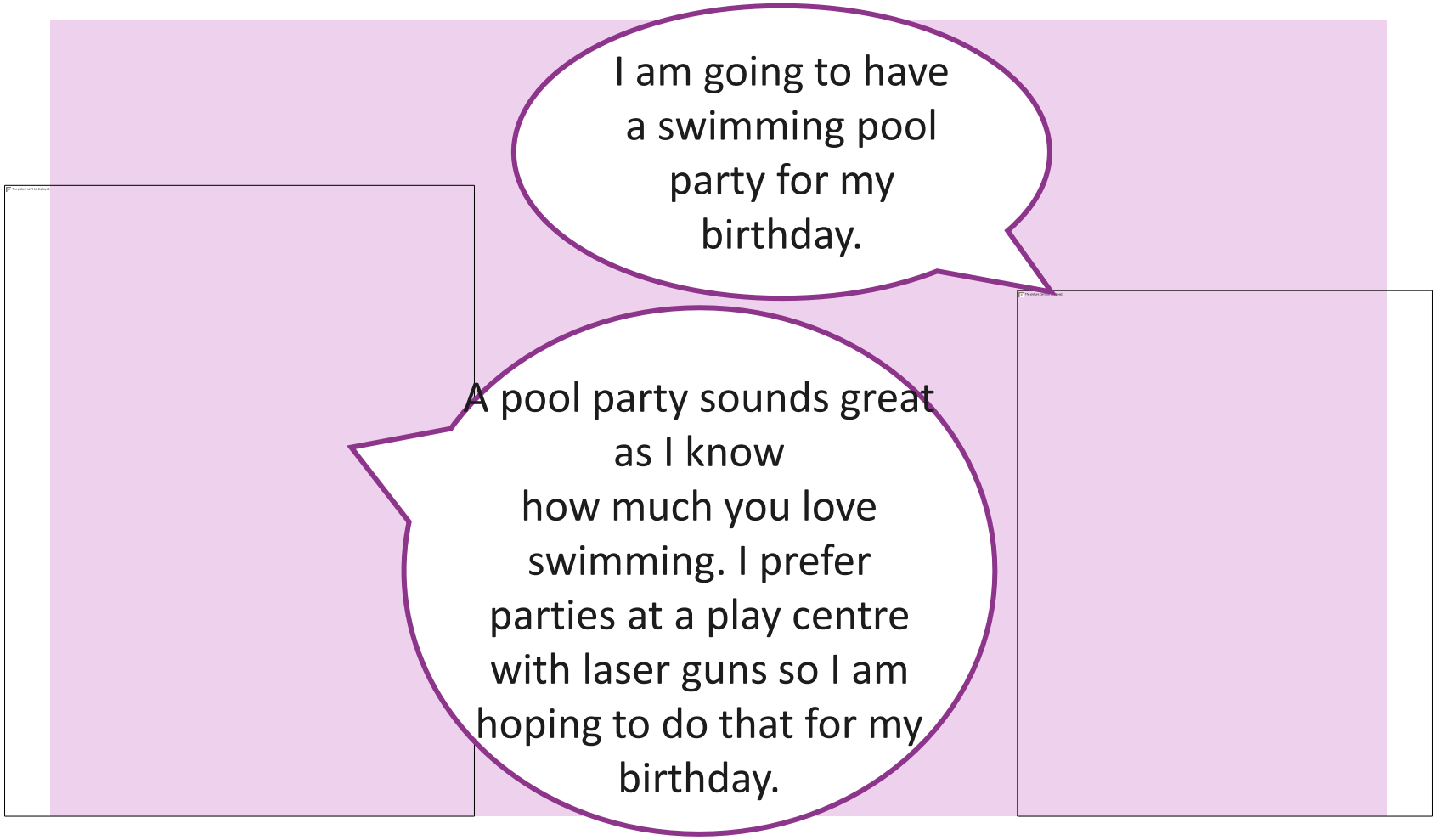
Differing Opinions

Ben and Kai are discussing their favourite television programme.



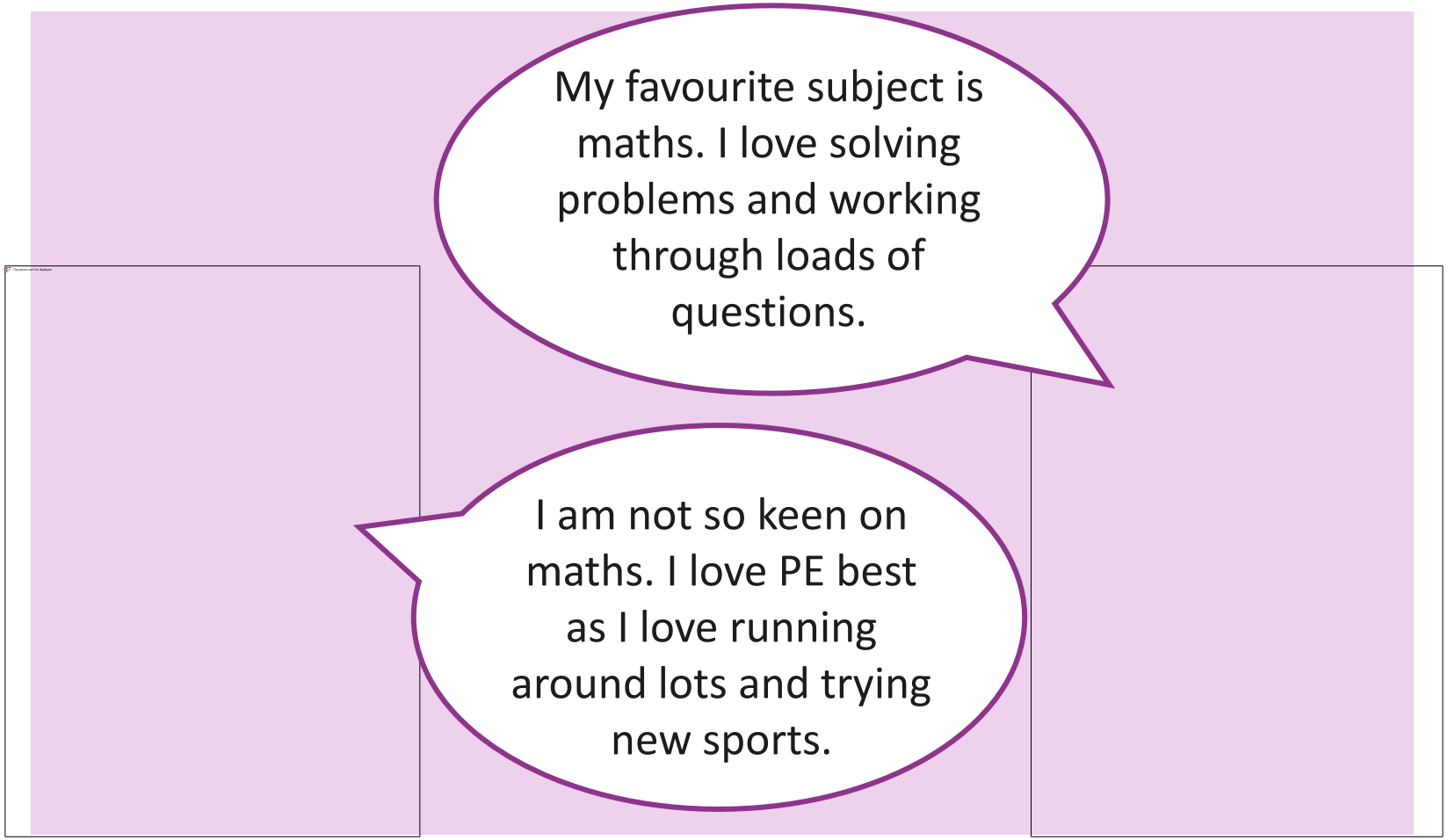
Differing Opinions

Paul and Sue-Ling are talking about their birthday parties.



Differing Opinions

Frankie and Clarissa are talking about their favourite subject in school.



Differing Opinions

Did you still express your own opinions in the alternative scenarios?

Do you think these alternative scenarios would cause fallings out?

How are your responses different to the responses of others?

You can express a different opinion without being rude or upsetting anyone else.

By respecting someone else's opinion, before expressing your own, they are much less likely to be offended or upset when you express a different opinion from theirs.

Expressing an opinion in a polite and respectful way does not involve criticising the other person or making them feel bad in any way. It does not involve trying to convince the other person to have the same opinion as you or trying to change their opinion.

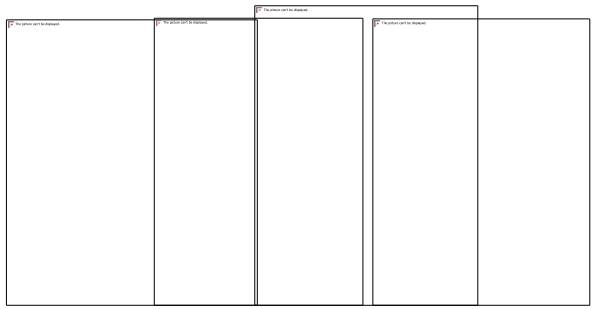
Disagreements

Disagreements happen when people have different opinions over something.

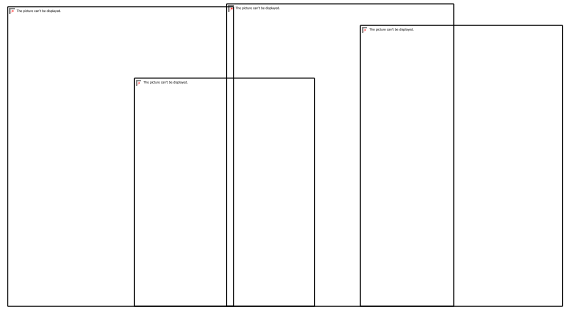
- Sometimes this is expressed in a way that makes one person feel bad for having their opinion.
- Sometimes this is expressed in a way that makes someone feel that their opinion is less important or not valid.
- Sometimes this is expressed in a way that recognises and respects the other person's opinions but shows that they have a different opinion.

Why do disagreements happen?

Which of these would be least likely to cause a falling out?



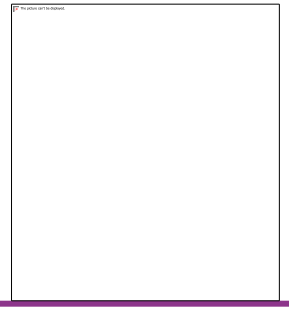
How could fallings out be avoided when disagreements happen?



Disagreements

Conflict or fall outs can be avoided when differing opinions are expressed with:

- politeness
- respect
- honesty

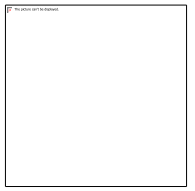


If someone else expresses their different opinion to you in a way that makes you feel upset, angry or uncomfortable, or makes you feel like your opinion is not right, what could you do?

If this happens, it might be that the other person does not know how to express a different opinion while being respectful. You could explain that it is fine to have different opinions and then show them how you could express a different opinion while still being polite, respectful and honest.

Reflecting

What Do You Think?



Thinking about everything we have discussed today, jot down your answers to the following questions.

Is it betraying a friend to have a different opinion from them?

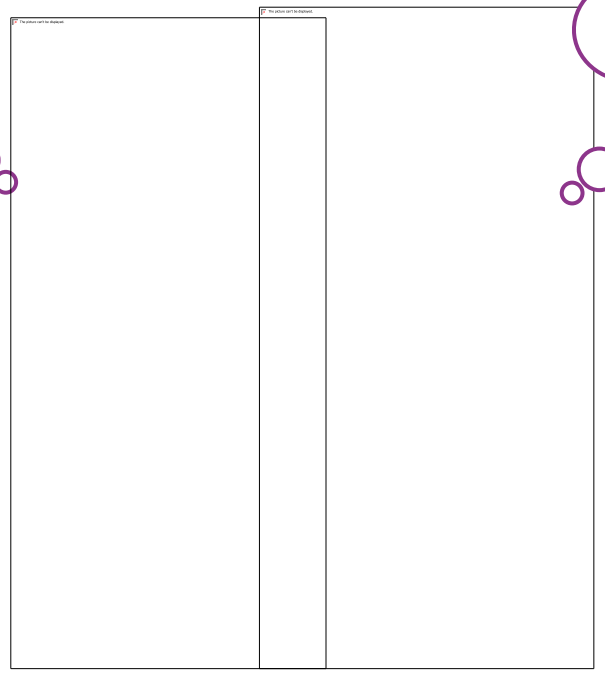
Does being honest have to mean hurting another person's feelings?

Can you be friends with someone who has a very different opinion from you?

Is it possible to move on and still be friends after a disagreement?

The Big Questions

How have your responses changed since the beginning of the lesson?

Do people who care about each other always have to agree?

How can we resolve disagreements without falling out?