

Year 5 Maths – Fractions, Decimals and percentages



Decimals vocabulary	
Tenths (y3)	Equivalent (y2)
decimal place (y4)	decimal point (y4)
Hundredths (y4)	Rounding (y4)
New vocabulary	
mixed number	thousandths
percentage	percent

Rounding decimals to the nearest whole number and one decimal place



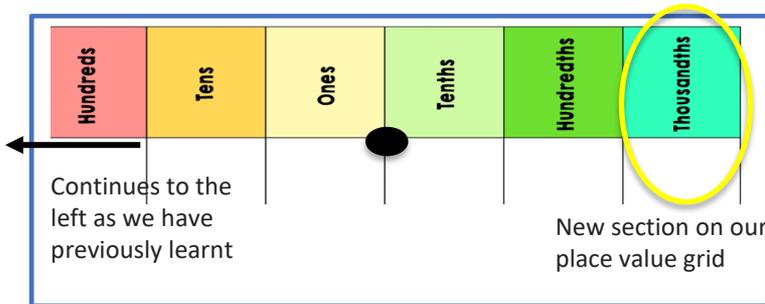
If the hundredths digit is 1, 2, 3 or 4, we round down to the nearest tenth.

If the hundredths digit is 5, 6, 7, 8 or 9, we round up to the nearest tenth.



If the tenths digit is 1, 2, 3 or 4, we round down to the nearest whole number.

If the tenths digit is 5, 6, 7, 8 or 9, we round up to the nearest whole number.

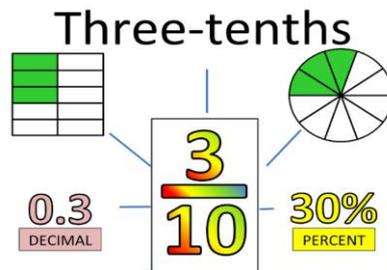


Equivalent Fractions, Decimals and Percentages

Fraction	Decimal	Percentage
1/2	0.5	50%
1/4	0.25	25%
3/4	0.75	75%
1/10	0.1	10%
1/5	0.2	20%
2/5	0.4	40%
3/5	0.6	60%
4/5	0.8	80%

Percentage, fraction, decimals

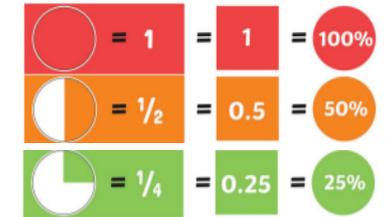
They can be equivalents of the same value.
For example:



Percent %

This is the symbol for percent %

Percent means 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.



We can use this for other fractions when the denominator is a multiple of 25.



We then also know 2/5, 3/5 and 4/5 equivalence.



We can then also know the equivalence of other fractions with a denominator of a multiple of 10

Decimal numbers can be read as fractions

$$0.71 = \frac{71}{100}$$

$$0.37 = \frac{37}{100}$$

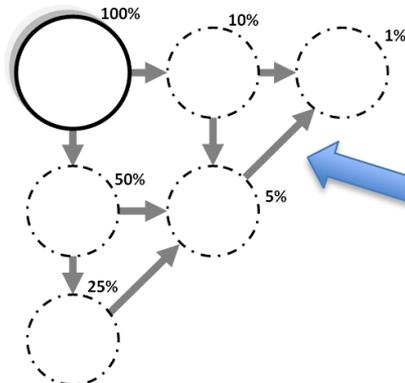
Y6 Maths- Fractions, decimals and percentages



Percentages of amounts

Different methods to choose from...

1. Bubble method
2. Divide by 100 and multiply by the percentage
3. Multiply together and divide by 100
4. Flip the values



Use the bubble method to find different percentages of any number. Add them together to find the one you are looking for.

To find 50% of a number, divide it by 2...

$$50\% \text{ of } 40 = 20$$

To find 25% of a number, divide it by 4...

$$25\% \text{ of } 40 = 10$$

To find 75% of a number, find 25% and then multiply that by 3...

$$75\% \text{ of } 40 = 30$$

Short cuts!

Use these to help you

To find 1% of a number, divide it by 100...

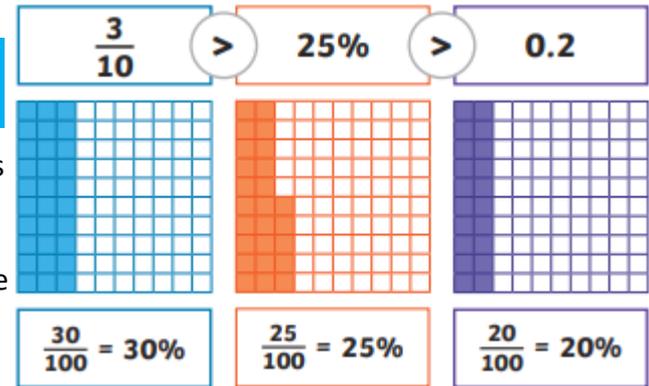
$$1\% \text{ of } 300 = 3$$

Previously Learned Vocabulary

Percentage (y5)	Proportion (y4)
Mixed number (y5)	Thousandths (y5)
Simplify (y5)	Improper fraction (y5)
Decimal equivalents (y4)	Percent/percentage (y5)

Ordering fractions, decimals and percentages

To order fractions, decimals and percentages, it can be useful to convert them so that they are all in the same form.

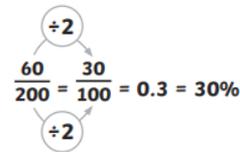
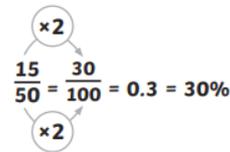


Equivalent fractions, decimals and percentages

Equivalent Fractions, Decimals and Percentages

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1/2	0.5	50%
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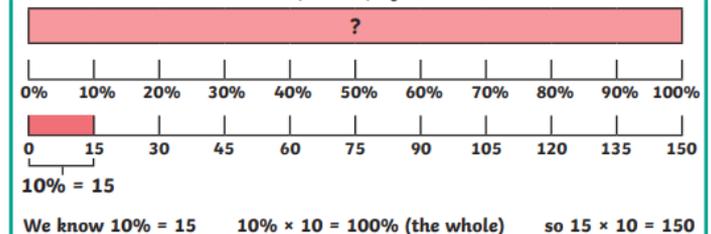
Fractions to Percentages



To change fractions to percentages, it can help to convert the fraction to an equivalent fraction out of 100 if possible.

Percentages- missing values

Whole value (100%) of bar model = ?



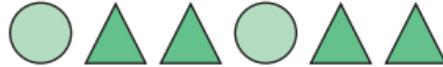


Year 5 and 6 - Ratio and Proportion

Previously Learned Vocabulary	
Percentage (y5)	Proportion (y4)
New Vocabulary	
Relative size	Scale factor
Ratio	Ratio as a:b
Similar	Scale drawing

Ratio language

For every 1 circle, there are 2 triangles.



For every 2 bananas, there are 3 apples.



The ratio symbol

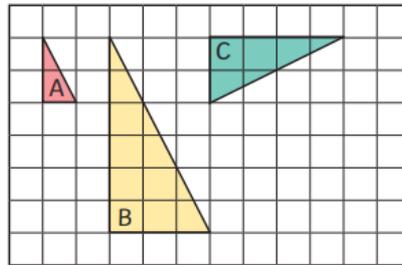


The ratio of footballs to rugby balls: 1:4

The ratio of rugby balls to footballs: 4:1

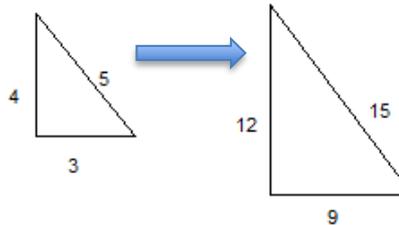
Similar shapes

Where one shape is an enlargement of the other, the two shapes are similar. All sides have been enlarged by the same scale factor. These 3 triangles are similar.

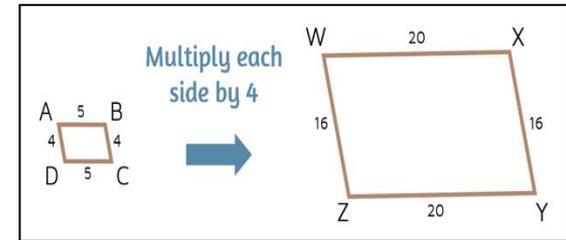


Scale factor

These triangles are similar.
The scale factor is 3



These parallelograms are similar.
The scale factor is 4



Topic/Skill	Definition/Tips	Example
1. Ratio	Ratio compares the size of one part to another part . Written using the ':' symbol.	3 : 1
2. Proportion	Proportion compares the size of one part to the size of the whole . Usually written as a fraction.	In a class with 13 boys and 9 girls, the proportion of boys is $\frac{13}{22}$ and the proportion of girls is $\frac{9}{22}$
3. Simplifying Ratios	Divide all parts of the ratio by a common factor .	$5 : 10 = 1 : 2$ (divide both by 5) $14 : 21 = 2 : 3$ (divide both by 7)

TOP TIP
Ratio- look for 'to every' or 'for every'

Proportion- look for 'in every'

Year 5 and 6 Maths – Algebra



Vocabulary	
BODMAS (y6)	BIDMAS (y6)
Simplify (y6)	Linear sequence (y5)
New Vocabulary	
symbol	letter
formula(e)	algebraic
terms	equation
unknown	variable
constant	generalise
algebraically	

Key Definitions:

Equations – a number sentence which uses an equal sign to separate two *expressions* which have the same value

Expression – groups of numbers, *variables* and operation symbols that give a value

Variable – a value represented by a letter or symbol

Substitution into formulas

Swap the letters for the numbers that you know.
Eg.

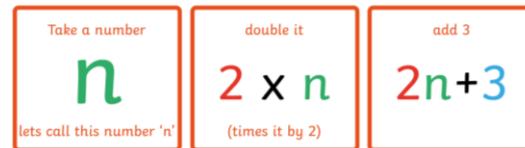
If $x = 3$ what is y when $y = 2x + 4$

$$y = (2 \times 3) + 4$$

$$y = 6 + 4$$

$$y = 10$$

Equation example



If 'n' was 4, then $2n + 3 = 11$.
This is called an equation.

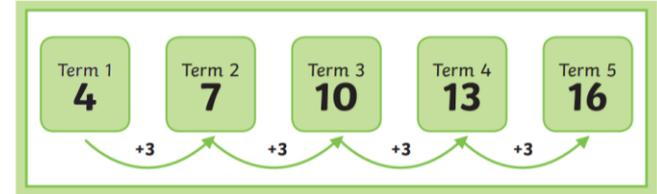
TOP TIP!

When letters or numbers are next to each other in an equation, it means they need to be multiplied e.g.

$Ab = 12$ means $A \times b = 12$
 $5c = 10$ means $5 \times c = 10$

Linear sequence

A **linear number sequence** is a sequence of numbers where each number increases or decreases by the same amount each time.



Each number in a linear number sequence is called a **term**.

The constant change between each number is called the **term to term rule**.

Use **formulae** to help find perimeter, area or volume of shapes

4cm

10cm

For a rectangle, the perimeter could be shown as $P = 2(L + W)$ because we add the length and the width and then multiply by 2.

Answer = 28cm

The area could be shown as $A = LW$ because we multiply length and width to find area.

Answer = 40cm²

Essential Knowledge

$$a + a + a = 3a$$

$$4 \times d = 4d$$

$$y \times y \times y = y^3$$

$$7 \times e \times f = 7ef$$

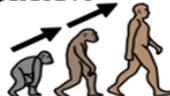
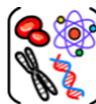
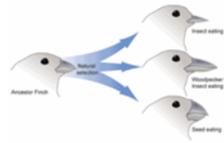
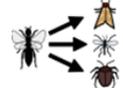
$$ab = a \times b$$

$$a^2 = a \times a$$

$$\frac{a}{b} = a \div b$$



Key Vocabulary

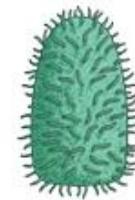
<p>Adaptive traits</p> 	<p>Characteristics that are influenced by the environment the living things live in. These adaptations can develop as a result of many things, such as food and climate..</p>
<p>Evolution</p> 	<p>Adaption over a long time.</p>
<p>Genetics</p> 	<p>The way physical traits and characteristics get passed down from one generation to the next</p>
<p>Inherited traits</p> 	<p>These are traits you get from your parents. Within a family, you will often see similar traits, e.g. curly hair, eye colour.</p>
<p>Natural Selection</p> 	<p>The process where organisms that are better adapted to their environment tend to survive and produce more offspring.</p>
<p>Variations</p> 	<p>The differences between individuals within a species.</p>

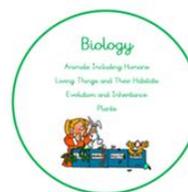
Key Information I will learn...

Living Things		Habitat		Adaptive Traits
polar bear		arctic		Its white fur enables it to camouflage in the snow.
camel		desert		It has wide feet to make it easier to walk in the sand.
cactus		desert		It stores water in its stem.
toucan		rainforest		Its narrow tongue allows it to eat small fruit and insects.

Adaptation

All species have **adaptations** that help them to survive in the environment they live in. **Selection pressures** are conditions in an environment that might make it harder for living things to survive and reproduce there. Living things that are well adapted are more likely to survive and reproduce. For example, animals with thick, white fur are more likely to survive in polar regions. Here are some examples of **selection pressures**.

 weather and climate	 finding food	 avoiding predation
 attracting a mate	 avoiding disease	 competition for territory or shelter



Natural selection

Mutations occur naturally; these can be helpful, harmful or neutral to the organism. Organisms with **adaptations** that suit the **selection pressures** of the environment are more likely to survive and reproduce, potentially passing on these **adaptations** to their offspring. Over generations, these **adaptations** become more and more prevalent and less useful traits will die out.



Offspring

Animals and plants produce **offspring** that are similar but not identical to them. **Offspring** often look like their parents because features are passed on.

Fossils

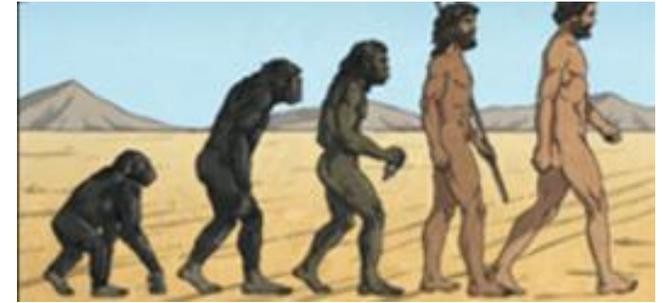
Living things that are alive now are very different from organisms that lived millions of years ago. We know about life in prehistoric times due to **fossils**.

Even incomplete **fossils** can give us clues about how species adapt over time and why they became **extinct**.



Fossils are the preserved remains, or partial remains, of ancient animals and plants. **Fossils** let scientists know how plants and animals used to look millions of years ago. This is proof that living things have **evolved** over time.

Evolution



Evolution is the gradual process by which different kinds of living organism have developed from earlier forms over millions of years. Scientists have proof that living things are continuously **evolving** - even today!

Influential individual

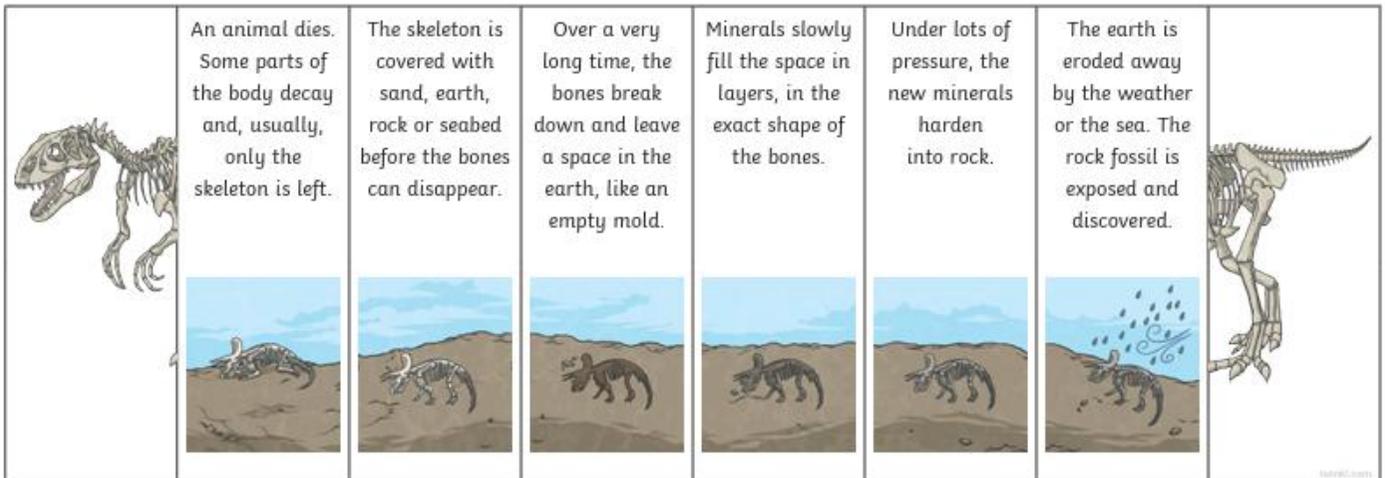


Charles Darwin 1809-1882

Charles Darwin was an English naturalist, geologist and biologist, widely known for his contributions to evolutionary biology.

Variation

In the same way that there is **variation** between parents and their **offspring**, you can see **variation** within any species, even plants.



Must Knows

Evolution and Inheritance



Key Facts:

- When living things reproduce, they pass on characteristics to their offspring. This is known as inheritance.
- Key characteristics include skin colour, eye colour and height.
- Due to reproduction, the offspring are not identical to their parents and vary from each other.
- Adaptations are characteristics of an organism that improves its chances of surviving and/or reproducing.
- Plants and animals have characteristics that make them suited (adapted) to their environment.
- If the environment changes rapidly, some variations of a species may not suit the new environment and will die.
- If the environment changes slowly, animals and plants with variations that are best suited survive in greater numbers to reproduce and pass their characteristics on to their young
- Evolution is the process by which living things can gradually change over time.
- Charles Darwin is a famous scientist renowned for his theory on evolution.
- Charles Darwin discovered that animals adapt to their surroundings based on their beaks.
- Charles Darwin's theories of evolution are widely recognised by other scientists.
- Animals need to adapt to their surroundings to survive.
- Fossils give us evidence of what lived on the Earth millions of year ago and provide evidence to support the theory of evolution.
- More recently, scientists such as Darwin and Wallace observed how living things adapt to different environments to become distinct varieties with their own characteristics.
- Humans are an animal that have evolved over the years.



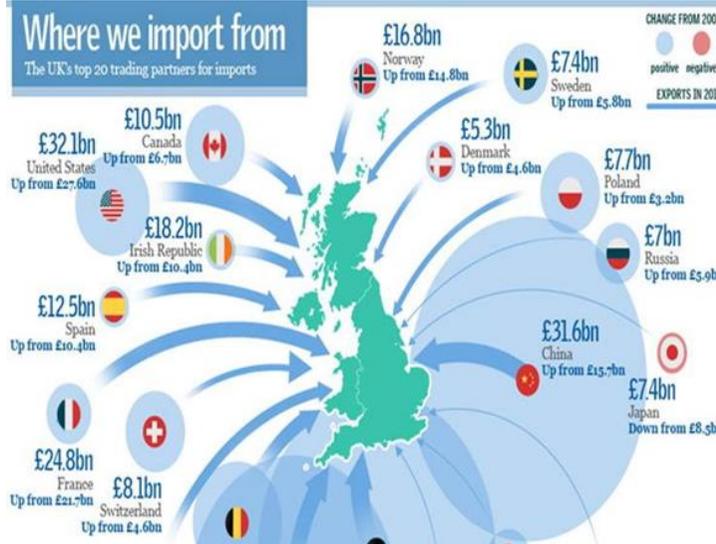
The way people spend and make money.

Key Information I will learn...

This is a Geography topic. We will be working as Geographers.



Sending goods and services from England to another country.



Imports and Exports



Ensures people receive a fair price for the goods they produce.



The spread of trade and ideas worldwide.

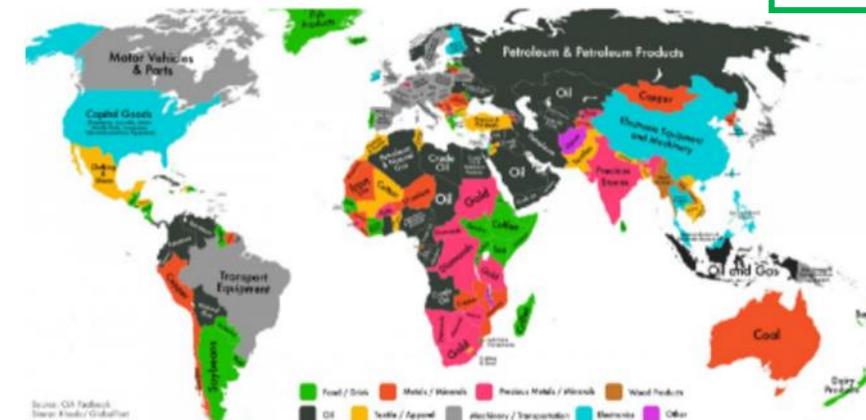
Highest-Value Exports

The UK ranked 7th in the global ranking of exports of goods and services.

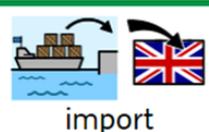
The UK ranked 6th in the global ranking of imports of goods and services.



Items that can be bought or sold.



The UK has access to a range of natural resources. For example gas and agriculture.



Bringing goods and services to England from another country.



Something found in nature that can be used by humans. For example, air, water, animals and fuels.

Natural resources



The buying and selling of goods and services.

The UK doesn't have the correct climate to grow bananas so we have to import them.



Topic Must Knows
Trade and resources

Key Facts

- Imports are the goods and services that are purchased from a country and brought to the UK.
- Exports are the goods produced in the UK and sold to other countries.
- The UK imports fruit, coffee beans, fish and computers.
- The UK exports car parts, medicine, gold and aircraft parts.
- The UK's biggest trading partners are the USA, Germany and China.
- The physical geography of a country can influence its highest value export. For example of this is coasts, natural resources and climate.
- The human geography of a country can influence its highest value exports. For example, technology, education and transport.
- Fairtrade is a worldwide movement that aims to help producers in less economically developed countries. It means the producers receive a fair price for their products.
- Trade has a big influence on where people may choose to settle as it provides jobs for the community.

Must know quiz score:.....

Key Vocabulary

Identity	The fact of being who or what a person or thing is.
Portraiture	The art of painting or taking portraits
Digital art	Digital art is any creative, artistic work that uses digital technology—such as computers, tablets, software, or algorithms—during its production or presentation.

Key Information I will learn...

Njideka Akunyili Crosby

Njideka is originally from Nigeria but trained as an artist in America, which is where she now lives. This duality of experience has given Njideka a fresh perspective on the places and cultures that she has experienced.



Yinka Shonibare

Yinka Shonibare is an interdisciplinary artist. Within his practice he explored Western art history and literature to question contemporary cultural and national identities within the context of globalisation.



Textiles - Waistcoats

Adapt	To change or alter something to fit a given purpose, or to improve it.
Annotate	To add notes which explain a plan or design.
Detail	The small features of an object.
Fabric	A natural or man-made woven or knitted material that is made from plant fibres, animal fur or synthetic material.
Fastening	A closing and opening detail on clothing such as buttons, zips and press-studs.
Knot	A join made by tying two pieces of string or rope together.
Properties	The way in which we describe materials for their appearance, strengths and weaknesses. (e.g. absorbent, flexible, transparent).
Running-stitch	A simple style of sewing in a straight line with no overlapping.
Seam	A line along the two edges of cloth that are joined or sewn together.
Sew	To join or fasten by stitches with thread and a needle.
Shape	The form of an object.
Target audience	A particular group of people who the product is aimed at.
Target customer	A particular type of person who the product is aimed at.
Template	A stencil made of metal, plastic, or paper, used for making many copies of a shape or to help cut material accurately. (e.g. biscuit cutter)
Thread	A thin string of cotton, wool or silk used when sewing.
Unique	One of a kind, original.
Waistcoat	A formal vest-type jacket with no arms, usually worn over a shirt and under a jacket. They sometimes have buttons or pocket detailing.
Waterproof	Material that does not allow water pass through it.

Did you know?

The first waistcoat was created in Britain in 1630 by King Charles II.



! Be careful when sewing your material together. Watch your fingers and ask an adult if you're unsure.

Key facts

Kapow Primary



Think carefully about your **target audience** or **customer**.
 What do they like (colour, texture)?
 What material would be best?
 What type of **fastening** will you use?



It is very important that you are **accurate** in your measurements for the waistcoat, otherwise it will not fit the person it is designed for.



Dodgeball is a fast-paced team sport played with two opposing teams on a rectangular court. The objective of the game is to eliminate players from the opposing team by hitting them with thrown balls, while also avoiding being hit yourself.



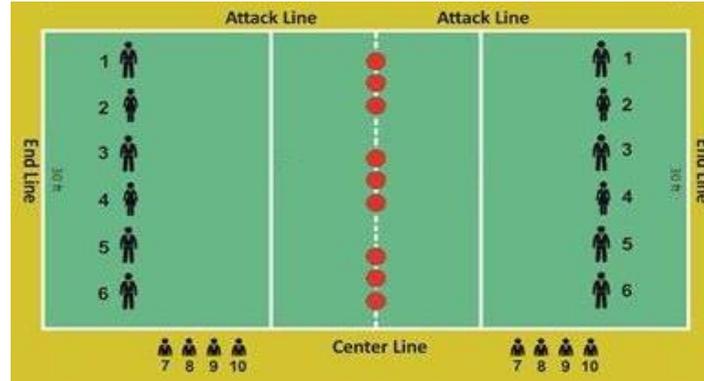
Justin Payan

Club: Doom

National Team: America

Position: middle

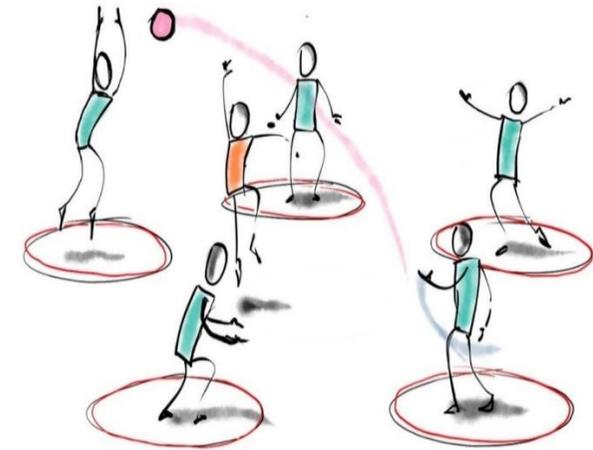
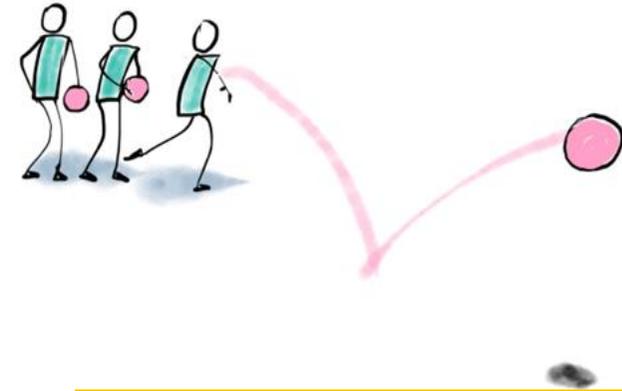
Fact: Justin Payan has won 4 elite national championships



speed positioning catch

dodge target bounce

strike roll



STEPS TO SUCCESS

These are the skills I need to achieve success in UKS2 Dodgeball:

To throw a ball at a moving target.

To use the most appropriate throwing technique for the situation.

To play catching games.

To dodge a ball by jumping and skipping.

To dodge a ball by jockeying and galloping.

To use peer evaluation to discuss strategies and tactics and apply these to my own game.

Handball is a team sport. Two teams of 7 players (including a goalkeeper) use their hands to pass the ball to each other with the aim of throwing the ball into the opponent's goal to score. Players can bounce the ball to dribble, but can only make 3 steps when holding the ball.



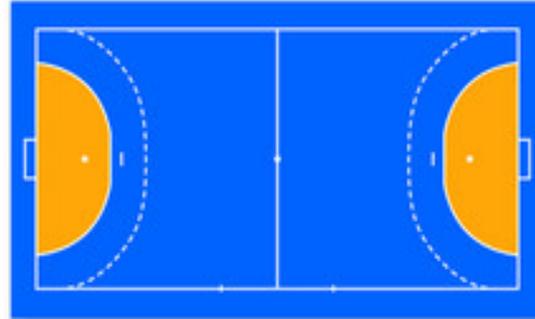
Mikkel Hansen

Club: Paris Saint Germain.

National Team: Denmark.

Position: Left-back.

Fact: Has won world player of the year 3 times.



space receive support
control accuracy power
dribbling intercept



STEPS TO SUCCESS

These are the skills I need to achieve success in UKS2 Handball:

To pass/send a ball whilst on the move.

To shoot whilst under pressure.

To pass the ball over different distances whilst moving.

To decide on ways to attack during games.

To decide on ways to defend during games.

To play handball games against others.

RE Unit 6.2 What do Christians believe about Jesus' death and resurrection?

Oak Class – Heptonstall School



Key Vocabulary	
Easter	Important Christian festival
Gospel	The teachings of Jesus
Holy communion	Also called the Eucharist – it's the sharing of bread and wine
Sacrifice	Giving up something of great value for the sake of something important
Salvation	Being saved from sins
Incarnation	A person who represents God in the flesh
Stations of the cross	Images that show the 14 stages of Jesus' journey on the day of his crucifixion
Pentecost	Celebrated 50 days after Easter

Key characters
<ul style="list-style-type: none"> • Jesus – central Christian figure • The disciples (Apostles) – followers of Jesus • Mary Magdalene – she was a witness to the crucifixion • Judas Iscariot – betrayed Jesus for 30 [pieces of silver • Pontius Pilate – the official who oversaw the trial of Jesus

Religious places
<ul style="list-style-type: none"> • Jerusalem – oldest city in the world in Israel • Garden of Gethsemane – where Jesus was arrested • Calvary – the hill where Jesus was crucified



Key Information I will learn...
Biblical events
The last supper – the final meal that Jesus shared
The crucifixion – the punishment given to Jesus
The resurrection – proof that Jesus was the son of God
The ascension – the physical departure of Jesus from earth

Easter events
Palm Sunday – week before easter Sunday commemorating when Jesus entered Jerusalem
Maundy Thursday – Thursday before Easter Sunday commemorating the Last Supper
Good Friday – commemorates the crucifixion
Easter Sunday – commemorates the resurrection of Jesus

The disciples
Simon, Peter, James (Elder)
John (brother of James the Elder), Andrew (brother of Simon), Bartholomew
(Nathanael), James (brother of Jude), Judas, Jude (Thaddeus)
Matthew, Philip, Simon, Thomas

Key questions
What is the significance of Palm Sunday to Christians?
What are the Christian traditions on Maundy Thursday?
What does betrayal mean?
What is the significance of the crucifixion to Christians?
Why do Christians believe that Jesus' death is so important?
What does sacrifice mean?
What is meant by Jesus' death as a sacrifice?

The Black Cross by Georgia O'Keefe



Golgotha by Giovanni di Paolo



Resurrected Christ and the Apostles by Edgardo De Guzman



The Resurrection Window



Mary Magdalene, The Witness' by Rowan LeCompte



End Goals
Children will
<ul style="list-style-type: none"> • Describe how Christians show their beliefs about Palm Sunday in worship. • Compare and contrast different gospel accounts of the Last Supper. • Give reasons for the Christian traditions on Maundy Thursday. • Give reasons for the importance of Good Friday to Christians. • Make a parallel between a work of fiction and aspects of the Easter story. • Explain what the gospel texts about the death and resurrection of Jesus might mean to Christians. • Explain why Pentecost might be important to Christians today. • Describe how Christians mark the Easter events in their church communities.



Year 5

Spreadsheets

Key Learning

- To refresh and extend understanding of formulae and functions from previous learning.
- To use formulae in 2Calculate to convert measurements between different units.
- To use 2Calculate to create and interpret line graphs that show how data changes over time.
- To analyse weather data by using spreadsheets to identify patterns.
- To use spreadsheets to plan and budget for an event.
- To use a spreadsheet to plan a holiday.

Key Resources



2Calculate

Key Vocabulary

Axis/Axes

The vertical and horizontal lines on a graph.

Forecast

A prediction about what will happen in the future.

Line Graph

A graph that shows changes over time using points connected by lines.

Budget

A plan that shows how much money will be spent and how much money is expected to come in.

Formula

A set of instructions that tells a spreadsheet what to calculate.

Meteorologist

A person that studies data from the atmosphere and oceans to make weather forecasts.

Continuous Data

Continuous data is data that is usually measured, rather than counted.

Income

Money that can be earned, usually from working a job or selling things, to pay for the things they need and want.

Plot/Plotting

Putting points on a graph for each piece of data.

Conversion

Changing a unit of measure from one form to another, whilst keeping its value the same.

Function

A built-in formula that performs a specific job automatically.

Trend

The direction data is moving (up, down, staying the same).



Key Images

Formula Bar



Line Graph



Add Sheet



Formula Wizard

Numeric Formats



Merge Cells

Key Questions

When converting between measure, what is the most important thing to remember?

Although the unit of measure may change, the **value** of that thing stays the same.

What is a line graph and how does it show trends?

A graph that shows changes over time using points connected by lines. They can show the direction that data is moving at a glance, e.g. upward, downward.

How can a spreadsheet help someone avoid spending too much money?

Spreadsheets allow people to have a clear overview of their finances and it is a great tool to help someone create and stick to a budget.

What is continuous data?

Continuous data is something that can be measured over time, such as the change of temperature throughout a day

What is a meteorologist?

A meteorologist is someone that collects and studies data from the atmosphere and oceans to make weather forecasts.

Why might a business use a spreadsheet instead of writing things down on paper?

Keeping things on paper can be risky. They can get lost or damaged, whereas spreadsheets are safe, secure and are often automated.

Key Vocabulary – Time

Quelle heure est-il ?
What time is it?



Il est **midi/minuit**

Il est **onze heures** Il est **une heure**

Il est **dix heures** Il est **deux heures**

Il est **neuf heures** Il est **trois heures**

Il est **huit heures** Il est **quatre heures**

Il est **sept heures** Il est **cinq heures**

Il est **six heures**

moins cinq **cinq**

moins dix **dix**

moins le quart **et quart**

moins vingt **vingt**

moins vingt-cinq **vingt-cinq**

et demie

Il est dix heures vingt **du matin**.
It's twenty past ten **in the morning**.

Il est quatre heures et quart **de l'après-midi**.
It's quarter past four **in the afternoon**.

Il est neuf heures moins cinq **du soir**.
It's five to nine **at night**.

Key Vocabulary

- The French language doesn't have words for am and pm, so **du matin** can be used for am, **de l'après-midi** from noon until about 6 pm. and **du soir** from 6pm until midnight.
- Time is usually expressed on a 24-hour clock. So, 3 pm. is usually expressed as **quinze heures** or 15h00 but you can also say **trois heures de l'après-midi**.
- Midi** and **minuit** are used respectively for midday and midnight.
- In English, the hours are separated by a colon e.g. 10:20, whereas in French, the hours and minutes are separated by an **h** for **heure(s)**, e.g. 10h20.

À quelle heure... ? At what time...?



...manges-tu ton petit déjeuner ?
...do you eat your breakfast?



...rentres-tu à la maison ?
...do you go home?



...manges-tu ton déjeuner ?
...do you eat your lunch?



...vas-tu au lit ?
...do you go to bed?



...fais-tu tes devoirs ?
...do you do your homework?

À...
At...



Key Vocabulary – At the Airport

arrivées arrivals	départs departures	provenance arriving from	décollé departed
à l'heure on time	en avance early	arrivé arrived	en retard delayed

Key Language in Context

<p>À quelle heure est-ce que l'avion de Londres est arrivé ? At what time did the plane from London arrive?</p>	<p>À quelle heure est-ce que l'avion pour Nice est parti ? At what time did the plane to Nice leave?</p>
<p>À quelle heure est-ce que l'avion de Bordeaux arrivera ? At what time will the plane from Bordeaux arrive?</p>	<p>À quelle heure est-ce que l'avion pour Marseille arrivera ? At what time will the plane to Marseille arrive?</p>
<p>À vingt-deux heures cinquante-cinq.</p> 	<p>À dix-neuf heures dix.</p> 

Je préfère les sciences.
I prefer science.

Je préfère l'histoire.
I prefer history.

Quelle matière préfères-tu ?
Which subject do you prefer?



Key Vocabulary – School Subjects

Le lundi/Le mardi/Le mercredi/Le jeudi/Le vendredi ...
On Mondays/On Tuesdays/On Wednesdays/On Thursdays/On Fridays...

...la première leçon est...
...the first lesson is...

...la dernière leçon est...
...the last lesson is...

<p>le français (m)</p> 	<p>le dessin (m)</p> 	<p>la géographie (la géo) (f)</p> 
<p>l'anglais (m)</p> 	<p>l'éducation physique (f)</p> 	<p>l'informatique (f)</p> 
<p>les mathématiques (les maths) (f)</p> 	<p>la musique (f)</p> 	<p>l'histoire (f)</p> 
<p>les sciences (f)</p> 	<p>la culture religieuse (f)</p> 	<p>À ... At ...</p>

À quelle heure commence la géographie ?
At what time does geography start?

À quelle heure finit l'éducation physique ?
At what time does PE finish?