



High Flyers



To seek, to learn, today...to shape, to lead, tomorrow

Winter 2020 Highsted Grammar School Issue 2

A long time ago in a galaxy far, far away...



Special Feature: The Mandalorian

This is the way...that your mind works!

Credit Disney



Enter the Photography competition or Maths Challenge to win prizes!!!

Learn to bake Gingerbread



votes at 16

Should the voting age be lowered?

Also inside this issue:

Discover Iguanas



Read about the author of the Term: Chris Riddell.

Discover a Christmas classic by Charles Dickens





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Develop your curiosity by reading further into this second issue of High Flyers.

Which subject inspires you to unlock your potential?

Enter the Photography competition or the Maths Challenge to be in with the chance to win prizes!



Credit Disney

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Should voting be compulsory?



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Chris Riddell





Special Feature: Psychology -

Making a Mandalorian!

Understand your mind!

What is Psychology?

Psychology is the scientific study of the human mind and behaviour. It aims to answer the question of why we are who we are, and why we do what we do!!

Psychology is a subject available for students to study at A Level at Highsted (when you're 16). However, there are a lot of very interesting things that we can look at regardless of how old we are!

The Mandalorian is a series shown on Disney Plus, set in the Star Wars universe. It follows the story of the bounty hunter Din Djarin (a bounty hunter is a person who hunts people for a reward). Din Djarin has a reputation for being a ruthlessly efficient bounty hunter – one of the best around – but despite his reputation, Din Djarin displays a softer side to his personality when he meets a certain small, green character...



Credit Disney

So how might we explain Din Djarin's character? Let's explore the different approaches that psychologists might take...

The Evolutionary approach

The evolutionary approach looks at the way in which our behaviours may have helped our ancient ancestors to survive. Working as a bounty hunter allows Din Djarin to gain resources and also provides frequent opportunities to display his fighting skills – this shows others that they should not mess with him!

This approach might also explain his care for 'The Child' – it is said that the 'cute' features of infants triggers a response in us that makes us want to care for them.

Nature v Nurture

This is a debate in Psychology, asking whether the way that we think and act is due to our genes (inherited from our parents) or how we are raised. As Din Djarin was adopted and raised by the Mandalorians, he shows their behaviours (rather than his parents), this supports the nurture side of the debate.

The Biological approach

This approach focuses on the effects of our physical bodies on the way we think and act. This can include the structure of our brain, the chemicals in our bodies and the genes that are passed on to us by our parents! Din Djarin shows a lot of aggressive behaviour and this has been linked to high levels of a hormone called testosterone that we have in our bodies.





Special Feature: Psychology – Making a Mandalorian!



The Behavioural approach

This approach suggests that we learn through a process called ‘conditioning’. One aspect of this is rewards and punishments: if we are rewarded for a behaviour then we are likely to do it again! This is used in activities such as dog training and even in schools through the use of house points, etc. Din Djarin receives a reward for his actions in the form of Beskar steel, which he values highly as it can be used to make new armour.

The Cognitive approach

This approach looks at the way we think: our mental processes. Din Djarin is very quick to react to potential dangers and usually displays a high level of intelligence and logic in his planning and actions.



People are complicated!

It is likely that many different factors lead to us developing our personalities and shaping the way that we behave. This can include everything from the chemicals in our bodies to our early experiences growing up!





Special Feature: Psychology - A psychological adventure!



Oh no, The Child has wandered off looking for food (frogs are his favourite). To save him, you will need to complete each of the following challenges. Good luck – and may the force be with you!

Challenge 1: Colour Chaos!

For this challenge you need to say the colour that the word is printed in, rather than the colour that is written. For example, for **BLUE** you would need to say green! Ask another person to time you as you try to name all of the colours without making a mistake! This is known as a 'Stroop Test' and is used to measure a person's mental processing skills...

RED	GREEN	BLUE	YELLOW	PINK
ORANGE	BLUE	GREEN	BLUE	WHITE
GREEN	YELLOW	ORANGE	BLUE	WHITE
BROWN	RED	BLUE	YELLOW	GREEN
PINK	YELLOW	GREEN	BLUE	RED

Challenge 2: Illusion and Confusion!

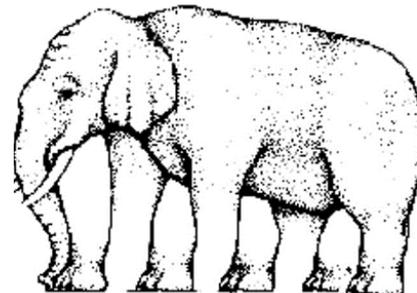
For this challenge you need to answer the following question about each image. Ask someone else for their opinion – do they agree? These are examples of optical illusions, and you can find many more online.



Are the pears the same colour?



Young lady or old lady?



How many legs does this elephant have?

Challenge 3: Random Reading!

To pass this challenge you need to read the following text as quickly as possible without making any mistakes. Ask another person to time you and check your accuracy!

MANY PEOPLE THINK THAT THAT OPTICAL ILLUSIONS ARE ARE TRICKS OF THE EYE - THEY THEY ARE NOT - THEY ARE TRICKS TRICKS OF THE BRAIN - OUR EYES EYES SEE THEM AND OUR BRAINS BRAINS INTERPRET THEM WRONGLY.

Congratulations – you have found The Child!

You can now go back to your spaceship and continue searching the galaxy to find his real family





It seems that all that people could talk about over the last month was the US General Election! If you were following the results, you will know that the new President Elect for the United States is Joe Biden. Were you surprised! Here at Highsted, students were gripped from minute to minute following BBC News, trying to predict what would happen next. Did you guess correctly what would happen?!

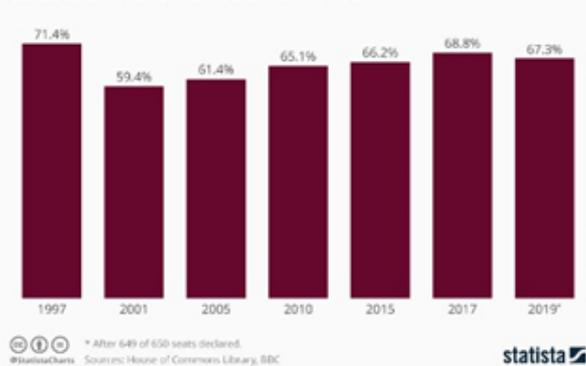
While everyone was obsessed with the outcome of the election, many historians and political scientists were more intrigued with who voted rather than the destination of their ballots. America recorded the highest number of votes ever cast at 154million! This is very exciting for democracy in the USA because it means more people are using their voice and this is what makes a democracy thrive. But enough about our neighbours across the Atlantic Ocean, what about here in Britain? Do most people in the UK use their democratic right? If not what can we do about it?

What can you learn about the trend of people turning out to vote? Do you think it should be compulsory to vote? Countries like Australia issues penalties to people over 18 who do not vote; do you think this should be introduced in the UK?

It took over one hundred years for men and women over the age of 18 to finally be able to cast their votes at the ballot box and yet in 2019, only 67% of people in the UK chose to vote. Some people believe that we should allow 16 year olds to vote – there is a huge campaign that calls on the government to change this law; do you think this would help our country? www.votesat16.org argue that 1.3million 16 & 17 year olds deserve to have their voice heard. Representation is key to a democracy, perhaps if young people could vote there would be more emphasis on policies that support young people.



How 2019's voter turnout measures up
General election voter turnout in the UK from 1997 to 2019



TimeLine of Voting Rights in the UK

1832 Representation of the People Act (the first Reform Act) extends vote to men who own land valued at £10. 1918 Representation of the People Act extends vote to all men over 21 and most women over 30. 1928 Representation of the People Act extends vote to all women over 21. 1969 Representation of the People Act extends vote to men and women over 18. 2008 Voting Age (Reduction) Bill - a Private Members' Bill - to reduce voting age to 16 and over. Bill does not become law.

Challenge: Produce a speech/poster persuading the government to lower the voting age to 16. Try to make it impossible to resist. Or Produce a speech/poster persuading people over the age of 18 in the UK that they must vote in the next General Election.



Understanding Classification

Let's start by considering our cutlery draws at home

Many of us will sort our cutlery into groups. Have you ever consider why we do this?



Grouping together the cutlery makes it easier and quicker to access the item that you need. Groups are made by looking at similar features. You may also find that you sub group your cutlery.



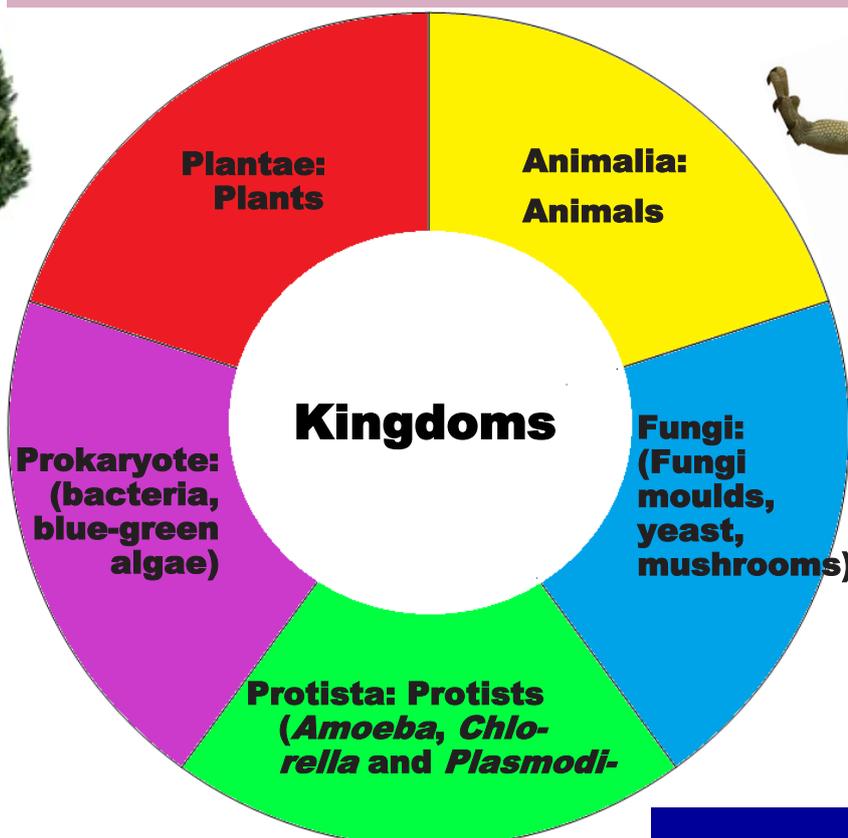
Are your tea spoons placed in a separate area from the desert spoons and table spoons? They are all similar because they are all spoons however, breaking the group up means it is easier and quicker to access the item that you need.

Over the next few issues we will be looking into how animals are classified and the reason for this.

Every living organism is classified using the same system, initially designed by Carolus Linnaeus in 1758. It was to group species of similar characteristics together and provide a uniform system for naming species.

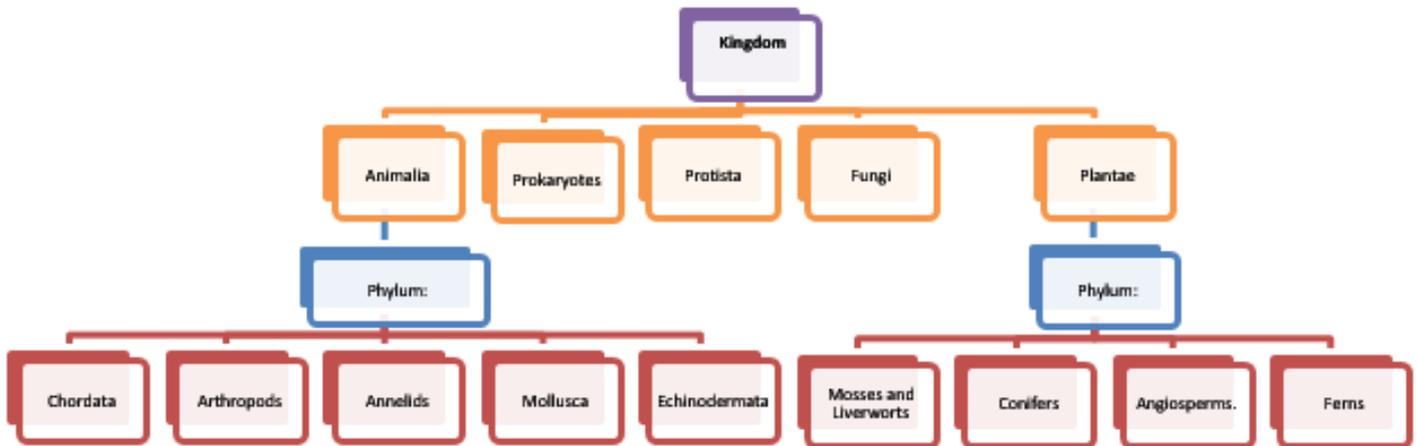
This Winter Issue looks at how organisms are classified under Kingdoms and Phylums.

When the system was first produced by Carl Linnaeus in 1758 – it only contain two Kingdoms similar to todays system, Animals and Plants. Now we have identified 5 different Kingdoms, into which organisms are first placed.



Linnean classification system:

Kingdom
Phylum
Class
Order
Family
Genus



Organisms are placed into their phylum due to similar characteristics.

The Kingdom Animalia contains phylum which include examples below:

- **Chordate – vertebrates – animals with backbones.**
- **Arthropod – which have jointed legs and an exoskeleton**
- **Annelids – contain segmented bodies**
- **Mollusca – contain a muscular foot**

Kingdom Plantae contains phylum which include the examples below:

- **Mosses and liverworts – reproduce by spores and have no proper roots**
- **Ferns– reproduce by spores, and have roots**
- **Gymnosperms (conifers) – have seeds inside cones and needle like leaves**
- **Angiosperms – (flowering plants) flowers produces fruit that cover seeds.**



Read the next issue to find out about how animals are classified by Order and Class.

The Killer Whale – Orca orca,

- **is an animal**
- **is a vertebrate**

Therefore it is classified as:

Kingdom: Animalia

Phylum: Chordata





Discover this Christmas Classic

A Christmas Carol, Charles Dickens

Here at Highsted, our Year 10 GCSE students are in the middle of studying Charles Dickens' novel *A Christmas Carol*. This is a story that you probably know. You may have read versions of it at primary school, for example. Or perhaps you watched a film version, or saw something on the stage?

In *A Christmas Carol*, a mean-spirited old miser, Ebenezer Scrooge, is utterly changed as a person through the visits of several increasingly terrifying spirits, who show him the error of his selfish and closed ways. At the beginning of the novel, Scrooge is described as "a squeezing, wrenching, grasping, scraping, clutching, covetous, old sinner! Hard and sharp as flint... secret, and self-contained, and solitary as an oyster." By the end, Scrooge has utterly reformed into a generous, cheerful man who helps to change the lives of others.

Why is *A Christmas Carol* so popular?

It is a novel that contains a great deal of the 'Christmas spirit'. Charles Dickens seems to thoroughly enjoy setting out, often in great detail, the bright luxury of Victorian London's Christmas shops, as well as carol singers, happy and generous people and a snowy London.

Dickens deals with both the very rich and the very poor in the novel. Conditions for the very poor were almost beyond our imagination. Really dreadful! It is interesting to see how social attitudes in England have changed since Dickens' time.

Many people love a good ghost story! The ghosts in the novel range from a jolly giant to an extremely creepy and menacing hooded figure that just silently points at things.

People enjoy stories and narratives that show great change in a character. Although the change in Scrooge is slow at first, the reader takes pleasure in the warmth, generosity and charity that flow from him by the end of the novel.



How could you experience the novel?

If you are an adventurous reader, reading the novel might be the best way! It is a challenging read, with quite a lot of very long sentences (a fashion in Victorian English) and some old-fashioned vocabulary.

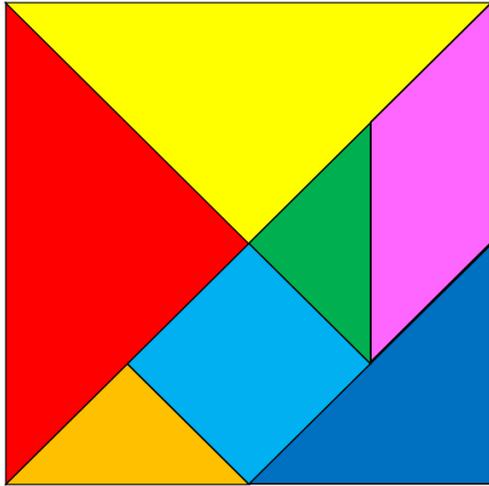
There are play/script versions of the novel that are a little easier to read.

Watch one of the film versions. There are several. One is a musical called 'Scrooge'. Another involves The Muppets. The version truest to the novel is probably the most recent version – an animated Disney production, although watch out for some jump-scares.



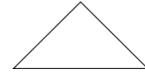
How to make a tangram

A tangram is an ancient Chinese puzzle which uses mathematical shapes in patterns.



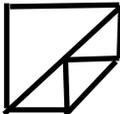
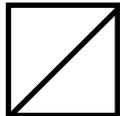
Using the shapes in your tangram, can you make:

- A) **A rectangle using 3 pieces.**
- B) **A triangle using 3 pieces.**
- C) **A trapezium using 3 pieces.**
- D) **A parallelogram using 4 pieces.**

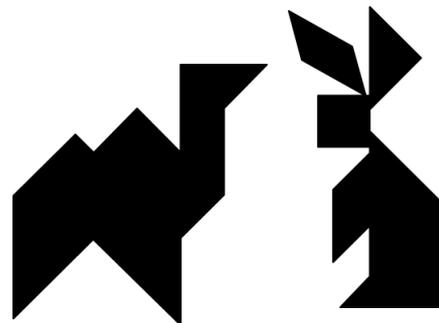
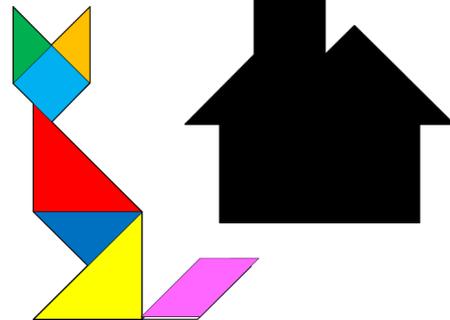


How to make tangram

1. **Draw a square.**
2. **Draw a diagonal line from the top right to the bottom left**
3. **Fold the bottom right corner to the centre of the square.**
4. **Fold the corner back out and draw a line over the fold.**
5. **Draw a line from the top left to the bottom right, stopping 3/4 the way along.**
6. **Draw a vertical line upwards from the end of the previous line.**
7. **Draw a line from the midpoint of the bottom of the square, at a right angle to the shorter diagonal line.**
8. **Colour and decorate your shapes.**

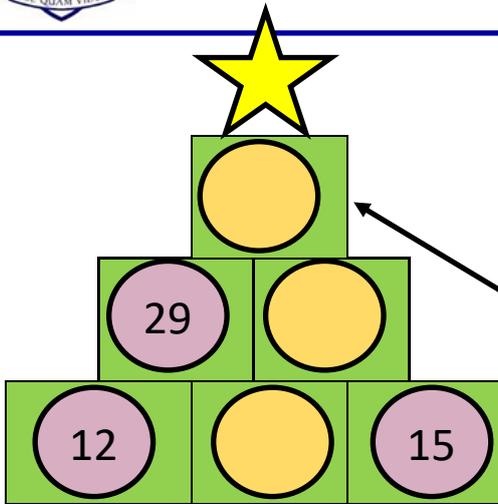


Try making some decorations using all the shapes in your tangrams.



For more tangram challenges go to <https://nrich.maths.org/14074>

Challenge 2



Reach to the Top

Each block is the sum of the two blocks it sits on. Work out the missing values.

Fact Corner

Angles in a triangle add up to 180°

Angles at a point add up to 360°

Vertically opposite angles are equal.

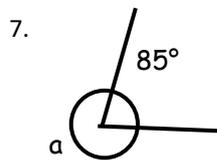
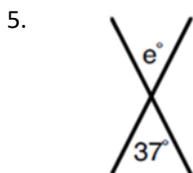
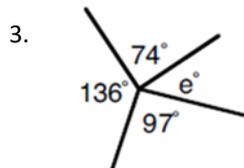
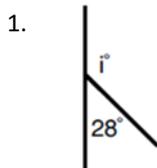
Use these facts to find the missing angles in the cross number.

Match the 3D shapes to its net.

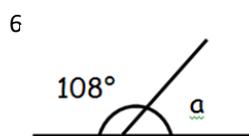
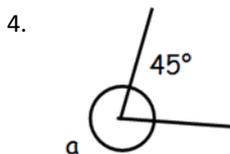
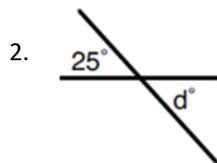
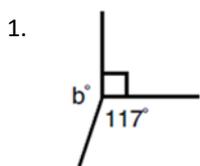
Angle Rules Cross Number

1		2	
		3	4
5	6		
	7		

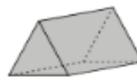
Across



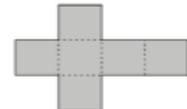
Down



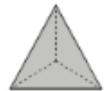
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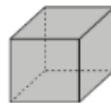
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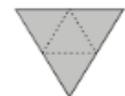
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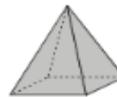
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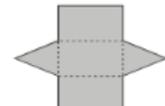
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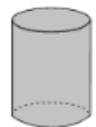
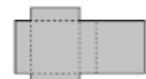
E



6



F



G



Send in your answers to:

ks3@highsted.kent.sch.uk

Place in the subject box:

Maths Challenge 2

Your name

Your Age

Your Primary school

And your answers!

Competition closes 15 January 2021



Musical notes

Discover a new talent!

Secret Musician

How would you describe your job?
I am a performer which involves acting, singing, dancing and playing my ukulele

Which instrument(s) do you play?
As well as singing I play the ukulele, not brilliantly but well enough to be able to accompany myself when I sing

How old were you when you started learning? I started dancing aged 8, having previously been a gymnast. I started learning the ukulele aged 38!

What did you enjoy about learning an instrument? I'm a natural extrovert so my parents sent me to dancing classes to burn off my energy! Now I get enjoyment from hitting the right notes when I sing with a symphony orchestra, or feeling the emotion in a dramatic scene or perfecting a dance move within a routine

How did you train for your career?
An injury led to the doctor suggesting dance as being 'more gentle' than gymnastics. From then I was involved in a lot of competitions. At 16 I auditioned for the musical CATS and moved from Lancashire to London where I have been performing ever since, I will be 49 on my next birthday!

What is your favourite piece of music? Adagio for Strings by Samuel Barber, and my favourite pop artist is Stevie Wonder

Your top tip for young musicians?
Grow a thick skin! As artists we are sensitive people But you will face rejection and judgement constantly, so be strong and confident in your own talent and never give up if you feel that being a performer is your vocation and your 'calling'!

Welcome to the Music page. Here you will learn about careers in music, unusual instruments and some of the signs and symbols that enable musicians from around the world to communicate through the universal language that is Music.

Lesser spotted instruments....

The Mandolin

Habitat: popular with Baroque composers such as Vivaldi, the mandolin is now more widely used in folk music, especially Bluegrass

Played: plucking or strumming the strings, often with a plectrum

Looks: similar in size to a ukulele, the mandolin has 8 metal strings (two of each note) and sound holes like the violin and other orchestral string instruments

Sounds: similar to a ukulele banjo

Claim to fame: all four members of Mumford and Sons bought each other mandolins for Christmas one year!



Can you find a recording of a mandolin?

Can you find and listen to Barber's Adagio for Strings?

Have you considered learning to play an instrument?

The Treble Clef



Musical signs and Symbols

Did you know?

-The Treble, or G clef, is used on the staff to show where the note of G is placed.

-Many instruments play from music written in the treble clef, it is also used for the right hand of the piano

-The Treble clef is not the only clef, there are also alto, tenor and bass clefs.



Food and Nutrition – Gingerbread!



Get creative with this Christmas classic!

How did the Gingerbread man become associated with Christmas?

The earliest explanation of person-shaped gingerbread cookies is from the 16th century. Elizabeth I of England surprised guests with “biscuits” that were designed in their resemblance.

Its relationship with the holiday season, which didn't come until later, is likely a practical one: some people feature the tradition to the weather, as ginger has a comforting way of warming the person who is eating it.

Others say that, since gingerbread was once well thought-out as a delicacy reserved for special occasions, its association to Christmas is natural.

These days, when we say “gingerbread,” we could be referring to a wide variety of tasty treats. Basically, the name applies to pretty much anything that heavily features the mix together of spices, ginger, nutmeg, cinnamon, cloves to name a few that we have come to associate with the holidays.



Try your hand at the classic gingerbread man



Adult supervision required

Method:

Preheat oven to 190 °C, gas mark 5.

Line the baking tray with grease proof paper.

Weigh all ingredients.

Sieve flour, salt, bicarbonate of soda, ginger and cinnamon into a large mixing bowl.

Heat the butter, sugar and syrup over low heat until they dissolve. Leave the mixture to cool for 30 minutes before adding to the ingredients in the large mixing bowl.

On a floured surface roll dough to ½ cm thick and cut into the required shape.

Repeat the process till all the mixture is used up

Cook in a hot oven for 15 minutes then remove and leave to cool.

Quick and easy Recipe:

225g plain flour

½ tsp salt

100g sugar

2tsp bicarbonate of soda

1 tsp ground ginger

½ tsp cinnamon

50g butter

100g golden syrup





Careers in sport: featuring Alex Scott

Get inspired by Alex's awesome skills

Alex Scott has recently been announced as the new presenter of the long running TV Sports quiz show 'A Question of Sport'. But this is only her latest triumph in a sporting career that has given her an incredible range of opportunities and experiences.

Alex was born in 1984 and at the age of just 8 she signed on with Arsenal Football Club. She played for Arsenal for most of her football career where she helped win many titles including the FA Women's Premier League and the FA Women's Cup. She even played professional football in America where she played for the Boston Breakers in 2010.

But her proudest moment and greatest victory in football was when she played for Great Britain against Brazil in the London 2012 Olympics at Wembley Stadium.

Scott's England career spanned an amazing 13 years, with 140 appearances, playing in 4 UEFA Women's Championships and 3 FIFA Women's World Cups! With her biggest achievements winning silver at the 2009 UEFA Women's Euros and bronze at the 2015 FIFA Women's World Cup.

After her retirement from professional football in 2017, Alex turned her focus to a career in TV broadcasting, appearing on programmes such as Soccer AM and Sky Sports. She became well known to a wider audience when she covered the 2018 FIFA World Cup, becoming the first female football player to be a pundit at a World Cup for the BBC. She is now a co-host of Sky Sports' *Goals on Sunday* programme.

However, you may know Alex Scott from her appearance in BBC's *Strictly Come Dancing Show* last year. An opportunity she would never have had without her successful career as a professional footballer and TV presenter.



Could you have the skills of Alex Scott?

Try this football challenge:

⇒ Keepy-uppies – how many times can you kick and keep the ball up in the air ?

⇒ Or if you would like more of a challenge try visiting this CBBC link:

<https://www.bbc.co.uk/cbbc/watch/kickabout-home-skills-football-to-do-in-home-and-garden>



Did you know.....?

Women's football was huge during World War One, drawing crowds of 53,000 even after the war had ended!

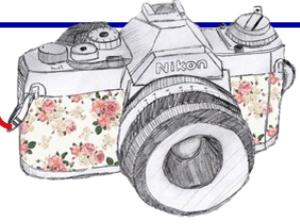




Photography Competition



A memory in a moment



Here at Highsted, we understand that 2020 has been an unexpected year for us all, and the festive season may be one like we have never had before! But we have captured memories through it all; from the neighbours clapping for the NHS to Captain Tom walking 100 laps of his garden. Whatever you have done or will do no matter how big or small, we want to see your creative approach to capturing a moment. Whether this be the first crunch of frost under your feet on your daily walk, to the little gems like the reflections on festive decorations. Feel free to think outside the box – to support your submission we would like a little sentence or two to explain your image and the idea behind it .



Send in your entry to:

ks3@highsted.kent.sch.uk

Place in the subject box:

Winter — A memory in a moment

Include:

Your name

Your Age

Your Primary school

And your picture!



Competition closes 15 January

The runner up and winning photos will be displayed in Issue 3 of High Flyers.





Recommended Reads

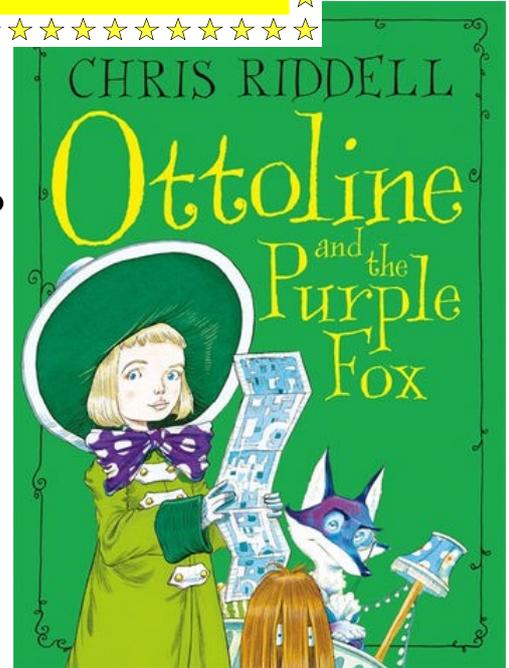


Be inspired by this imaginative illustrator!

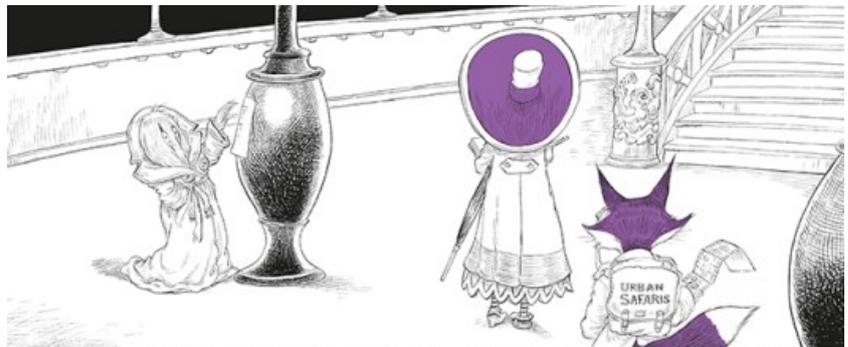
Ottoline and the Purple Fox

Ottoline and her best friend Mr Munroe love puzzles and adventures. They met the sophisticated purple fox who takes them on a secret tour of the city at night. But who is leaving poems on all the lamp posts and how does it involve the purple fox?

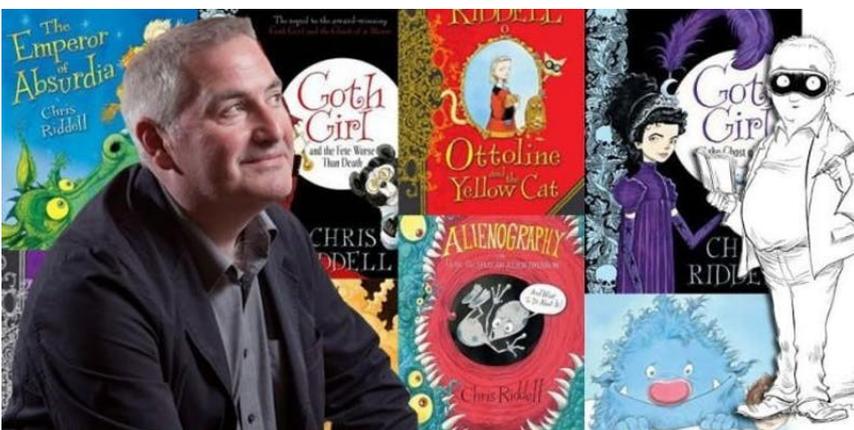
Ottoline and the Purple Fox is the fourth adventure for Ottoline and Mr Munroe (a bog creature from Norway). You don't need to have read the other Ottoline books as this is a standalone story, but it does mention previous adventures. These books have incredibly beautiful illustrations by Chris Riddell that show so much detail and I love the host of recurring characters that support Ottoline. These books are really quirky, original and funny. They are so engaging that they can easily be read in one sitting! Ottoline is a smart, independent and courageous character who isn't afraid to be different.



Credit Macmillian books



Author of the Term: Chris Riddell OBE



Chris Riddell OBE is a hugely talented writer and illustrator. He was the Children's Laureate 2015-17 and a champion of libraries.

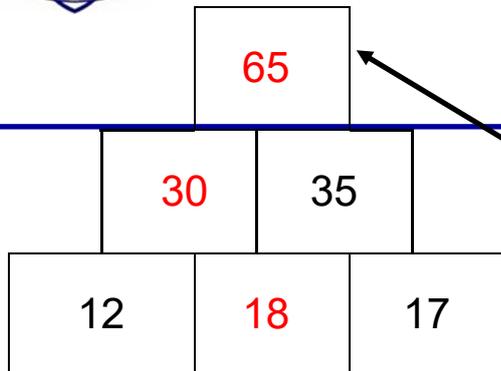
He has written several series Such as *Goth Girl* and the *Edge Chronicles* and illustrated books for authors like Neil Gaiman. He is also a celebrated political cartoonist for the Observer newspaper and uses his drawing to comment on current events.





Answers to Challenge 1—

Featured in Issue 1 of High Flyers



Reach to the Top

Each block is the sum of the two blocks it sits on. Work out the missing values.

What am I?

RHOMBUS

- I have 4 straight sides.
- All my sides are equal.
- I have two pairs of equal angles.
- I have two pairs of parallel sides.

Crack the Code— Answer the questions below. Match your answer up with a letter to spell out two words.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

1. What is $2 \times 2 \times 2 \times 2$? **16 (P)**
2. What is the sixth triangular number? **21 (U)**
3. What is one more than a dozen? **13 (M)**
4. Add one to the number of days in October, then halve your answer. **16 (P)**
5. The first prime number that has two digits. **11 (K)**
6. What is third square number? **9 (I)**
7. How many days are there in a fortnight? **14 (N)**
8. One quarter of 64. **16 (P)**
9. Any number divided by itself. **1 (A)**
10. One fifth of 100. **20 (T)**
11. The number of angles in a triangle. **3 (C)**
12. The number of sides in an octagon. **8 (H)**

★	Start with 23	- 7	X 5	÷ 2	$\frac{3}{4}$ of this	Double this	$\frac{1}{10}$ of this	X 7	+8	X 2	= ?
											100
★★	Start with 48	X 3	÷ 2	$\frac{5}{6}$ of this	÷ 20	Square it	X 9	+ 19	÷ 5	+ 17	= ?
											37
★★★	Start with 67	X 4	$\frac{3}{4}$ of this	- 1	10% of this	Halve this	Square it	$\frac{3}{4}$ of this	÷ 15	X 27	= ?
											135

Calculation Challenge

Starting with the number in the first box, perform the operations in order, to get the final answer. Which row can you complete in two minutes?





Acknowledgements



We would like to congratulate Oliver R (Age 8) from Borden Primary School for his dedication to complete the Maths Challenge competition.

Great work!



High Flyers was produced by Highsted Grammar School to inspire Key Stage 2 students in local primary schools to develop a passion for learning across the curriculum.

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