



# High Flyers

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



Easter 2023 Highsted Grammar School Issue 15



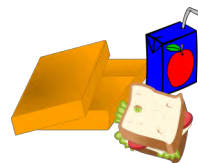
## International Women's Day



National Careers Week

### Also inside this issue:

Transitioning to Secondary: What do I need to pack?



Art: The Gemäldegalerie



Recommended Reads: Cressida Cowell





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Welcome to our fifteenth issue of High Flyers. This term the Highsted Virtue we have been looking at is Community Conscious.

Which subject inspires you to unlock your potential?



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# International Women's Day

## Our Pledges



This year's theme for International Women's Day was "Embrace Equity". The IWD 2023 Embrace Equity campaign theme seeks to get the world talking about why "equal opportunities are no longer enough" and can in fact be exclusionary, rather than inclusive.

Equity recognizes that each person has different circumstances, and allocates the exact resources and opportunities needed to reach an equal outcome.

Please see Highsted student pledges to challenge gender stereotypes, bias and equality.



This International Women's Day, I pledge to embrace equity by:

"Challenging the stereotype around women in STEM"



This International Women's Day, I pledge to embrace equity by:

"Standing with my Highsted Sisters"



This International Women's Day, I pledge to embrace equity by:

"Giving everyone a shoe that fits"



This International Women's Day, I pledge to embrace equity by:

"Providing a safe space for everyone to be themselves without judgement"



This International Women's Day, I pledge to embrace equity by:

"Fighting for change and improvement in quality"



This International Women's Day, I pledge to embrace equity by:

"Encouraging others to remain confident in themselves, and to stand up for themselves"





# International Women's Day

## Your Pledge



Print off this page to write your own pledge!

What will you come up with?



This International Women's Day, I pledge to embrace equity by .....

.....

.....

.....





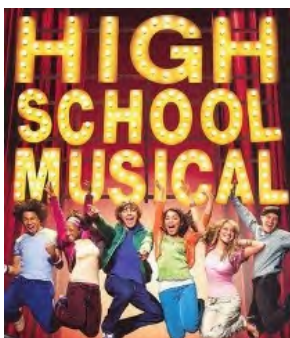
## Anti-Bullying Week Mental Health Week



This year's theme for Children's Mental Health Week was **Let's Connect**. Its aim was to get us all to consider meaningful connections that we make to support our mental health.



Connecting to other individuals is vital for our wellbeing. When you have healthy connections - to family, friends and others - it leads to positive mental health and a sense of wellbeing. Without this individuals may feel isolated and lonely, and this may have a negative impact on their mental health. The theme **Let's Connect** is about joining in and encouraging and supporting others to join in to make meaningful connections.



There are many different activities that you can do with each other to connect. Here is an example from *Place 2 Be*. Invite a group of friends to learn a dance that you can perform together. For inspiration have a look at the song, 'We're All in This Together' from High School Musical.



Could you come together to perform this to your class or in an assembly. Remember this is about connecting, collaborating and joining in, and not about a 'perfect performance'. Consider how dancing and singing together made you all feel?

**CONNECTING THROUGH  
DANCE AND SONG**





# Careers: Volunteer Work



## Discover



Being a volunteer can be one of the most rewarding jobs that you can undertake in your career pathway. There are many different volunteer opportunities that you can participate in within the UK or worldwide. Some of the opportunities are free however, others come with a small cost, in order to support the project that you are working for, or to cover food and accommodation. There is a vast range

of volunteer opportunities available and it is important to look for one that suits your interests.

One of the volunteer opportunities available to you is Sea Turtle Tagging.



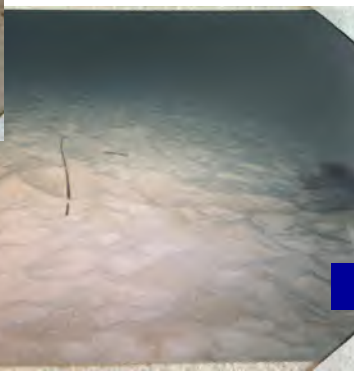
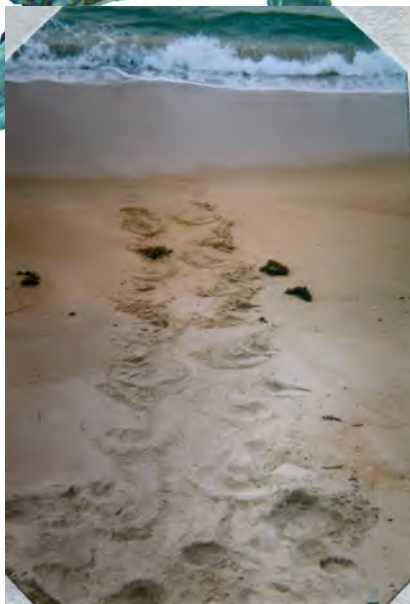
Along the coast of Thailand there is a small island called Kho Phra Thong, in which an Italian organisation Naucrates not only managed to tag the first Oliver Ridley Sea Turtle in Thailand to protect its feeding and breeding grounds but the project has developed to conserve the local area including coral reefs and mangrove forests.

### Working as a volunteer:

Each morning before the sun rises volunteers walk the beach for two hours using a torch to scan the shoreline to look for sea turtle tracks. The tracks on the left show a sea turtle that has come out of the water ready to lay its eggs in a nest.

The aim is to find the turtles nest after the eggs had been laid, in order for the eggs to be relocated, so they are safe from poachers, as well as to catch the sea turtle, to tag it before it returned to the sea.

Once the nest had been located the leaders of the projects are informed, leaders and the volunteers dig up the eggs and transport them closer to the projects accommodation and place them back into the sand above the high tide line. The relocated nests are monitored by volunteers, ready to see the eggs hatch.





# Careers: Volunteer Work



Relocated Olive Ridley Nests

It is important that sea turtles have time to lay the eggs, to protect future generations and on their return to the sea, are caught to tag.

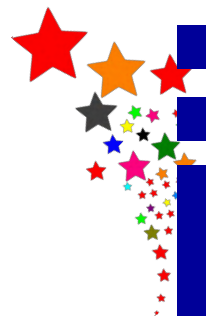
Sea turtles are carried to the small holding area located close to the accommodation. A disposable tracker is glued to the back of the sea turtle. The tracker is due to last around about a year before the glue decomposes and the trackers would fall off the turtle. Once the turtles are fitted with the tracker the turtles are then carried back to the shoreline and released back into the sea.

Just as the turtle would have left the nest and wandered down the beach into the sea, the turtle was returned to the same position.

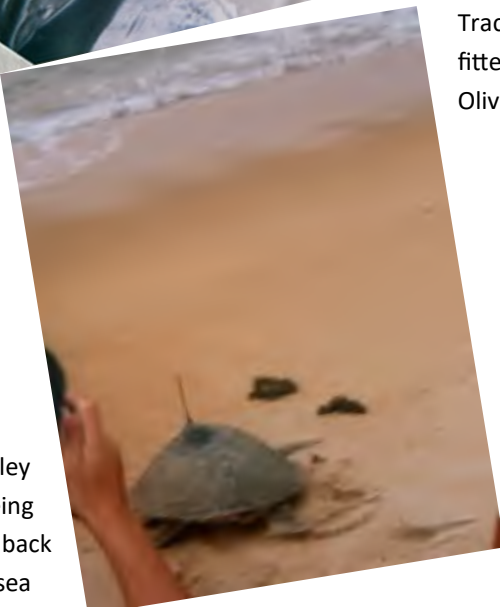
The work that volunteers do, is essential to the running of projects such like this.

Due to the help of volunteers Naucrates became the first organisation to tag Olive Ridley sea turtles enabling them to move forward with plans to protect the turtles feeding and breeding grounds.

Protecting the future generation of Olive Ridley Sea turtles in Thailand.



Disposable Tracker fitter to an Olive Ridley



Olive Ridley Turtle being released back into the sea



Discover

## Physics Asteroids



### Asteroid 2023 BU about to pass Earth in one of closest ever encounters



Asteroids are small, rocky objects that orbit the sun.



An asteroid the size of a minibus came close to colliding with Earth on Friday 27 January 2023.

The asteroid, named BU 2023 only became known to NASA scientists on Saturday 21 January 2023. NASA predicted that there was no threat to the Earth! The

asteroid would come close, but not collide with the Earth. Asteroids smaller than 25 metres burn up in our atmosphere and therefore do not pose a threat. At its closest point, the asteroid was 2200 miles away from the Earth, closer than communication satellites that orbit the Earth, and less than 3% of the distance between the Earth and the Moon. The asteroid was tracked by live stream and swung past the Earth. To see

future asteroids that are coming close to the earth visit the [NASA website](#). NASA state there is no threat to Earth for over 100 years.





PE

## The Boat Race



### What is the boat race?

It is an annual rowing race between the Cambridge University Boat Club and the Oxford University Boat Club on the River Thames, London.

The men's race was first held in 1829 and has been held annually since 1856, except during the First and Second World Wars (although unofficial races were conducted) and the COVID-19 pandemic in 2020. The first women's event was in 1927 and the race has been held annually since 1964. Look out for this year's race on Sunday 26 March 2023 at 4:00 pm.

### CHALLENGE QUESTIONS

1. Do you know how many people there are in the boat for each team?
2. How many races have there been in the men's competition since it started?



Rowing is a great activity that requires strength and stamina.

One of the most important types of fitness to have when rowing is muscular endurance because your arms have to keep rowing without a break.

### Where can I find out more about rowing?

There are places you can row in Swale: check out this link

[www.visit-swale.co.uk](http://www.visit-swale.co.uk) and look up rowing clubs. There is Queenborough Rowing Club on the Isle of Sheppey and Cinque Ports Rowing Club based in Faversham.



Rowing doesn't have to take place on the water you can use a rowing machine as well.

### Who has the best muscular endurance in your family?

- Lay on the mat with the knees bent, feet flat on the floor and your hands by your ears
- Get someone to hold your feet on the ground
- Say "GO" and start the stopwatch!
- Sit up touching the knees with your elbows, then return to the floor.
- Do as many sit-ups as possible in 30 seconds



Don't forget to do a good warm up and lots of stretches before



CHALLENGE ANSWERS  
1. 9 there are 8 rowers and a COX  
2. 168 mens races





# PE

## Swimming



### The History of Swimming

Swimming has been around since 2500BC in Egypt and then later on by the Greeks and Romans. It became a competitive recreational activity in the 1830's and in 1828 the first indoor swimming pool opened to the public in England. Swimming takes place in pools or open water (seas and lakes). Open water swimming has become really popular recently.

Swimming is really popular in Swale and there are many pools you can visit including, Swallows in Sittingbourne, Faversham Pools and Beachfields and Sheerness Swimming Club on the Isle of Sheppey.

Can you name the main swimming strokes that make up competitive swimming that takes place in the Olympic games?

#### Ellie Symmonds (OBE)



Ellie is a former Paralympian swimmer who swam in S6 (swim classification) events. She first shone in the Beijing 2008 Olympics winning two gold medals at the age of 13. She went on to win more golds in the London Olympics in 2012 setting the record for the 400m freestyle. She took another gold at Rio 2016 setting another WR in the 2016 Paralympics. You will have seen Ellie more recently in Strictly Come Dancing.

#### Adam Peaty (OBE)



Adam is an English swimmer who specialises in the breaststroke. He won the gold medal in the 100 metre breaststroke at the 2016 Summer Olympics, the first by a male British swimmer in 24 years, and retained the title at the 2020 Summer Olympics in 2021, the first British swimmer ever to retain a title. As a young boy, he developed an acute fear of water and hated the bath after his brothers told him that sharks may come up through the plughole!

Can you unscramble these anagrams? They are also a clue to the question above.

CKABSTORKE

EEFRESTLY

TTERBUYLF

REABSTSTOKER

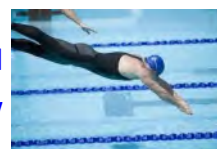
### Swimming the English Channel

Swimming the English Channel (La Manche) is a challenge that some people try. It was first conquered by Captain Matthew Webb who swam it in 1875 using breaststroke. It took him 21 hours to swim the 21.26 miles between England and France.

Can you guess how many 25m lengths it would take to cross the English Channel?

### Technology in Swimming

Swimming times have dropped over the years due to new technological developments in swim suits. The first ever swimming events took place in open water in full body suits. Now swim suits are created to make them



1352 LENHTS

BUTTERFLY INDIVIDUAL MEDLEY  
FREESTYLE BACKSTROKE BREASTSTROKE

ANSWERS



## Morse Code and Modern Coding Systems

Codes have been used over the centuries to pass on information or encrypt messages. Before modern computers and the internet, messages could be passed over long distances using a device known as a telegraph and a special code called Morse Code. Before the telegraph, most long distance messages were written or memorised and carried by messengers travelling by horse. This meant that messages could take days to get delivered.

A Telegraph



The invention of the telegraph meant that messages could be sent and received almost instantly. Messages were sent over the telegraph by tapping a code for each letter using long and short signals. These signals were converted into electrical impulses and sent over telegraph wires. The receiver at the other end converted the impulses into a series of dots and dashes which were decoded to represent letters. Short signals are referred to as dits (represented by dots). Long signals are referred to as dahs (represented by dashes). Morse code was invented by an American named Samuel Morse, born in 1791. He chose the shortest codes for letters which were used more frequently so that messages could be passed as quickly as possible. He noticed that 'e' was the most commonly used letter in the local printing press and gave 'e' the shortest code, 'dit'. The 'dits' and 'dahs' each lasted a specified amount of time so the message could be read clearly.

### Morse Code

A . -	N - .
B - . . .	O - - -
C - . - .	P . - - .
D - . .	Q - - - -
E .	R . - .
F . . - .	S . . .
G - - .	T -
H . . . .	U . . -
I . .	V . . . -
J . - - -	W . - -
K - . -	X - . . -
L . - . .	Y - . - -
M - -	Z - - . .

A Dit (dot) takes - 1 unit of time  
A Dah (dash) takes - 3 units of time  
Pause between Dits/Dahs - 1 unit of time  
Pause between letters - 3 units of time  
Pause between words - 7 units of time

### Challenge:

Can you tap out your name in Morse code?

In World War II, German soldiers sent encrypted (coded) information to each other. An English Mathematician, Alan Turing, supported by a team of mathematicians at Bletchley Park, created a special machine that was able to break the code (known as the Enigma Code). This enabled British forces to intercept messages and discover secret information held within, which helped shorten the length of the war. The creation of machines to break encrypted codes led to the development of modern computers.



# Maths

## Coding



Like the telegraph, computers also work using electrical signals. They send and process information a bit like Morse code. Instead of dots and dashes it's either power on (1) or off (0). This code is known as binary as there are only two signals. The pattern of 0's and 1's can represent different information. Letters can be represented using ASCII code. ASCII stands for American Standard Code for Information Interchange. Extended ASCII codes are different 8 bit codes that each represent a letter or symbol on the keyboard. The ASCII code for A is 01000001. The ASCII code for B is 01000010.

Codes play an important role in communication and information interchange. Various coding systems have existed over time to meet different needs. In modern technology, mathematicians and computer scientists have developed advanced encryption techniques using mathematical algorithms. This is like a set of instructions that encodes data using encryption codes. The data can then only be read by the person or computer that has the decryption key. Modern encryption involves the use of encryption keys involving the product of two large prime numbers. The decryption key knows the two prime numbers to use and is therefore able to decode correctly. Prime numbers are used because it is extremely difficult for someone (or a computer) to find the correct two prime numbers when you have a very large number.

### Key Terms

#### **Product**

A product is the result of a multiplication.  
For example the product of 3 and 5 is 15.  
The product of 7 and 11 is 77.

#### **Factor**

A factor is a number that divides into another number exactly without leaving a remainder. For example, factors of 6 are:  
1, 2, 3 and 6.

#### **Prime number**

A prime number is a number that has exactly two factors (itself and 1.).

**The first ten prime numbers are:**

**2, 3, 5, 7, 11, 13, 17, 19, 23, 29**

### **Challenge:**

**Can you work out which two prime numbers multiply to give the following:**

1. 58
2. 85
3. 143
4. 299
5. 493

*Hint: I have only used prime numbers less than 30.*

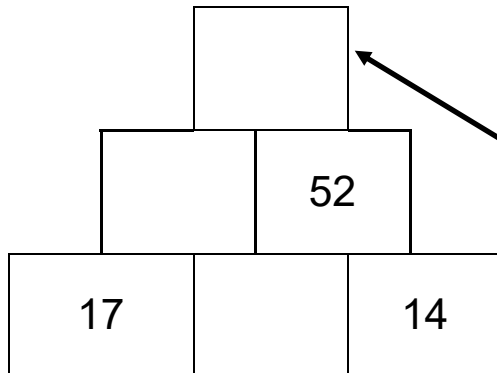
Check your answers at the bottom of the page.

Answers: 1.  $2 \times 29$ , 2.  $5 \times 17$ , 3.  $11 \times 13$ , 4.  $13 \times 23$ , 5.  $17 \times 29$





# Maths Challenge



## Reach to the Top

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

## What am I?

I have 4 sides

My opposite sides are equal

My opposite sides are parallel

My opposite angles are equal

I have rotational symmetry of order 2

**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

- The number of sides in a triangle.
- The largest odd number less than ten.
- The digits of this number add up to 9.
- 10% of 30
- The time at midday.
- 25% of 20
- The largest prime number less than 20.
- A quarter of 68.
- The seventh triangular number.
- A unit.
- 20% of 90
- What number multiplied by itself gives 25?

★	Start with 12	— 6	X 10	÷ 2	Half of this	Double this	$\frac{1}{10}$ of this	X 7	+8	= ?
★★	Start with 18	X 3	÷ 2	$\frac{1}{3}$ of this	Square it	Subtract 6	÷ 5	X 4	+ 4	= ?
★★★	Start with 36	X 4	$\frac{3}{4}$ of this	+ 2	10% of this	Double this	- 2	$\frac{3}{4}$ of this	Square it	= ?

## 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 one minute?



# The Gemäldegalerie

## Art in Berlin

During the last few months the Gemäldegalerie, in Berlin, has had a special gallery on including some amazing pieces from famous artists, such as Donatello, Rembrandt, Holbein and Canaletto to name a few.

A student who visited stated "It was really exciting to be able to witness such masterpieces in person, especially visiting



the room full of Rembrandt pieces. After looking at and analysing his work for years, it was unbelievable to be able to stand and admire his work in person. I also found it very calming and meditative to listen to music and be in a room full of amazing pieces of artwork."

Canaletto, one of the artists on display, likes to work with oil paint and specialises in looking at landscapes, specifically many canals and architecture in Venice. A student said: "I really enjoy his work as he includes every single piece of detail in his enormous paintings. But it is also very impressive that he

Painted this without any picture. He would have painted straight from observation and in my opinion, that makes him all the better of an inspirational artist."

"My favourite piece of his I witnessed was this of Venice. It was a very large piece and looking up closely, you could see all of the detail all the way up to the colours and folds in a person's clothing. It was such an amazing experience seeing his work."

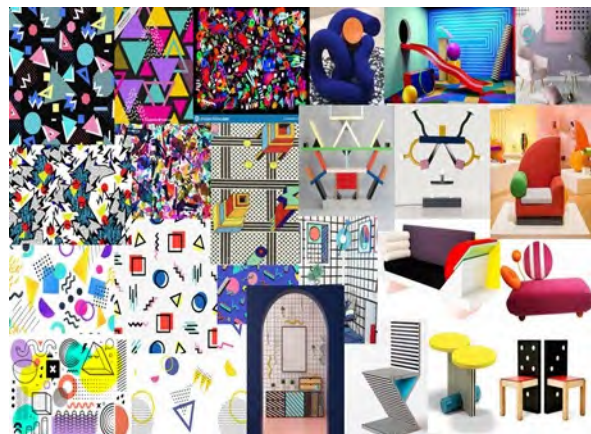


"Overall, this was one of the best experiences I've had, as well as being in a new city, it was lovely to have the opportunity to look at these amazing pieces in person and be able to analyse these closely."



### Night Lights

At Highsted the Year 8 students have been able to design and create their own nightlight that are printed off and can be use as their own personalised light. They looked at different art styles such as Pop Art to gain inspiration. They made some initial ideas and after that they worked on the computers to make their final designs.



Using the pictures as inspiration how would you design your own nightlight? Use the space below to jot down some ideas!



## Recommended Reads

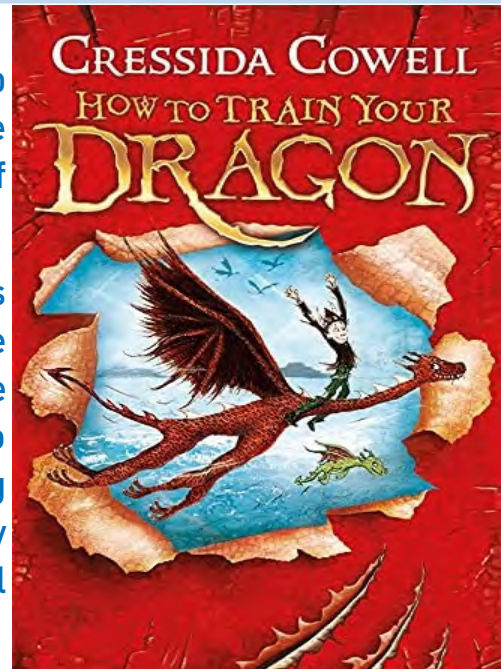


### Cressida Cowell

#### A tale of Friendship and Bravery

Set in a fictional Viking world, follow Hiccup Horrendous Haddock the Third as he overcomes obstacles on his journey of "becoming a hero, the hard way".

As the novel opens, Hiccup and others in his tribe are preparing to enter the dragon cave where the young dragons are sleeping off the last few weeks of hibernation. Each child is to choose a dragon, put it in the basket, and bring that dragon back out of the cave. When they emerge, Hiccup discovers he has a small dragon of indeterminate breed with no teeth...



*"Being frightened is not the same as being a coward."*

Cressida Cowell was born on the 15 April 1966. She is best known for her book series "How to Train your Dragon", which in recent years has become an award-winning franchise by DreamWorks.

In addition to this Cowell is currently working on her new series called the "Emily Brown" series.





# Food Technology:

## Chicken Skewers



Delicious recipes from our Food and Nutrition Department for you to try!

### Spicy Spanish Chicken Skewers

#### Ingredients:

##### **For the chicken skewers**

- 1 tsp sweet or smoked paprika
- 1 tsp ground cumin
- 1 tsp ground coriander
- 1 fresh thyme sprig or ¼ tsp dried thyme
- 1 garlic clove
- 2 tbsp olive oil
- 1 tsp sherry vinegar or red/white wine vinegar
- 2 chicken breasts
- Salt and pepper for seasoning
- 4 wooden skewers

##### **For the spicy dipping sauce**

- 100g (7oz) Greek-style yogurt
- 1 tbsp sweet chilli sauce
- 1 lime
- ¼ tsp smoked paprika
- ½ tsp ground cumin
- ½ tsp ground coriander



#### Method (Adult supervision required):

1. Using your washing up bowl, soak the skewers in cold water.
2. Cut the chicken into cubes, then place into a glass bowl.
3. Crush the garlic clove and add to the bowl
4. Zest and juice the lime. Add the zest and 1tbsp of lime juice to the small mixing bowl.
5. Place all of the other ingredients for the dip into the small mixing bowl and combine thoroughly.
6. Turn your grill on to preheat on a medium-high heat.
7. Check that your grill tray has a rack and is lined with foil.
8. Thread your chicken cubes on to the skewers.
9. Place the skewers on the grill tray.
10. Grill the skewers until lightly browned.
11. Check that the temperature of the chicken is 75°C or above using a food probe.  
**Ensure that you wipe the probe with a probe wipe before and after use.**
12. Leave your chicken to cool in your container with the lid off.
13. Transfer your dip to your other container, then refrigerate.





# Food Technology:

## Chicken Skewers



Delicious recipes from our Food and Nutrition Department for you to try!

### Fresh Greek Chicken Skewers

#### Ingredients:

##### **For the chicken skewers**

- 2 chicken breasts
- 1 tbsp olive oil
- 1.5 tsp white vinegar
- 1 lemon
- 1 garlic clove
- 1/4 tsp dried thyme
- 1/4 tsp Italian/mixed/Provencale herbs
- Salt and Pepper for seasoning
- 4 wooden skewers

##### **For the tzatziki dipping sauce**

- 1/2 cucumber, diced
- 1 garlic cloves
- 1/2 tsp salt
- Fresh ground pepper to taste
- 100g Greek yoghurt
- 2tsp extra virgin olive oil
- 1 tbsp fresh mint



#### Method (Adult supervision required):

1. Using your washing up bowl, soak the skewers in cold water.
2. Cut the chicken into cubes, then place into a glass bowl.
3. Crush the garlic clove and add to the bowl.
4. Zest and juice the lemon. Add the zest and 1tbsp of lemon juice to the bowl.
5. Add all of the other ingredients for the skewers to the chicken and mix thoroughly.
6. Crush the garlic for the dip, then place it in a small mixing bowl.
7. Chop the mint and place it in the small mixing bowl..
8. Turn your grill on to preheat on a medium-high heat.
9. Check that your grill tray has a rack and is lined with foil.
10. Thread your chicken cubes on to the skewers.
11. Place the skewers on the grill tray.
12. Grill the skewers until lightly browned.
13. Check that the temperature of the chicken is 75°C or above using a food probe. **Ensure that you wipe the probe with a probe wipe before and after use.**
14. Leave your chicken to cool in your container with the lid off.
15. Transfer your dip to your other container, then refrigerate.





# Food Technology:

## Vegetarian Skewers



Delicious recipes from our Food and Nutrition Department for you to try!

For a veggie alternative try these Halloumi Skewers

### Ingredients:

120g halloumi cheese  
1 yellow pepper  
1 courgette  
140g cherry tomatoes  
½ a bunch of fresh mint , (15g)  
½ a fresh red chilli , optional  
1 lemon  
olive oil



### Method (Adult supervision required):

1. On a chopping board, cut the halloumi into 2cm cubes, then add to a large mixing bowl.
2. Carefully cut the pepper in half from top to bottom, then trim away the stalk, seeds and any white pith (you can use teaspoon to do this), then slice into 2cm pieces and add to the bowl.
3. Cut the courgette in half lengthways, then cut into half-moon slices, roughly ½cm thick, then add to the bowl along with the tomatoes.
4. Pick the mint leaves onto a board and finely chop them, discarding the stalks. Carefully deseed and finely chop the chilli, if using.
5. Use a microplane to finely grate the lemon zest onto a board, then add to the bowl along with the mint leaves, chilli (if using), and 2 tablespoons of olive oil.
6. Season with a pinch of pepper, then mix well to coat.
7. Preheat the grill to high.
8. Lightly grease a baking tray with oil, then put aside.
9. Thread and divide the halloumi cubes, cherry tomatoes, pepper and courgette pieces between the skewers.
10. Place onto the greased tray and cook under the grill for 10 to 12 minutes, or until the cheese is golden and the veg are soft, turning halfway through.
11. Serve with a fresh green salad and some flatbreads or pittas.





# English

## Highsted Book Awards



Highsted  
Grammar School

### Highsted Grammar School Book Awards

To celebrate World Book Day 2023, Highsted students in all years nominated their favourite books for an award.

If you could join in, which book would **YOU** nominate?

Write your nomination and send it to: [ks3@highsted.kent.sch.uk](mailto:ks3@highsted.kent.sch.uk)

**Tips:**

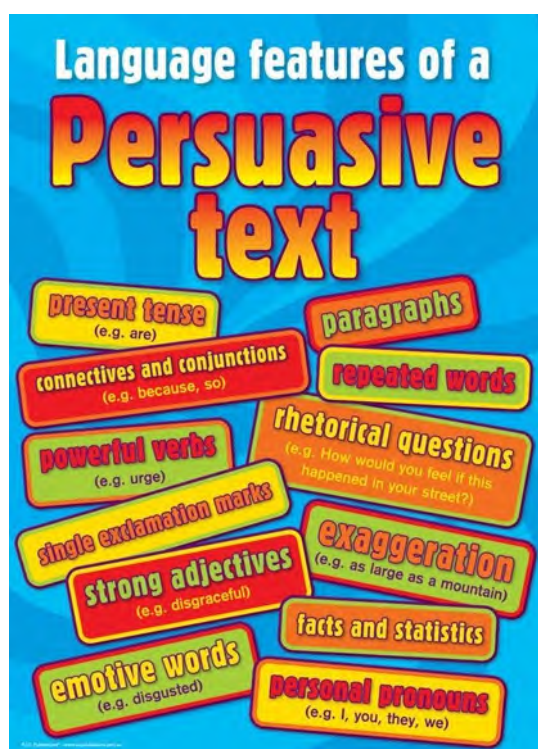
FAO Mrs Field

**First include:**

- the title and author of your book
- the genre
- a short plot synopsis that mentions the main characters

**Then include:**

A persuasive paragraph explaining why we should choose your book.



The most persuasive entry  
will win:

NATIONAL  
BOOK  
tokens





# Transitioning to Secondary

## What do I need to pack?



In the previous article, we looked at what our journey to secondary school would be like and how we are going to get there. Its now time to start thinking about packing **your school bag!**



At secondary school, there are lots of **new lessons** and you will be moving to different rooms for each class so it is important to have a school



What do I need to pack?

Have a go at thinking about what you may need to pack in your new school bag - it could even be fun to draw what you want your bag to look like!



Don't worry if you are not sure what school you will be going to yet, just think about what school /s you might like to attend.





## *Acknowledgements*



**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.**



**With thanks to Miss Baker, Miss Gardiner, Mrs Tirimisiu, Miss Appleton, Mrs Rennie, Mrs Springhall, Mrs Field and our sixth formers for sharing their enthusiasm for their subjects.**

**A special thank you to Mrs Longley.**

