CRANBUZZ

Cranbrook School's Newspaper

THE FINAL EDITION (2021-22)

Editors: Mia Jackson, Mayah Reid, Martha Tatnell, Issy Wright.

Thank you to everyone who has contributed to our Cranbuzz editions this term, preceding terms and to our readers. This is our sixth and final edition for this school year, so we hope you enjoy it!

Have a lovely summer holiday.

We wish you a long and well-deserved break!

Love The Cranbuzz Editors 2021-22.

A LITTLE NOTE FROM EACH OF OUR EDITORS:

MIA- I have loved being part of Cranbuzz and encouraging the younger years to take part. I cannot wait to see what the new editors of Cranbuzz will produce next year!

MAYAH- Thanks to everyone who was a part of Cranbuzz this year….I hope you enjoyed it as much as I did! Keep a look out for more articles as we pass on to new editors of Year 12.

MARTHA- Cranbuzz has really helped me with my writing and editing abilities and has led me to develop transferrable skills for the future!

ISSY- Being a part of Cranbuzz has been a highlight of my year. Thank you to everyone who got involved and wrote an article!

HAVE A GREAT SUMMER!!

Firstly, let's warm up your brains, hold on to your summer hats and test your knowledge in...

The Performing Arts Quiz

This quiz contains questions on different themes spanning from music to movies to general pop culture and celebrity artists.

1. Which country won the Eurovision 2022?

2. Which famous group is launching a new digital entertainment experience this year called "Voyage"? A) The Beatles B) One Direction C) The Spice Girls D) Abba

3. Which album won best pop vocal album Grammy in 2022? A) Sour, Olivia Rodrigo B) Justice, Justin Bieber C) Montero, Lil Nas X D) Happier than Ever, Billie Eilish

4. Other than being the King of Pop, what is the lesser-known skill that Michael Jackson had a talent for? A) Painting B) Acting C) Juggling D) Plate-spinning

5. 2022 marks the 30th anniversary of which of these classic Disney Movies? A) Aladdin B) Beauty and the Beast C) Bambi D) The Lion King

6. Which of the following holds the record for longest-running animated series in television history? A) South Park B) Bob's Burgers C) Rick and Morty D) The Simpsons

7. In the movie 'Harry Potter and The Prisoner of Azkaban', what kind of creature was Buckbeak? A) Centaur B) Basilisk C) Thestral D) Hippogriff

8. Which 'Friends' character is best known for the catchphrase, "How you are doin'?" A) Chandler B) Ross C) Joey D) Gunther

9. What creepy TV show took over Netflix with its release in 2016? A) Stranger Things B) Riverdale C) Inventing Anna D) Behind her eyes

10. How many Harry Potter movies are there? A) 7 B) 10 C) 14 D) 9

11. What actor starred as “Freddie Mercury” in the movie Bohemian Rhapsody?

12. Which movie won the most Oscars in the year 2022 A) CODA B) West Side Story C) Dune D) King Richard

13. In 2021, which of the following celebrities changed his name to ‘Ye’? A) Drake B) Kanye West C) Machine Gun Kelly D) Jay Z

14. Musical.ly was rebranded for its global launch as TikTok in which year? A) 2014 B)2016 C) 2018 D) 2020

15. Which of the following is the youngest Kardashian? A) Kim B) Kourtney C) Kylie D) Kendall

16. Who made history by being the first male appear solo on the cover of Vogue, the magazine? A) Harry Styles B) Liam Hemsworth C) Justin Bieber D) RuPaul

17. Who sings the song "Say So" that is behind the popular TikTok dance?

18. What character has both Benedict Cumberbatch and Robert Downey Jr played?

19. Which artist has the most streams on Spotify of all time as of **July 2022?** A) Ed Sheeran, B) Drake C) Bad Bunny D) Doja Cat

20. Finish the lyric – Taste like strawberries A) in the summertime B) covered in sugar C) and smells like sugar D) On a summer evening

TURN TO THE FINAL PAGE OF THIS EDITION TO FIND OUT THE ANSWERS!

Hydrogen in Aviation: The road to net-zero carbon emissions in aviation

Today, the aviation industry makes up 2.5% of global carbon emissions. But with more people taking holidays after COVID-19 and aviation companies increasing their fleet, the need for a more carbon neutral source of fuel for planes has emerged. This is where hydrogen comes in.

A little about hydrogen

Hydrogen has been the fuel of choice for some of man-kinds first and boldest attempts to reach the sky, from hot air balloons to space travel. Hydrogen is experiencing renewed interest in the aviation industry as a greener alternative to jet fuel. Within the next few year, it will play a particularly key role in decarbonising many industries and significantly reduce emissions cause by aviation.

Hydrogen already occurs in vast quantities as one of the two elements that make up water. Occurring in lakes, rivers, oceans etc. With an average atomic weight of one it is the lightest element on the periodic table.

Hydrogen itself is not a source of energy, but an energy carrier. It may be the most abundant element on earth, but it can rarely be found in its purest form. For this reason, it usually needs to be extracted often with fossil fuels or renewable energy. The first step toward greener aviation would be the production of “greener hydrogen.” The use of only renewable energy to extract hydrogen to minimise, or completely eradicate the production of greenhouse gases during the aviation process is the first step in a long road to reach net-zero emission for the aviation industry.

Why hydrogen?

Hydrogen fuel cells, along with electric batteries are the only two technology pathways that do not produce greenhouse gases. And if “green hydrogen” is used then that ensures zero emissions are produced during the cycle. Hydrogen combustion is different from hydrogen fuel cells, in that they produce some greenhouse gases; but still significantly less than normal jet fuel when it is paired with hydrogen fuel cells which reduces overall emissions.

Cost is also a factor in why the aviation industry should switch to hydrogen fuel. With the cost of renewable resources declining in recent years, so will the cost of hydrogen. Not only making it eco-friendly, but also economy friendly.

Challenges of using hydrogen

The automotive and space industry often use hydrogen for fuel and this needs to be translated into the commercial flight industry. The planes will need to modify to bring weight and cost down. And to justify them being in the sky’s hydrogen aircrafts will need to be at least as safe if not safer than kerosene fuelled planes.

Going back my previous point, hydrogen often needs to be harvested. Which has led it to be more expensive per kWh than jet fuel. With the state of the aviation industry after COVID, it may not be in

the best position to switch to a more expensive fuel. However, with the price of renewable energy decreasing, and the increase of green hydrogen production, within the next few years we may see more companies beginning to bring in hydrogen powered planes into their fleet.

Hydrogen is expected to be a solution for several industries to meet their climate targets. One step forward from the aviation industry also then bring everyone that much closer to potentially ending the climate crisis. And who knew it could all change with one small insignificant element.

Written by Kunayomi Edomobi

(Year 12 Scott)

Primates and Language

I thought it would be interesting as the scholar of modern languages to link our visit to Port Lympne to my subject through a focus on communication. I decided to focus on the ways primates communicate amongst themselves as well as cross-species, with humans.

Apes have the gene called FOXP2, which helps enable humans to speak. Our version contains a minute mutation (two amino acid changes) which makes an enormous difference regarding vocal control, which facilitates the capacity to speak languages as we do. Apes' brains do not have the unusual brain wiring that humans' brains do. The direct connection between the part of the brain involved in voluntary movements (the lateral motor cortex areas) and the brain area called the "nucleus ambiguous," which facilitates motor control of the larynx, is unique to humans. However, primates can communicate sophisticatedly in many interesting ways.

Free-living chimpanzees do not use words with specific definitions. They use dozens of calls and many gestures, which partly rely on context to be understood but convey a lot of information. Most monkeys and apes have instinctive calls that they cannot alter very much.

All apes use gestures to communicate. These are understood by individuals in the group. The gestures are directed at specific individuals, who understand them, and they are used deliberately and flexibly. Researchers in Uganda have produced a first "lexicon" of 66 gestures used by chimpanzees to convey 19 messages. These included "come here," "go away," "let's play," "give me that" and "I'd like a hug." Gorillas also use more than 100 gestures, all conveying a different meaning.

Complex syntax is what defines human language, but many animals use simple syntaxes in the wild when communicating. Syntax is the arrangement of words and phrases to convey a meaning in a sentence, so it is important in communication. Most animals can distinguish a difference between a situation of "I can dominate you" and one of "you can dominate me." This is evident because of their ability to evaluate the risks and benefits of social and strategic decisions. Their minds can evaluate the likelihood of coming out on top and judge outcomes as well as swap characters in different potential scenarios. Some apes, especially bonobos, can learn to use some human syntax, too.

There are many interesting examples of the way primates can convey information and understand human communication. I have found some case studies to show this.

Apes like Kanzi the bonobo can understand hundreds of human words and keyboard symbols but are not able to utter human speech. Kanzi can also convey his experience of new things through the keyboard of words that he understands. For example, when he was given kale to eat, he found it was chewy and took him a while to eat. As there was not a symbol for kale on the keyboard, he combined the symbols for "slow" and "lettuce" to describe it.

Kanzi is very observant. Anthropologist Dawn Prince-Hughes went to visit this bonobo after spending time with some gorillas, including Koko, a signing gorilla. Kanzi had been watching videos of Koko using sign language and had been picking lots of it up. When Kanzi had been observing Prince-Hughes for a short while, he noticed that some of her mannerisms were the same as Koko's. Following this observation, he asked her in sign language, "you gorilla, question".

In the 1960s, Allen and Beatrix Gardner and Roger and Debbie Fouts raised a chimpanzee in a family setting, teaching her sign language as a form of communication. This chimp became the world-famous Washoe. She was able to teach other chimps things like "give me apple." She was also able to combine signs such as "fruit" and "candy" for "watermelon." Some signing chimpanzees can make sentences stretching to 6 words.

By 1982, Washoe had given birth to two babies, which had sadly both died – one of a heart defect and the other of an infection. When one of the research assistants (Kat Beach) became pregnant, Washoe took a lot of interest in her belly. For example, she would sign, "baby." Unfortunately, Kat Beach had a miscarriage. She knew Washoe had lost both her children too, so she went to visit her and signed to her, "my baby died." Washoe looked down and the ground before looking Kat in the eye and signing, "cry" while touching her cheek just below her eye. When Kat went to leave that day, Washoe would not let her, and signed "please person hug."

Written by Eliza Briffa

(Year 9 Lynx)

What is in a Word?

Have you ever been told to chillax? (to '*calm down and relax*') Did you respond what-evs...? ('*whatever*') Easy-Breezy? ('*easy; simple*' or '*light-hearted and relaxed*') You see… It is simples really… ('*used to convey that something is very straightforward*'). These are all examples of words added to the dictionary in recent years.

As society changes, language too must take shape around new ideology and discoveries, inventions, and current events. Lexicographers are the people who track these novel words to be published in the dictionary. They do this by analysing updated terms appearing in every form of written document on the Internet, from cycling magazines to recipe books, newspapers to social media posts. Every quarter, Oxford English Dictionary publishes a list of all these new additions. The OED also has a Word of the Year, the word that is decided best reflects the ethos, mood, or preoccupations of the past year.

Every Word of the Year portrays an interesting reflection of the evolving world in which we live. It is strange to think that something now so common (vaping) was only included in the dictionary in 2004, 'inhale and exhale vapour containing nicotine and flavouring produced by a device designed for this purpose'. 2007's word was carbon-footprint, which has become particularly important in the race against time to lower our carbon emissions and slow global warming. In 2015, 😂 became the first emoji Word of the Year; a thought-provoking new addition to the list. An example of a novel word representing current events of the time could be Brexit, which was added in late 2016, 'the withdrawal of the United Kingdom from the European Union'. Another popular choice was toxic, 'very harmful or unpleasant in a pervasive or insidious way,' which beat gaslighting and techlash to become 2018's Word of the Year In 2020, there was no single word in which the year could be captured, so the OED instead published a report on 'Words of an Unprecedented Year'. Some of the words included in the report were bushfires, Covid-19, WFH, lockdown, circuit-breaker, support bubbles, keyworkers, furlough, Black Lives Matter, and moon-shot. The highest-voted of 2021 was Vax, 'a vaccine or vaccination'. This was chosen as the best word as it represents coming out of the pandemic and moving forward

As for this year's Word of the Year, in my opinion, some possible contenders include Wordle and Partygate, Czech Hedgehogs or the letter Z now seen as a Russian pro-war symbol. These are all words we would not be using in general conversation just 12 months ago. Can you think of anymore?

Written by Gemma Brassley

(Year 9 Horsley)

The latest victim of the Ukraine war: Sri Lanka

With the Russian invasion of Ukraine about to enter its fifth month, its effect on the international community has become increasingly prevalent, with: mass food shortages, severe inflation and rising energy costs. However, one nation has been particularly affected by the invasion and yet couldn't be geographically further from the conflict: Sri Lanka.

Sri Lanka’s economy was on the brink of the collapse before the war started, for various reasons including the government's attempt to make Sri Lanka a fully organic nation, This reduced crop yield. As many developed nations such as that of the United Kingdom have only 10% of their food organically, the government banned the import of fertilisers to make the nation more organic and with 90% of Sri Lankan farmers using them to yield crops, it dealt a massive blow to the local agriculture industry which caused the nation to be more reliant on the international market of food as crop yields were significant reduced. One of the main impactS of the war was the food market as Sri Lanka and Russia together provide 30% of the world’s exported wheat - due to the war and sanctions, they weren't able to export this wheat which significantly increased the cost of imported wheat products and coupled with the increased fuel prices from Russian sanctions this made the transportation cost of these products significantly higher. Further to this, it led to imported food being more expensive. The government, however, could not afford these increased prices as Sri Lanka has a smaller tax revenue compared to other developing nations (with its tax revenue being as low as 13% of its GDP in comparisons the UK’s being nearer to 40%). This was then worsened by a populist tax cut which reduced revenues by a further 50. For the Sri-Lankan government to afford these essentials it borrowed moneyt, however, due to the inflation caused by the war, central banks rose interest

rates to reduce spending and hence reduce the inflation. However, this also made borrowing money more expensive which started a reckless cycle for the Sri Lankan government and eventually the Sri Lankan bank ran out of its reserves of international currency, which resulted in the collapse of Sri Lankan Rupee and a significant rise in inflation. Inflation reached a record high of 19%, soon after the government defaulted on its loans for the first time. This resulted in widespread protests which was followed by the resignation of the entire cabinet.

There has been a significant political and social impact.

Over this weekend, the Presidential palace was stormed, and the prime minister's house was burnt down. Further to this, on 11th July both the President and Prime Minister resigned. Sri Lanka's economy collapsed because of the war. Sri Lanka is not the only nation at risk of collapse with many developing nations also at risk and with the war not looking to end any time soon, countless more livelihoods may be lost.

Written by Ethan Goddard

(Year 10 Rammell)

Sources:
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Helping the heart heal itself: The science of regenerative medicine

Heart disease has remained the leading cause of death worldwide for the last 20 years. More than 900,000 people are living with heart failure in the UK, and 200,000 get diagnosed each year. So what makes this disease so deadly?

A heart attack occurs when there is a blockage in the arteries that supply blood to the walls of the heart. This severely reduces blood flow and supply of oxygen to the heart. The heart muscle cells, or cardiomyocytes, are very metabolically active, so they will die very quickly if blood flow is interrupted. Since the heart can't grow back new muscle, it heals by scar formation; fibrotic scar tissue, which cannot contract, replaces the injured cardiomyocytes. This leaves the patient with a deficit in the amount of heart muscle that they have, diminishing heart function. The illness progresses to the point where the heart is no longer able to keep up with the body's demand for blood flow. This imbalance between supply and demand is what results in heart failure.

The heart is the least regenerative organ in the body. The ability of most cardiac muscles to reproduce disappears in humans and all other mammals about 1-7 days after birth. There is a short window after birth where we can regenerate, only about a week. Once that window closes, cardiac cells mature and forever lose the capacity to regrow injured regions in their hearts. Meaning any injury to the heart is permanent.

Current treatments for the condition focus on managing symptoms and trying to improve heart muscle function, but there are currently no therapies that can reverse damage to the heart. Besides heart transplantation, there is no cure for heart failure. Although there are survivors from successful heart transplantation, the long waiting list, high patient-to-donor ratio, high incidences of post procedural complications, and a limited number of transplantable hearts, prompt an urgent need to seek out alternative treatments. That's where stem cells come in. Stem cells are the raw materials of the body, usually derived from embryos, bone marrow and umbilical chord

blood. Stem cell- based therapies are fast becoming an attractive and highly promising treatment for heart disease and failure.

Until recently, researchers thought adult stem cells could create only similar types of cells. For example, bone marrow stem cells could only differentiate into blood cells. However, emerging evidence has appeared which suggests that adult stem cells may be able to create bone or heart muscle cells. This has led to early-stage clinical trials to test usefulness in people with neurological or heart diseases. Already, there have been successful breakthrough experiments where mice with heart failure that were injected with new heart cells experienced improved heart function and survival time.

Written by Ejehirele Eremiokhale (Year 12 Scott)

THE ULTIMATE SUMMER CELEBRATION PLAYLIST

Freedom! '90- Remastered - George Michael
Kiss- Prince
I Feel for You- Chaka Khan
Got to be real- Cheryl Lynn
Got To Give It Up- p.t 1 - Marvin Gaye
I'm Every Woman- Chaka Khan
Dancing Queen - ABBA
Automatic - The pointer sisters
I can make you feel good- Shalamar
Best of my love- The emotions
Young hearts run free- Candi Stanton
He's the greatest dancer- sister sledge
I don't feel like dancin' - scissor sisters
Celebrate good times (come on) - Funktown America
Let's Hear it for the boy - Deniece Williams
Gay street fighter - Keiynan Lonsdale
About Damn Time - Lizzo
Jump (original mix)- the pointer sisters
Are you ready for love?- Elton John

Send me on my way- rusted root
Everything now- arcade fire
Is this love- Bob Marley & the whalers
Dancing in the dark- Bruce Springsteen
Don't you worry 'bout a thing - Stevie wonder

Congratulations to all of the year 11's & 13's who have officially finished their exams for the summer.

Here's a playlist in celebration of YOU + Pride Month. Have a good one :)

Élodie, Year 12.

Performing Arts Quiz (Answers)

Answers

1) Ukraine
2) D) Abba
3) A) Sour
4) A) Painting
5) A) Aladdin
6) D) The Simpsons
7) D) Hippogriff

8) C) Joey
9) A) Stranger Things
10) B) 10
11) Rami Malek
12) C) Dune
13) B) Kanye West
14) C) 2018
15) C) Kylie
16) A) Harry Styles
17) Doja Cat
18) Sherlock Holmes
19) B) Drake
20) D) On a summer evening

HOW MANY DID YOU GET RIGHT?

1-5 = YOU NEED TO SHAPE UP YOUR KNOWLEDGE!

6-10 = YOU KNOW A FAIR AMOUNT

11-15 = AN 'ALMOST THERE' EXPERT

16-20 = **THE** GENIUS

ROUND UP OF THE EVENTS THAT HAPPENED THIS TERM:

SWIMMING GALA