



SIXTH SUPPORT

THE MAGAZINE COMMITTEE

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All previous and future editions of the Sixth Support magazine can be found online at <https://www.abbeycollege.cambs.sch.uk/coronavirus>.

BIOLOGY

Robotic Nerve Fixers

BY AVA B.

Recently, advances have been made with tiny robotic nerve cell connectors. They've been observed to bridge together two distinct groups of cells.

What happened?

These robots are 300 micrometres long with horizontal groves, mimicking the shape and size of a nerve cell.

The objective for the micro biotic cell was to bridge together two groups of cells grown on glass plates. As it approached closer magnetic fields were used to align it with the cells as it can't do that itself. Cells grew out onto the micro robot as the nerve cells attached to it grew towards the group of cells.

What this means/leads to?

This research can be used to investigate neurone pathways in the brain, helping

scientists to have a wider understanding of the brain's complex system. It could also be used in studying cell growth and potentially being used to aid those with nerve cell damage such as spinal cord injuries.

Computer scientists may even use this to create computers with human nerve cells to develop artificial intelligence!

Here is the link for those of you who would like to read the whole article:

<https://www.sciencenews.org/article/magnetic-robots-nerve-cells-connections-brain-injury>

PHYSICS

Women in Physics

BY TOM S.



Female physicists have often been overshadowed by their male counterparts throughout history. Although we many of us have heard of the likes of Marie Curie or recognise the photo of Margaret Hamilton, many major

contributions of female physicists have been cast aside in favour of their male counterparts.

In some instances, female physicist's work were overlooked for well-established awards such as the Nobel Prize. Lise Meitner was a physicist who led ground breaking research into nuclear fission where an atom nucleus is split into smaller nuclei. Rather than being acknowledged for her work and in turn rewarded, the Noble prize for chemistry was instead given to her male co-lead Otto Hahn. This was again seen through Chien-Shiung Wu who helped to disprove the law of conservation of disparity. Her male colleagues won the 1957 Noble prize for their theoretical work. Vera Rubin received no recognition from the Noble prize awarding committee

for her major discovery of dark matter which has no led to a new field in astronomy with large studies at the Large Hadron Collider now researching this topic.

Nowadays, three times as many boys study physics in comparison to girls at A Level. There remains this great disparity which seemingly continues into the workplace which has led some female physics graduates to refer to the industry as hostile towards them.

However, it is not all negative. Initiatives are being made to promote more women into the physics industry and there has been a substantial rise in the number of female physics graduates in the last 30 years. There are now many opportunities for girls to enter the physics industry. If you would like to see the profiles of what some women are doing in physics please see:

<https://www.aps.org/programs/women/resources/profiles.cfm>

HISTORY

The Matilda Effect

BY EMILY N.

The Matilda Effect is the phenomenon of how, over time, men have taken credit for the inventions and accomplishments of women. Because of the way that women's voices have been oppressed in the past, it is very rare that they ever receive true recognition until long after they die.

In 1962, two Cambridge University scientists, James Watson and Francis Crick received the Nobel Prize for their research on the double helix. However, this research would have gotten nowhere if it weren't for **Rosalind Franklin**, a chemist and X-ray crystallographer, who had produced an image and a significant amount of research which was then given to the aforementioned men without her permission. Franklin was not appropriately accredited for her role in the research and passed away of ovarian cancer four years before the men received the Nobel Prize. In his autobiography, Watson shows a sexist attitude and refers to Franklin as a "belligerent, emotional woman".

Although the Matilda Effect typically refers to scientific inventions, these are not the only things that men have taken credit for. **Margaret Keane** is an American artist famous for her "Big Eye" paintings. But, when these paintings first rose to fame in the 1950s and 60s, her husband Walter Keane was

the one selling the paintings and taking credit for the work. When Margaret became aware of this, she confronted her husband but he pressured her to continue the façade. It was not until 1970, after the couple's divorce, that Margaret exposed Walter and in an interview in 2014, she told *The Guardian* that the man had been emotionally abusive during their relationship, threatening that he would kill her if she revealed the truth. In 1986, the pair battled for the credit in a Hawaiian courtroom as Walter continued to deny any wrong doing. Margaret's painting conformed to her usual style but Walter claimed his shoulder was too sore to paint.



Other female's works that men took the credit for include Monopoly, nappies and nuclear fission. Although women are far more acknowledged in scientific fields nowadays and women are nominated for awards far more frequently than ever before, a study in 2012 found that women are far less likely to actually win awards for their efforts because of a "culturally held belief that women's scholarly efforts are less important than those of men."

SOCIOLOGY

Types of Feminism

BY EMMA H.

Feminism:

/femənizəm/
noun.

The advocacy of **women's rights** on the grounds of political, social, and economic **equality** to men.

There are many different types of feminism, but all of the different types believe that genders should be equal and that society is patriarchal (male dominated). Feminists believe that the inequalities within society are due to the inequalities between genders.

Liberal feminism: Liberal feminists believe that women's inequalities are due to sexist stereotypes and how children are brought up being taught that certain genders do certain tasks. For example, it is a gender stereotype that the women do the cooking and cleaning while the man is at work. Liberal feminists believe that these stereotypes are the cause of gender inequality.

Radical feminism: Radical feminists believe that the biggest inequality is patriarchy. They believe that men cause women to be oppressed. Radical feminists believe that patriarchy needs to be abolished.

This type of feminism is typically associated with "hating all men".

Marxist feminism: Marxist feminists believe that there is gender inequality due to capitalism (the idea that the ruling class have control over the working class). They believe that the inequality isn't due to patriarchy, but more of an issue to do with the class system and how society is run.

Dual-systems feminism: They believe that patriarchy and capitalism combined causes inequalities. They believe these factors also combine with things like social class and ethnic inequalities that altogether create an unequal society.

There are many other types of feminism and not all types of feminism can be put into one type or class. There are many issues raised with each type and different beliefs about feminists, but ultimately feminists want to make society equal for all genders.

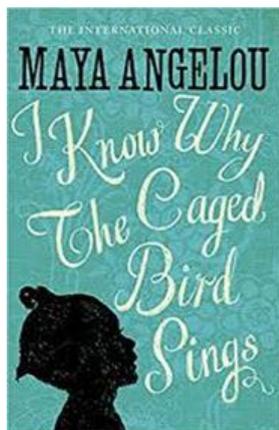
Feminists can create change in many different ways, including protests, signing petitions and even just raising awareness of the inequalities. These things will all help to bring along change and help make society as a whole a more equal place.

ENGLISH LITERATURE

Inspiring Female Writers

BY AMBER M.

Maya Angelou: Angelou is famously known for being a writer, editor, poet, director and actress but was also a civil rights activist and worked with those such as Dr Martin Luther King Jr. and Malcolm X. Using her literature she has inspired generations of women, African Americans and many others to overcome prejudice and fight for their equality. Her most famous work, *I Know Why the Caged Bird Sings*, was written in 1969 and is an autobiography describing the early years in her life. However, her screen play *Georgia*, *Georgia* made her the first African American woman to have her script turned into a film in 1972.



The Brontë sisters: Charlotte, Emily and Anne Brontë are some of the most influential authors of all time, producing classic novels such as *Wuthering Heights* (Emily), *Jane Eyre* (Charlotte) and *Agnes Grey* (Anne). For the sisters, writing provided a sense of freedom from a patriarchal 19th century society in which middle class women were expected to marry, have children

and oversee the household. Nevertheless, all three women wrote under male pseudonyms as it increased the chances of their manuscripts being approved. Their work expressed the importance of female independence and encouraged women to form their own identities.

Virginia Woolf: Woolf was born in London in 1882 and is best known for her novels, particularly *Mrs Dalloway* and *To The Lighthouse*. She was also responsible for writing copious amounts of essays concerning literary history, politics and “woman’s writing”. Her essay, *A Room of One’s Own*, written in 1929 has become a feminist classic in which she discusses what a woman needs in order to write fiction. She is considered one of the most important modernist authors of the 20th century.



BY TEGAN T.

Over the years there have been some truly groundbreaking female artists that have shaped the way people view certain styles of art.

For example many people studied Georgia O'Keeffe during their GCSE art who used paint to create stunning floral works that have themes of femininity being both fragile or innocent and filled with strength. Thanks not just to her colours and composition, she truly showcases her thoughts of the inner strength that women can harness in her paintings. Something you may not know about her though is that she used to be in charge of art for her school yearbook and was recognised by her head teacher for her knowledge and passion for art – he even encouraged her to peruse the arts in the way she did! When she died in 1986 she had upwards of 2,000 paintings which weren't just Mexican landscapes and floral designs as many were skyscrapers or buildings which caught her eye which is something not often spoken of as people focus on said nature themed works.

Although these are just a few lesser known facts about Georgia O'Keeffe, there are many more out

there for anyone who is willing to do a little rummaging to find!



There are of course, many other female artists that showcase their femininity as powerful and some artists have even changed art genres for the better by creating new revolutions in technique or style so if you are interested, all you need to do is google it!

As always you have any questions, queries or additions to the art section of the magazine do feel free to contact me.

PHILOSOPHY

Mary Daly – The philosopher with the battle-axe

BY JOSEPH B.

Mary Daly, a rather controversial figure within modern philosophy and theology. Daly rather overtly and vehemently disagrees with how society today has formed, proclaiming herself to hold a “post-Christian” view of how the world should be. Daly argued that society and its Christian root had been corrupted and ruined by centuries of patriarchal rule. She believed that Christianity had been so badly infested with patriarchal thought that there was nothing redeemable left within, because of this Daly argued that we all, as a collective, must move beyond Christian based law and morality into a more spiritual and female-pro way of thought.

Whilst Daly claims the title of feminist and wears it with pride, many would argue that she is not a real feminist at all! Daly believes that it is only fair that after centuries of female oppression it is only fair that society as a whole move into a period of male oppression. Whether or not she is morally correct? Not for me to say, you decide for yourself. However, is this really feminism or some other kind of ideology

entirely? No one seems sure as of yet, so come to your own conclusion.

Fun Fact: Mary Daly ran university lectures in which she did not allow men to attend. These lectures were, however, shut down and deemed malpractice.



Last Week's Solutions

SUDUKO

9	7	6	4	8	1	3	2	5
1	4	3	2	5	9	7	8	6
5	2	8	3	7	6	1	9	4
6	9	4	5	1	8	2	3	7
8	1	2	7	3	4	5	6	9
7	3	5	9	6	2	4	1	8
4	6	7	8	2	3	9	5	1
2	5	1	6	9	7	8	4	3
3	8	9	1	4	5	6	7	2

COUNTDOWN: rejection

COUNTDOWN NUMBERS:

$$8+2=10$$

$$(10 \times 3) + (100 \times 4) = 430$$

ARITHMETIC CHALLENGE: 2, 174, 24

FIND THE PATH:

Start at the bottom left square and move up, down, left or right until you reach the finish

12	3	8	1	7	9	1
32	8	7	1	3	2	1
14	4	17	4	7	2	4
5	8	2	5	9	5	7
9	3	1	4	2	1	3

Add the numbers as you go. Can you make exactly 68?

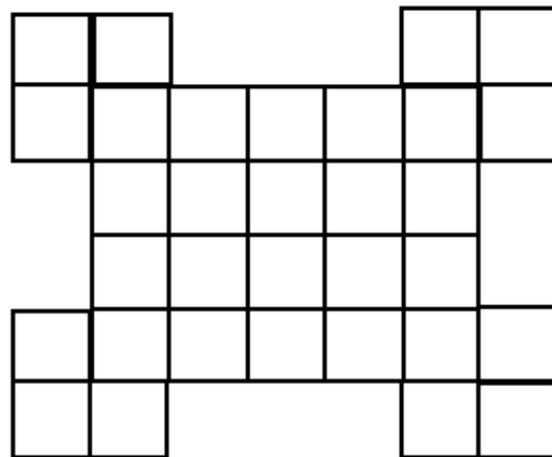
FOUR LINES:

Can you go through all 9 dots with 4 straight lines (you can't take your pen off the paper).



HOW MANY SQUARES?

How many squares can you see in this pattern?



COUNTDOWN NUMBERS 1:

Can you use the 6 numbers below to make: 918?

75

50

5

4

4

1

WORD SQUARE:

You can only use each letter once. Can you find the nine letter word?

O	R	S
E	S	S
P	P	E

COUNTDOWN NUMBERS 2:

Can you use the 6 numbers below to make: 593?

100

75

4

8

3

2

BLACK HISTORY MONTH

BY MITHU P.

Black History month is celebrated every October. In the UK, Black October history month has been shown by painting post-boxes across the UK to honour black history. It was first celebrated in the UK in October 1987, and was the idea of Ghanaian analyst Akyaaba Addai-Sebo, who had worked as a co-ordinator of special projects for the Greater London Council.

The concept of Black History Month originated in the US, at Kent State University, where it was first proposed in 1969 and first celebrated from January 2-February 28, 1970. Many different countries such as Canada and Netherlands celebrate Black History month and they all celebrate it at different months. This is done to so Black History Month aims to highlight and celebrate the stories of prominent black people, who may have been left out of mainstream history.

For example, most of us know about Florence Nightingale helping out during the Crimean War during October 1853 to February 1856, which Russia lost to an alliance made up of the Ottoman Empire, the United Kingdom, Sardinia and France. However, most of do not realise that Mary Jane Seacole had a vital role in supporting British soldiers during the war. Mary Seacole was born in Kingston, Jamaica (1805). Mary learned her nursing skills from her mother, who kept a boarding house for invalid soldiers. Although technically

'free', being of mixed race, Seacole and her family had few civil rights - they could not vote, hold public office or enter the professions. This was an obstacle for Seacole because many nurses, such as Florence Nightingale rejected working with her due to the colour of her skin. However, Seacole managed to help in the Crimean War nursing thousands of soldiers'. She became known as 'Mother Seacole' because of how great she was at caring for the injured. She set up the "British Hotel" which she described as "comfortable quarters for sick and convalescent officers"

Seacole is an inspiring woman because she broke social rules and prejudices to travel the world, run businesses and help those in need – even in the most dangerous places. She has inspired many young girls of colour to overcome discrimination and her legacy reveals how anything is possible.

If you want you can visit The Mary Seacole Memorial Statue on the Westminster Bridge, South Bank, London. This memorial was placed as a sign of forgiveness because she has been left out of history books. It also highlights how crucial her service was in the Crimean War.

POLITICS

Feminism

BY JESSICA M.

Technically, feminism is a political ideology and in this article I will be talking about key feminist icons who played important roles throughout the history of the movement:

Mary Wollstonecraft: Born in 1759, Mary was way before her times in terms of her belief in equality for women. During her lifetime she wrote many books, her most famous being 'A Vindication of the Rights of Women.' She believed that women were just as capable, rational, and independent as men therefore deserved the same rights. At the time women had no legal rights, with their male next of kin (usually father and later husband) having full autonomy over their lives. She believed women should be free to be economically independent from their husbands which included allowing women to be educated and have careers.

Emily Pankhurst: Arguably one of the most famous feminists (and suffragettes), Emily was born in 1868 and was part of the first wave of feminism. At the age of 14 she was introduced to the suffrage movement and later went on to found the Women's Social and Political Union. The union was known for opposing political parties in physical ways such as smashing windows, attacking police officers, and going on hunger strikes

whilst imprisoned for their actions. After the start of World War One Pankhurst focused more on politics rather than acts of violence- specifically campaigning to become a Member of Parliament. Sadly, she never got to see it through because she had chronic illness due to force feeding in prison and her busy life touring the world lecturing. Though her legacy lives on and her statue can be found outside of Westminster.

Ruth Bader Ginsburg (RBG): Born in 1933, RBG became the second woman to become a justice on the US Supreme Court. During her tenure she voted in favour of women's rights in both gender discrimination cases and abortion. In 1995 in the case of United States Vs Virginia, 518 along with the other justices she struck down the male-only admissions policy of Virginia's Military Institute. RBG argued for women further has the school tried to propose having a women's only school but she believed this segregation not equality. In interviews she has supported abortion rights saying "government has no business making that choice for a woman." Moreover, RBG ruled against Nebraska's partial-birth abortion laws in 2000. She has been honoured in the National Women's Hall of Fame for all her work for Women but also defending the rights of Native Americans and the LGBTQ+ community.