



Café Scientifique Newsletter

Half Term 3 & 4: Spring term

Inside

Academic Articles

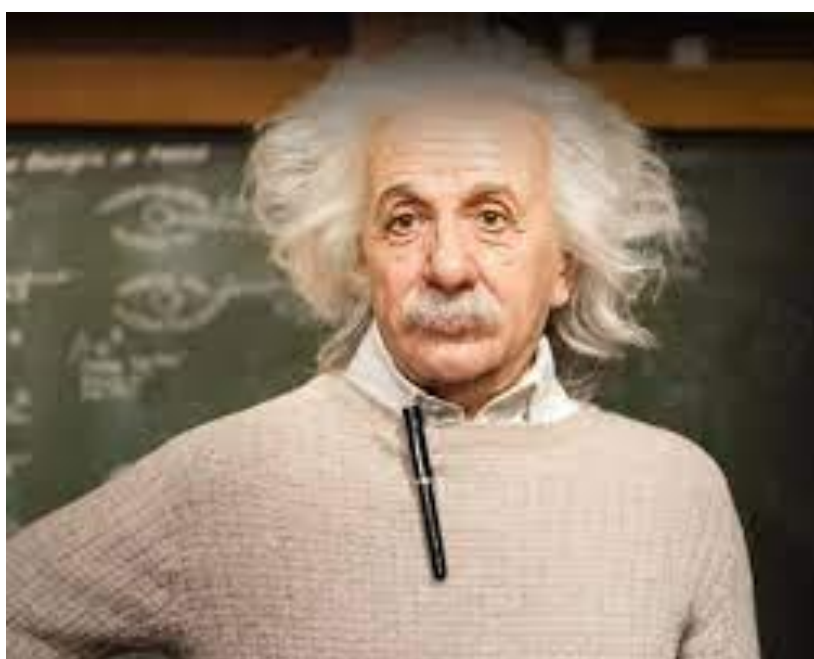
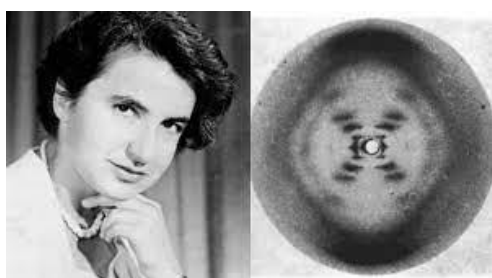
Written by current students and L6th who take science a-levels and who are interested in the new mural.

Movie and Book recommendations

Film/ book summaries of some amazing pieces

Your suggestions for science changemakers

Showcases some amazing entries and scientists who have made an incredible influence



Editors' Note:

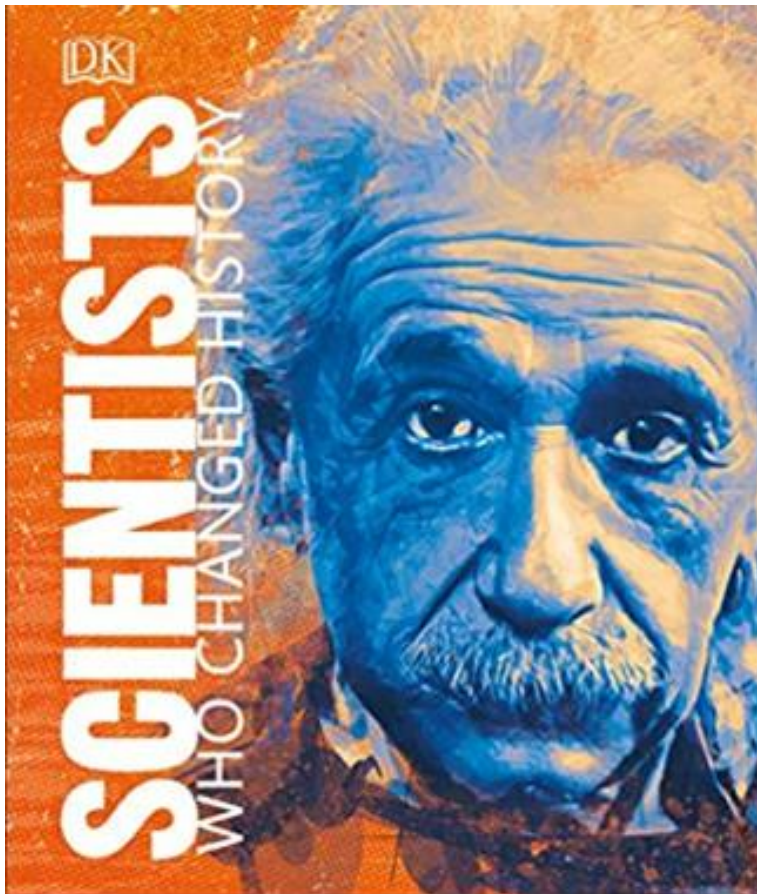
Congratulations on making it through the busy spring term. For all of our science interested pupils we hope that you enjoy this newsletter. This term we have focused on a new project of the science changemakers mural and I hope many of you have already gotten involved with sending in applications. In this edition of our Café Scientifique newsletter, it is jam packed full of articles written by sixth form students of amazing scientists as well as some jaw dropping film and book reviews.

Thank you so much to everyone who participated in sending in applications of your favourite scientists – find some applicants inside.

Happy reading!

Book Recommendations

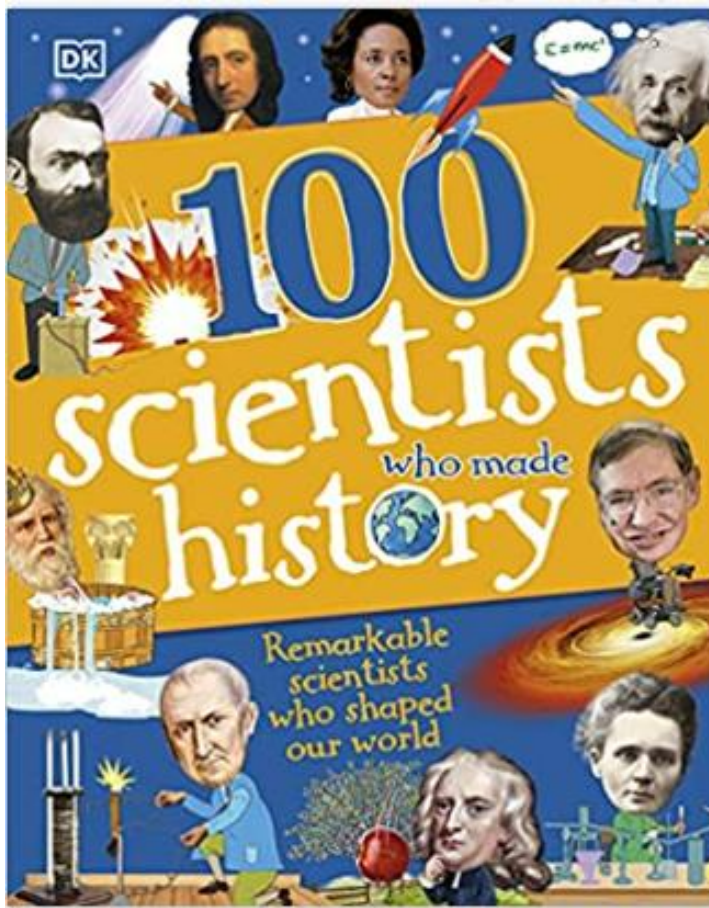
Amazon Review:



Explore the lives and achievements of more than 85 of the world's most inspirational and influential scientists with this innovative and boldly graphic biography-led book. The second title in DK's new illustrated biography series, *Scientists Who Changed History* profiles trailblazing individuals from Greek mathematicians, such as Archimedes and Hipparchus, through physicists of the early 20th-century, such as Marie Curie and Albert Einstein, to modern greats such as Stephen Hawking and Tim Berners-Lee. Each featured individual has made a major contribution to one or more scientific fields, from astronomy,

biology, and psychology, to computer science and geology. Combining elements of biography, history, and analysis, *Scientists Who Changed History* explains the groundbreaking contributions made by these revolutionary men and women in a clear and informative way.

Book Recommendations



Amazon Review:

Learn About The Minds Who Shaped The World!

Dive into the world of theories and experiments, reactions and equations, as we meet the figures who have helped us understand our universe and our place in it. Find out why Copernicus shook the world, what elements Marie Curie discovered, and how Franklin, Crick and Watson unlocked the secrets of our DNA.

It's divided into Pioneers, Biologists, Chemists, Physicists, and Innovators, whose innovations have changed the world and continue to change it now. Discover amazing facts about the world and the people behind

some of humanity's most impressive advancements.

Some of the amazing trailblazers you'll meet:

- Alan Turing
- Marie Curie
- Barbara McClintock
- Leonardo da Vinci
- And so many more!

Film Recommendations

Life Story (The Race for the Double Helix) - available to watch via Plant E-stream (log in with your school credentials).

<https://warwickschools.planetestream.com/View.aspx?id=108461~64~DFg696IUk6lg>



This is now an old film and is quite slow moving - something to watch when you feel like a quiet, relaxing evening!

John Smithson: Life Story | Features | Broadcast

Life Story (known as The Race for the Double Helix in the United States) is a 1987 television historical drama which depicts the progress toward, and the competition for, the discovery of the structure of

DNA in the early 1950s. It was directed by Mick Jackson for the BBC's Horizon science series, and stars Jeff Goldblum, Tim Pigott-Smith, Juliet Stevenson, and Alan Howard. It won several awards in the UK and U.S., including the 1988 BAFTA TV Award for Best Single Drama.

The film dramatises the rivalries of the two teams of scientists attempting to discover the structure of DNA: Francis Crick and James D. Watson at Cambridge University; and Maurice Wilkins and Rosalind Franklin at King's College London. They are also competing with other scientists in the UK, and with international scientists such as American Linus Pauling.

The film manages to convey the loneliness and competitiveness of scientific research but also educates the viewer about how DNA's structure was discovered. It explores the tension between the patient, dedicated laboratory work of Franklin and the sometimes uninformed intuitive leaps of Watson and Crick, against a background of institutional turf wars, personality conflicts, and sexism.

Student articles – Science Changemakers!

Leonardo da Vinci

Leonardo da Vinci was an Italian, active painter, as well as being an engineer, scientist, theorist, sculptor and architect. Leonardo had an approach to science that was observational - he attempted to understand a phenomenon by describing and depicting in detail. He was born on 15 April, 1452 and died 2 May, 1519. Leonardo was educated in Florence by the Italian painter Andrea del Verrocchio and later began his career in the city. He lacked education in Latin and maths, resulting in contemporary scholars ignoring Leonardo. However, he did manage to teach himself Latin.



Later, Leonardo began to study into the anatomy of the human body. As an artist, he drew many studies of muscles, tendons and other visible anatomical features. He made over 240 detailed drawings and wrote about 13,000 words about a treatise on anatomy. His drawings consisted of many studies of the human skeleton and the muscular forces applied to it. As well as this, he drew the heart and vascular system, the sex organ and other internal organs - he also drew one of the first scientific drawings of a foetus. Leonardo was very ahead of his time, making him so well known after his death. As well as his drawings, that could have had a major impact on medical science had they been published, Leonardo was also valued as an engineer, producing the first form of technical drawing- including a perfected 'exploded view' to show internal components.

By Molly

Student article

Sir Alexander Fleming

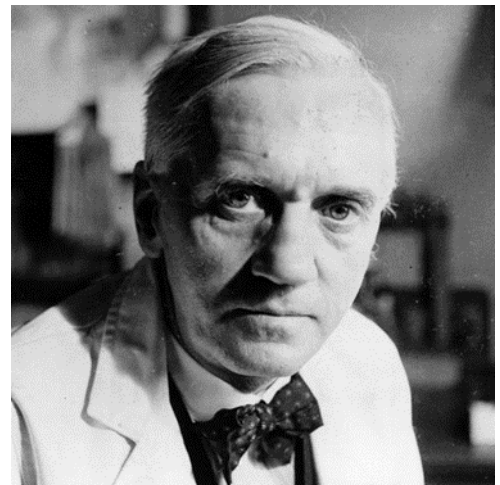
Sir Alexander Fleming (1881 - 1955) was a Scottish physician and microbiologist who is best known for his discovery of the world's first broadly effective antibiotic substance – penicillin.

After having worked in the army medical corp in the First World war and witnessing many soldiers die from sepsis resulting from infected wounds, he became very interested in searching for antibacterial agents, until he discovered the drug penicillin. The invention of this drug revolutionised modern medicine science since it was the world's first antibiotic.

Penicillin is an antibiotic that works by interfering with the production of a molecule called peptidoglycan. These molecules make up bacterial cell walls and form strong links that give the bacterial cell strength as well as preventing leakage from the cytoplasm. If the cell can no longer form new cell walls, then it becomes vulnerable to outside water and molecule pressures, which causes the cell to quickly die.

Not only did Fleming's contributions to science involve the discovery of penicillin, but also he discovered the important bacteriolytic substance lysozyme, a protein present in secretions and also tissues of animals and plants. It plays an important role in the innate immunity and provides protection against bacteria, viruses and fungi.

By Gabrielle



Science Changemakers Mural Project 2023



King's High School

Aim:

To create a mural along the Science Corridor to showcase a range of inspirational Scientific Changemakers.

Project Timeline:

Spring Term 2023 will be used to establish our chosen changemakers. All members of the community can contribute ideas

In Summer term, a final list of changemakers will be compiled and the information will be passed to the designers.

Over the Summer holidays, we hope that the mural will be produced and installed!

How can you get involved?

This is a chance to contribute to a project which will be on view for many years to come, inspiring pupils who come to the school long after you have left!

Each year group will be invited to a discussion, chaired by Mrs Sims and the Café Scientifique team, to suggest their favourite or most influential scientists. Ideas about layout/colour scheme and graphic design are also welcomed.

Look out for an invitation email from Café Scientifique and come along with your ideas or complete a written proposal form and hand it to Mrs Sims (forms can be collected from outside the Science Office).

Resources: You may have ideas already, or you could start with a list of famous scientists like the one here

<https://www.famousscientists.org/> and read about some of the incredible science of the last 2.3 million years!

Your Name:

Your Form:

Name of Scientific Changemaker:

What is their main subject?

Biology

Chemistry

Physics

What Scientific discovery or progress did they make? Explain it briefly:

Is there a quote from this person that you think is suitable for our mural?

Why do you believe they should feature on our mural?

Café Scientifique

Dear readers, this half term has been very exciting as we have been working on a new project of the science changemakers mural that will run along the science corridor. We have been asking you guys to help us with nominating some scientists that have influenced you or that you admire. Many of you have been involved with presenting ideas and put forward their investigations. We have sorted through these and picked our favourite scientists that represent the time line of scientists in all areas as well as ensuring they represent different genders. We can't wait to start and see our ideas come to life and for the mural to advance.

We hope to see more of you guys get involved!

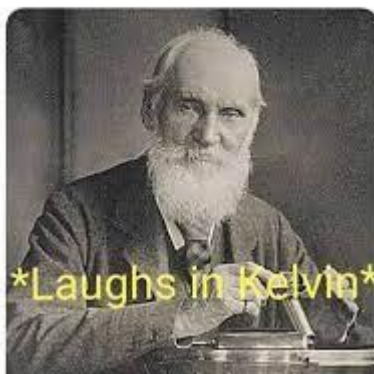
But I hope you have enjoyed reading about some fantastic scientists and some amazing book/film reviews.

Well done for getting through the term and have a well deserved easter holiday!

If you wish to put any more ideas forward or you have any ideas for our next half term topic, please get in touch.



When someone insults you by saying that you have an IQ of a room temperature

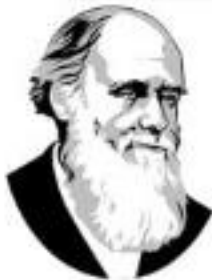


Name: _____

Famous Scientists Word Search



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



ALBERT EINSTEIN	JJ THOMSON	ALEXANDER FLEMING
MARIE CURIE	CHARLES DARWIN	EDWIN HUBBLE
STEPHEN HAWKING	ALFRED NOBEL	ALAN TURING
LOUIS PASTEUR	THOMAS EDISON	JAMES WATSON
ISAAC NEWTON	NIKOLA TESLA	ERNEST RUTHERFORD



FAMOUS CHEMISTS WORDSEARCH

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

Abegg
 Bosch
 Curie
 Erlenmeyer
 Haber
 Lavoisier
 Paracelsus
 Sanger

Arrhenius
 Boyle
 Dalton
 Fischer
 Hahn
 Lewis
 Pasteur
 Scheele

Avogadro
 Bronsted
 Davy
 Gay Lussac
 Hess
 Mendeleev
 Pauling
 Seaborg

Baeyer
 Bunsen
 Dewar
 Gibbs
 Hodgkin
 Moissan
 Perkin
 van 't Hoff

Berzelius
 Cavendish
 Dow
 Goldschmidt
 Kekule
 Nobel
 Priestley
 Wohler