



Founded in 1888

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June

Queen Elizabeth's Girls' School In The News

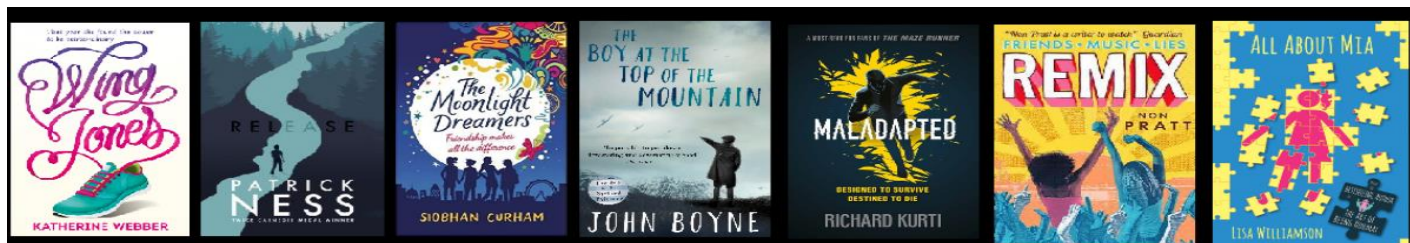
ITN



Our Public Examinations have ended and both Years 11 and 13 have enjoyed their Prom Events. Year 13 changed the style of their event with a restaurant dinner and dance which proved to be a highly successful change. On both evenings students and staff celebrated the cohort's completion of their individual key stage of study. We look forward to welcoming Year 11 students back as sixth formers in September.

I was delighted to receive a letter from the Mayor of London, Mr Sadiq Khan, congratulating the school on its achievement of supporting previously low-achieving students to progress to top 6% in London. I am particularly pleased for our students and staff as this has happened for the third year running. We are one of only 34 schools in London to have supported the progress of previously low-achieving students in this way over a successive number of years. Such students join our school behind their peers in terms of achievement for a number of reasons. We recognise our moral purpose is to support each and every student to achieve at the highest levels, whatever their starting point. We will be working with the Mayor's Schools for Success programme again from the September.





Read4Barnet Event

On Thursday 27th June Book Club attended this event at the Wren Academy with nine other schools. We read the shortlisted books, and knew four of the six authors would be speaking at the event.

We travelled by bus accompanied by Mrs Aldridge and Mrs Shipton. We were able to see two authors with breaks in between for book signing. At the end there was a Q and A with all four authors; Patrice Lawrence, Karen Gregory, Kesia Lupo and Tracey Mathias. This was a great opportunity to get to know more about their thought processes when writing the books.

We found it interesting listening to 2 authors in particular, Patrice Lawrence and Karen Gregory who spoke passionately about their lives and experience and how that had influenced their writing. We had an opportunity to vote for who we thought was the best book/author. The winner was Patrice Lawrence, which we agreed was our choice too.

Morsal Ahmed 8SKT received a prize for her book review of one of Patrice Lawrence's books, "Snap".

Year 7 students



Barnet Hospital Dementia Café

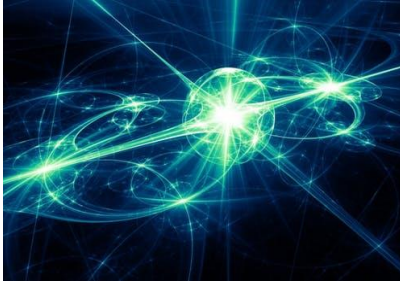
On Thursday 20th June nine students travelled to Barnet Hospital to sing to a group of elderly patients attending the Dementia Café with nursing and other care staff. I was one of them and I really enjoyed getting to sing to the lovely patients and carers and seeing them smile throughout the duration of our songs. These included Banaha and All of Me. All the other girls had very angelic voices, especially Akua who performed a beautiful Italian Opera piece and brought a tear to a few of the carers' eyes.

With our ukuleles and the assistance of the wonderful Mrs Coehorst, we all had a great time.

Erin, Year 8



Particle Physics Summer School



This is a three day free residential school which runs during the summer term from Wednesday 10th to Friday 12th July. It is held at St Paul's School, London and is aimed at students aged 14-15 who are at the end of Year 10 learning programmes. The course is organised and run in partnership between St Paul's, the Institute of Physics and Queen Mary College, University of London. It brings to life the complex subject of particle physics by showing the importance of the field across the sciences, engineering and computer science. The subject is explored through workshops, lectures and hands on experiments which would not be encountered in schools. Exciting careers available in the field are also highlighted.

A Level students are assigned as mentors and to support evening activities. A school cannot have more than three attendees and places are allocated following an application process requiring a statement from students and another from staff. We are delighted to have three students who have been accepted onto the course: Yan, Ana and Sarah. We wish them well and we look forward to hearing all about it soon.

Ms Lee, Teacher of Physics

Standard Model of
FUNDAMENTAL PARTICLES AND INTERACTIONS

The Standard Model summarizes the current knowledge in Particle Physics. It is the quantum theory that includes the theory of strong interactions (Quantum Chromodynamics or QCD) and the unified theory of weak and electromagnetic interactions (Electroweak). Gravity is included in this chart because it is one of the fundamental interactions even though not part of the "Standard Model".

FERMIONS				BOSONS			
matter constituents spin = 1/2, 3/2, 5/2, ...				force carriers spin = 0, 1, 2, ...			
Leptons		Quarks		Unified Electroweak		Strong (color)	
Flavor	Mass GeV/c ²	Approx. Mass GeV/c ²	Electric charge	Name	Mass GeV/c ²	Name	Mass GeV/c ²
ν_e electron neutrino	< 1 · 10 ⁻⁶	0	0	γ photon	0	g gluon	0
e^- electron	0.000511	-1	0	W^+	80.4	g gluon	0
μ^- muon	< 0.0002	-1	0	W^0	80.4	g gluon	0
τ^- tau	1.7771	-1	0	Z^0	91.1876	g gluon	0
ν_μ muon neutrino							
ν_τ tau neutrino							
u up	0.003	2/3	0				
d down	0.006	-1/3	0				
c charm	1.3	2/3	0				
s strange	0.1	-1/3	0				
t top	175	2/3	0				
b bottom	4.3	-1/3	0				

Structure within the Atom

Quark Size = 10⁻¹⁶ m

Nucleus Size = 10⁻¹⁴ m

Atom Size = 10⁻¹⁰ m

PROPERTIES OF THE INTERACTIONS				
Property	Gravitational	Weak	Electromagnetic	Strong
Adds to:	Mass + Energy	Flavor	Electric Charge	Color Charge
Particles participating:	All	Quarks, Leptons	Electrically charged	Quarks, Gluons
Particles mediating:	Graviton	W^+ , W^0 , Z^0	γ	Gluons
Strength (ratio to gravitation):	1	10 ⁻⁴¹	10 ⁻²	10 ³
Range:	∞	10 ⁻¹⁶ m	∞	10 ⁻¹⁵ m

$u - p - e^- \rightarrow \nu_e$

$n \rightarrow p + e^- + \bar{\nu}_e$

$p \rightarrow n + e^+ + \nu_e$

Matter and Antimatter
Every particle has an antiparticle with the same mass and opposite charge. Particles and antiparticles have identical mass and spin but opposite charge. Some particles have baryon number (B), lepton number (L), and other quantum numbers.

Figure
These diagrams are an artist's impression of physical processes. They are based on the Standard Model of particle physics. The particles shown are not real and have no size. The colors are chosen to represent the different types of particles. The diagrams are based on the Standard Model of particle physics.

The Particle Adventure
Visit the world's largest particle accelerator, CERN, and discover the secrets of the universe. This chart has been made possible by the generous support of the Department of Education, the National Science Foundation, the National Endowment for the Humanities, the National Endowment for the Arts, the National Endowment for the Humanities, and the National Endowment for the Arts.

CPER Contemporary Physics Education Project, CPER is a non-profit organization that promotes the teaching of contemporary physics in secondary schools. CPER is based at St. Paul's School, London, UK. For information on CPER, visit <http://CPERweb.org>

Year 8 Theatre Visit to Wicked



Our students were absolutely fantastic throughout, so much so that two members of the public stopped to say that they were a credit to the school and that we should be very proud of them. Really lovely to hear.

Mrs Campbell, Head of Year 8

*“You can really only enjoy
life when you're extremely
busy.”*

Josephine de La Baume

Dates for Your Diary

For further details of all events, please visit our website and use the following link to the school calendar pages:

<https://www.qegschool.org.uk/calendar/?calid=2&pid=6&viewid=1>

July

1

- Year 11 Work Experience Week
- Year 12 Geography Field Trip to Dorset

3

- Year 12 Women of the Future Event

4

- Year 12 Brent Cross Retail Challenge

5

- Year 12 New Designers Exhibition Visit

9

- Year 12 Theatre Visit to see Top Girls

12

- International Day celebrated at school with various themed events

15

- Year 12 Work Experience Week

16

- Year 8 Visit Boulogne

19

- **School term ends at 12.00pm**

During School Holidays

29

- **Years 8 – 10 Water Sports Activity trip to Dordogne, France**

Looking ahead

Tuesday 3 September Y7 and Y12 back in school

Wednesday 4 September Y8, Y9, Y10, Y11 and Y13 back in school

The school calendar, news and events items, letters from school, statutory policies, curriculum, governance, exam performance data, inspection reports and other information, the school and the sixth form prospectus are all available on the school website

www.qegschool.org.uk

Follow us on Twitter @qegsbarnet and @VioletWalker13

Contact the school via office@qegschool.org.uk