St Joseph's College **"A" level Physics Transition Work - Summer 2023**

- Please **complete** the free, online, Open University course "The Science of Nuclear Energy".
  https://www.open.edu/openlearn/science-maths-technology/the-science-nuclear-energy/content-section-overview?active-tab=description-tab

- You will need to **create a free account** before starting the course.

- The **weekly sections should take no more than 3 hours each** to complete.
  You may find that the course **takes between 6-12 hours** to complete in total.

- Each weekly section has specific tasks and reading to do to meet appropriate outcomes and criteria. There is also a mini assessment on each week's tasks.
  The course is designed to consolidate and extend nuclear energy learning from GCSE and challenge you towards "A" level standard. This includes developing your maths skills, subject knowledge, analytical skills and communication skills.
  After studying this course, you should be able to:
  - understand the physics of nuclear fusion
  - understand how a nuclear power station works
  - weigh up and debate potential solutions to the problems associated with nuclear power
  - assess the energy needs today and the part that nuclear power has to play
  - identify current and future technologies.

- **You can do the sections on a week-by-week basis or do more than one section in one week.**

- **It is expected that you complete the course prior to starting in September.**

- Please keep any work created in a folder to share in September 2023. This folder can be kept electronically. At the very least, **save the electronic certificate that you will earn by completing the course.**

Course offered:	**A level Physics team:**
AQA GCE "A" Level Physics (7408) Specification reference relating to this transition work is 3.8	Mr J. Davenport – Head of Science & physics Mrs L. Morris Mrs. J. Owen Mr. R. Santos

If you have any questions or queries, contact jdavenport@stjosephsmail.com
and you will get a reply as soon as possible.
Please note, due to school holidays, that it may be a few days before you receive a reply.

Specification:
https://filestore.aqa.org.uk/resources/physics/specifications/AQA-7407-7408-SP-2015.PDF

Possible additional interest reading / documentaries:
http://www.physbot.co.uk/nuclear-physics.html
https://onlyphysics.org/a-level-aqa-nuclear-physics-notes-1/
The Feynman Lectures on Physics, Richard Feynman
The Making of the Atomic Bomb, Richard Rhodes
BBC Sounds – The Bomb docu-podcast https://www.bbc.co.uk/sounds/brand/p08llv8n
https://www.youtube.com/watch?v=e34rIZTfJz0 (Nuclear weapons... new Documentary BBC 2016 by Meagan Iglesias.