Subject: Physics A-level (Enrichment Material)

Stretch and challenge tasks

Citizen science

I would like you to take part in a citizen science project, here are some examples but there are many more out there:

- SETI@home is a scientific experiment that uses Internet-connected computers in the Search for Extra-Terrestrial Intelligence (SETI). You can participate by running a free program that downloads and analyses radio telescope data. http://setiathome.berkeley.edu/
- Asteroid Watch allows you to search for Near Earth Objects (i.e. asteroids) in observations that have been made, and report back their positions. http://www.schoolsobservatory.org.uk/activ/asteroidwatch
- Galaxy Zoo – to understand how galaxies, and our own, formed we need your help to classify them according to their shapes — a task at which your brain is better than even the most advanced computer. If you're quick, you may even be the first person in history to see each of the galaxies you're asked to classify. http://www.galaxyzoo.org/
- Zooniverse – many other projects similar to galaxy zoo: solar stormwatch, planet hunters, the Milky Way project. https://www.zooniverse.org/

Online practical

Create a task for a GCSE Physics student who wants to study A-level. They should use an online simulation to collect data and your task should allow them to do this at a A-level standard. You can find some simulations here:

- PhET interactive simulations. Fun, interactive, research-based simulations of physical phenomena from the PhET project at the University of Colorado. This site will be used again and again during your A-level course. http://phet.colorado.edu/
- The Physics Classroom serves students, teachers and classrooms by providing classroom-ready resources that utilize an easy-to-understand language. https://www.physicsclassroom.com/

Revision resource

Using online technology create a revision resource that you could share with your class. It might be a quiz, flashcard deck or a video. You will be aware of your favourite platform to use.