Dear Year 11,
I hope you and your families are all well.

If you are planning to study physics in Year 12, here are some ideas of things you may like to do in preparation.

1. You may find it helpful to revise the following units from your GCSE Physics studies as you will be building on this work in your Year 12 studies.
    a. Unit 3.1 Electric Circuits
    b. Unit 3.5 Waves
    c. Units 6.1 Distance, speed and acceleration
    d. Unit 6.2 Newton's laws
    e. Unit 6.3 Work and Energy
    f. Unit 6.4 Stars and planets

The rest of the activities below are suggestions of things you may like to watch or read just to get a feel for some of the exciting areas of the subject that we will begin to delve into next year. Please don't feel that you need to look at every single suggested resource here. Just pick and choose in terms of what you think looks interesting.

2. You will be doing some work on particle physics in the first term of Year 12.
   Watch the following video clips on fundamental particles and the standard model:
   https://www.youtube.com/watch?v=HVxBdMxgVX0
   https://www.youtube.com/watch?v=WGWlT8SqXLM&t=1018s

3. You will be looking at a number of aspects of space and the universe in Year 12 and Year 13. Explore the plethora of interesting information on the NASA website relating to "Our Solar System and Beyond."
   https://www.nasa.gov/topics/solarsystem/index.html

   There was also an episode of Horizon on the Hubble Space telescope that you might like to watch.
   https://www.bbc.co.uk/iplayer/episode/m000hjpw/horizon-2020-hubble-the-wonders-of-space-revealed

4. Have a look at the following website to get a feel for the sort of things that we will be looking at next year.
   https://www.alevelphysicsonline.com/wjec (There is absolutely no need to start learning this information, it just might be interesting for you to have a look ahead at what we will be doing.)

5. This is a magazine https://physicsworld.com that keeps you up to date with the latest developments in physics.
   Don't worry if you find the articles too complicated as this magazine is aimed at university students. Just have a quick look to get an overall feel for the cutting edge developments that are currently taking place in the world of physics.

You will need to register on the website in order to be able to read the articles but I believe this is free.

Take care

Mr Humphreys