



**The John Roan School  
Sixth Form**  
The best in everyone™  
Part of United Learning

## Year 11 Bridging Work for Physics

### Week 3 and 4



### Complete - Practice your Standard form!

You used standard form in GCSE Physics – at A Level, we use it for all sorts of questions. It is important that you can handle the maths! Use the weblink to take you through materials for standard form – it links to Isaac Physics as well – you signed up to this on Week 1&2 – so check back to that document if you need to! There is also a livestream as well on 3<sup>rd</sup> June at 12pm if you want to ask questions!

**Link:**

<https://www.gcsephysicsonline.com/session-1>

**Time: as long as you like**



### Read - The Forces are with you!

In A level physics, we cover and build on our GCSE knowledge. This activity goes over the forces part of the GCSE course and introduces you to a range of simulations produced by PHET at the University of Colorado – we make use of these in our learning in year 12 and 13.

**Link:**

<https://www.bbc.co.uk/bitesize/articles/zd6mxyx>

**Time: as long as you like...**



### Listen – Einstein

Einstein is probably the world's most famous physicist. He formulated the theory of General Relativity. Download them to your phone when you go out and do some exercise.

**Links:**

<https://www.bbc.co.uk/programmes/b06r4wg9>

<https://www.bbc.co.uk/programmes/b06rxqw8>

**Time: 45 minutes each.**



### Watch - Have you got the energy?

Energy cannot be created or destroyed, it just transforms from one form to another – the challenge is whether we can harness and use it for our own purposes when it changes from one form to another. The three Lectures take you on an incredible journey through these powerful transformations to inspire you!

**Link –**

<https://www.rigb.org/christmas-lectures/watch/2016/supercharged-fuelling-the-future>

**Time: 60 mins x3.**



### Engage – Wave Structure and Properties

Recap on your wave knowledge – click the link, then find the box about Wave Structure and Properties. Download the worksheet, then click on the play button!

**Link –**

<https://www.stem.org.uk/remote-lessons/key-stage-4>

**Time: 45 mins**



### Watch - How has Islam influenced Science

The first part of a series by Jim Al-Khalili looking at the development of scientific knowledge in the Islamic world through history.

**Link -**

<https://www.bbc.co.uk/iplayer/episode/b00gksx4/science-and-islam-1-the-language-of-science>

**Time: 60 minutes**



### Complete – Electricity!

Electrical circuits come up in year 12 – they are important to understanding how the world works. It is important that you have a good grounding in how circuits work – so work through these questions set for you on Isaac Physics – use the hints to be taken to tips and video explainers!

**Link:**

<https://isaacphysics.org/>

**Time: Approx. 1 hour**