



The John Roan School Sixth Form

The best in everyone™

Part of United Learning

Year 11 Bridging Work for Applied Science (BTEC)



Complete Standard Form

You used standard form in GCSE science— in the BTEC Applied Science course we use it for all sorts of questions.

Use the two weblinks below to take you through materials for standard form. You will need to register to Isaac Physics to complete the extra problems from the second website.

Link 1: [What is Standard Form?](#)

Link 2: [GCSE Physics Online: Standard Form](#)

Time: *As long as you like (1 hour recommended)*



Read Types of Waves

The physics part of the BTEC Applied Science course looks at how waves are used in communications. For instance looking at satellite communications, mobile phones, WiFi and Bluetooth.

Read through the BBC Bitesize information on waves, that includes electromagnetic waves and sound waves. Remember to also have a go at the questions.

Link: [BBC Bitesize – Types of Waves](#)

Time: *30 minutes*



Listen Science Podcasts

There are lots of different podcasts discussing a whole range of different scientific topics. The ones linked below all look at how waves are used. Download them to your phone when you go out and do some exercise.

Link 1: [The Electromagnetic Spectrum](#)

Link 2: [Music and the Brain](#)

Link 3: [Oceans of Noise](#)

Time: *5 to 50 minutes*



Watch Khan Academy

The Khan Academy videos look quite basic, but stick with them because they are great at explaining difficult topics.

Watch the series on oscillations and mechanical waves.

Link: [Khan Academy – Mechanical Waves and Sound](#)

Time: *Each video is around 10 minutes*



Read The Physics Classroom: Waves

Read the information from the following website and complete the questions to check your understanding.

Link: [The Physics Classroom - Waves](#)

Time: *40 minutes*



Watch Wonders of the Universe #4 "Messengers"

Prof Brian Cox discusses how the unique properties of light provide an insight into the origins & development of mankind & the universe.

Link: [Wonders of the Universe – Messengers](#)
(I couldn't find it without subtitles)

Time: *1 hour*



Complete Wave Equation Questions

Read the summary of the wave equation on the link below and then complete the questions to check your understanding.

Link: [Physics Classroom – The Wave Equation](#)

Time: *20 minutes*