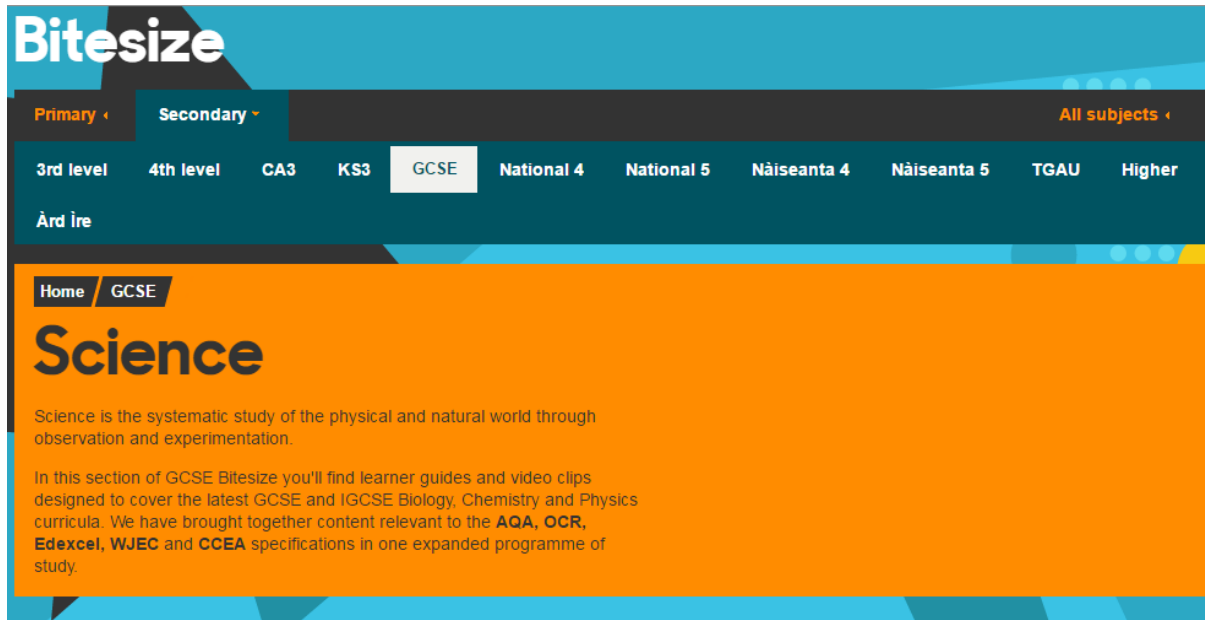


Research the Problem: BBC Bitesize

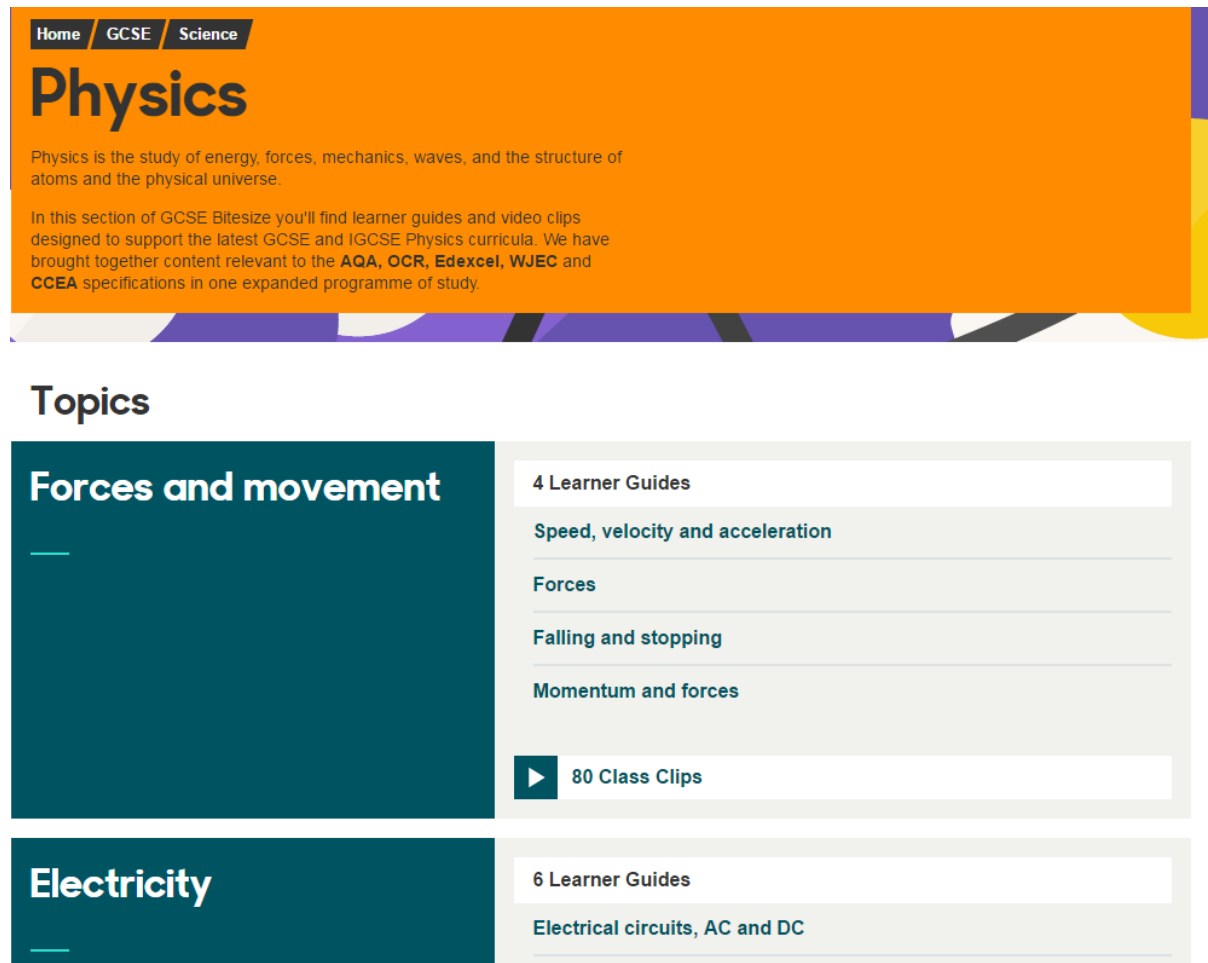
This is an educational website owned by the BBC. While the nature of all the content it covers is a bit questionable as you would have to check your own exam board, unlike teach ICT, the BBC is a trusted source.



One comment I would like to already make about the site is that it is huge. I have skipped a few steps to get to the GCSE Science section. It's not a complicated process from typing in BBC Bitesize into your browser to get to this point, but there sure are a lot of clicks. This once again shows how when it comes to education, it is best to split everything up into smaller pieces.

As we can see above, the GCSE page itself starts by giving a sentence to describe what science is, then a paragraph explaining what to expect in terms of content and what exams the information is relevant to. Notice how they mention bringing together "*content relevant to the **AQA, OCR, Edexcel, WJEC** and **CCEA** specifications in one expanded programme of study.*"

I know this is slightly off topic, but as someone who has been in education for just under 12 years, I want to state that you don't try to do things like this. Trying to tackle massive amounts of information and put it into place is bound to deliver subpar results. I've seen the difference between OCR and Edexcel science, you can't just merge the two together into one resource, you'd be teaching both students useless information at some point. I made sure that my aims with my game realistic, I used the Edexcel books as a guide, therefore I am perfectly aware that my game only works for those doing that exam board (although I could argue that the topics are so broad that it applies to all GCSE sciences).



[Home](#) [GCSE](#) [Science](#)

Physics

Physics is the study of energy, forces, mechanics, waves, and the structure of atoms and the physical universe.

In this section of GCSE Bitesize you'll find learner guides and video clips designed to support the latest GCSE and IGCSE Physics curricula. We have brought together content relevant to the **AQA**, **OCR**, **Edexcel**, **WJEC** and **CCEA** specifications in one expanded programme of study.

Topics

Forces and movement

- 4 Learner Guides
 - Speed, velocity and acceleration
 - Forces
 - Falling and stopping
 - Momentum and forces
- 80 Class Clips

Electricity

- 6 Learner Guides
 - Electrical circuits, AC and DC

The sciences are spilt up, each one having a very small description and an abstract image. For no reason, we will be looking into physics. Like the Teach ICT site, we are met with subjects on a table spilt into topics. Once again, they don't use a drop down table, meaning that if I wanted to get to inventions (that is no part of my old exam board), I will have to scroll down for about a page and a half. Unlike the Teach ICT list, this one also features video clips. As you can see, they boast quite the quantity of video clips for some of the larger topics, if pictures speak a thousand words, then a video conveys a lot more.

The screenshot shows the BBC Bitesize website interface. At the top, a navigation bar includes links for Home, GCSE, Science, Physics, and Electromagnetism and magnetism. The main heading is 'The electromagnetic (EM) spectrum'. Below it, a sub-header states: 'Electromagnetic waves form a spectrum of different wavelengths. This spectrum includes visible light, X-rays and radio waves. Electromagnetic radiation can be useful as well as hazardous.' A sidebar on the left contains buttons for 'Revise', 'Activity', and 'Test'. Below these is a progress indicator showing steps 1, 2, 3, and 4, with step 1 being the active one. The main content area is titled 'The electromagnetic spectrum' and contains a paragraph: 'The **electromagnetic spectrum** is a continuous range of **wavelengths**. The types of **radiation** that occur in different parts of the spectrum have different uses and dangers - depending on their wavelength and **frequency**.' Below the text is a blurred image of a rainbow. To the right, a 'More Guides' section lists 'The electromagnetic (EM) spectrum', 'Magnets', 'Electromagnets and motors', and 'Dynamoes and transformers', each with a right-pointing arrow. At the bottom right, there is a graphic of three smartphones displaying various apps and a score of 4/5.

Let us break down this page. Firstly, we'll start by moving away from the contents for a second and look at the colour scheme. The first thing that catches your eye is their use of that iconic bright orange they've used to highlight the title and the part of the page selected.

The revise section consists of text and images with the intention of delivering clear information that would be helpful for triggering a student to remember content when revising. While this idea of break down the content into really small chunks is a good idea, this falls off a bit when the top of the

The reason I brought this up is to point out that all things have limits. GCSE science is a massive topic. I could have done many more levels, or made mine span across multiple screens- but I didn't. I understand that more isn't always better. I also understood my limits and just how much commitment I would ask of my client. Hence, the size of my solution is small, as I only need to promote the fundamentals.



Moving on to the section, we have the activity section:




This is split into two parts:


1. A fully dubbed presentation. This comes with options to turn off all sound, turn on subtitles, get printed out, skipping parts (in order or via contents) and a help menu (this is also fully dubbed). These use humour and models to try and put a point across in such a way that it is easy on a child to learn.




2. Interactive activities. After having the presentation, they then present you with some activities to see how much information you were able to remember. The ones I was the one pictures above and a true a false activity. I like the idea behind this, as it is a lot less stressful than a test or quiz. There are two major problems with the quiz. Firstly, as a headphone user, I tore out my headphones when this section started, as the volume I was listening to the man presenting was painful when the irritating music played. Secondly, I got some questions wrong on purpose to see how it worked with incorrect information. When I tried to correct myself I found myself unable to drag an answer away from the spot. I tried replacing it, while I first though it worked, when I then tried to interact with it would not respond, I broke the activity.

Finally, there was the test section:

Revise

Activity

Test

The electromagnetic spectrum

1

Which of these types of electromagnetic radiation has the lowest energy?

☐ Microwaves
☐ Radio waves
☐ Infrared

2

Which of these types of electromagnetic radiation has the highest frequency?

☐ Gamma
☐ X-rays
☐ Ultraviolet

3

Which of these types of electromagnetic radiation has the shortest wavelength?

☐ Infrared
☐ Visible light
☐ Ultraviolet

4

What can split white light into its component colours?

☐ A prism
☐ A disperser
☐ A protractor

5

Which colour of light is refracted the furthest?

☐ Red
☐ Green
☐ Violet

Ten questions, all multiple choice. My first opinion of this would be why include activities and a test? Of course, as someone how has been forced to use Bitesize, teachers like to make you just do the test to check your current understanding of the topic. While I can understand why this is

useful for revision, as I am dealing with a target audience that has never seen GCSE before, I can't take much from it.

There is also the reoccurring theme with mass produced quizzes, they're not randomised. This removes all value to repeat them. While I understand that my game will have almost no replay value, at least I allow the user some choice in the levels.