

Eton Virtual Electricity Explained – Teacher’s Guide

A. Introduction

The Eton Virtual Electricity Explained course is set out as a self-study course but is easily incorporated into your teaching.

The course covers the main syllabus points for "Current Electricity" and "Mains Electricity" on most GCSE physics courses. It consists of short videos followed by self-marking quizzes that test knowledge and understanding gained from the videos. It also has some excellent interactive simulations and animations that pupils and teachers can use to better understand and explain what is going on in electric circuits.

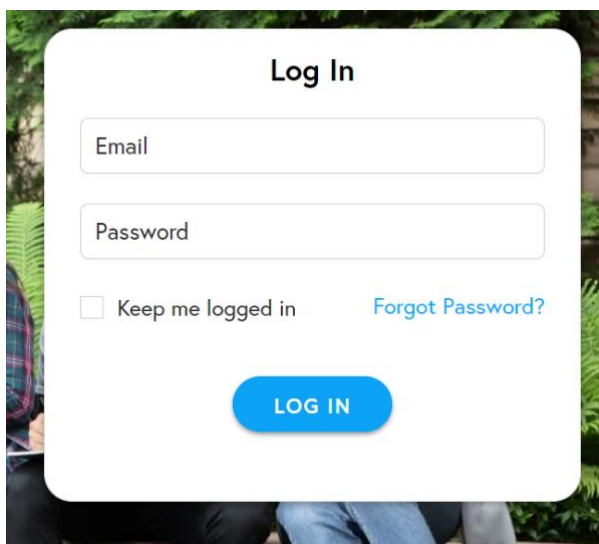
There are many different ways in which you might use Eton Virtual Electricity Explained with your classes:

1. As a standalone self-study course for your students during lock-downs, for self-guided revision or for pupils who are away from school long-term
2. For homework - pupils can do one of the lessons in their own time, watching the videos, trying out the [simulations](#) and completing the associated questions which self-mark and populate the online mark book
3. In classes:
 - You could use some of the key [simulations](#) or [animations](#) to explain a difficult concept to the class (much as you might use a PhET simulation). But with the advantage that there are accompanying questions to use if you wish.
 - You could show some of the short videos to your class during a lesson (much as you might a short Youtube Video). You could then ask them to complete the accompanying self-marking questions on a class-set of laptops or tablets or on the computers in the IT classroom. **Note: Following feedback from teachers we are looking at developing easily printable pdf versions of the questions that could be handed out in hardcopy to classes.**

We have also started to build a library of pdf question sheets (with accompanying exemplar answers and giveback videos), and other resources like suggested practicals. More information on this including where to find it can be found in Section E – Additional Resources.

B. Logging in to Eton Virtual Electricity Explained

1. Go to the website by typing <https://learn.etonvirtual.org/> into your browser or clicking on the link.
2. Enter your school email and the password. **If you do not know the password click on “Forgot Password?” and then enter your school email to reset the password**



The image shows a login form with the following elements:

- Title: Log In
- Input field: Email
- Input field: Password
- Checkbox: Keep me logged in
- Link: Forgot Password?
- Button: LOG IN

C. Setting up a class of students on Eton Virtual Electricity Explained

You can set up your classes so that you can monitor their progress as they use Eton Virtual Electricity Explained. This will allow them to watch the videos, use the simulations and answer the accompanying questions themselves on any device (ideally a laptop or tablet as phones are a bit fiddly!).

The questions self-mark and populate the mark book on Eton Electricity Explained and you can drill down to see exactly where your pupils struggled.

At present you will need to download your class data (first name, family name, gender and email address) into a spreadsheet and send the spreadsheet to h.clarke@etoncollege.org.uk . Make sure you include the name of the class and the details of the teacher who will manage this class. Your pupils will be uploaded onto the system and will then receive an automated email that allows them to login to the site.

In the future this process will become automated.

If for some reason your pupils have been uploaded, but have lost (or not received) the email, they can simply follow the instructions for logging on in Section B above.

D. Monitoring your class

Electricity Explained is built in the Eton Virtual learning environment. There are a number of useful features that help you to monitor your pupils.

You can monitor your pupils' progress by clicking on the Instructor tab in the menu bar:

The screenshot shows the Eton Virtual Instructor interface. At the top, there is a navigation bar with the Eton Virtual logo and a menu bar containing 'Electri...', 'Overview', 'Course', 'Journal', and 'Instructor'. Below the menu bar, there are buttons for 'Gradebook', 'SMART Plan', and 'Certificate and Transcript'. A 'Filter' dropdown is set to 'All', and a search box is labeled 'Search student'. The main content area displays a table of student progress:

	Progress	Total score	Interactive Circuit Simulations	1: Electric current	2: Voltage	3: Voltage in Series Circuits	4: Voltage in Parallel Circuits	6: Current-Voltage Characteristics: Wire
James S.	21	39	0	88	0	13	0	0
Eddie A.	13	77	0	77	0	0	0	0
James B.	13	100	0	100	0	0	0	0

Clicking on a pupil's name allows you to look at their progress in more detail:

The screenshot shows the detailed progress view for Eddie A. It includes a 'Keep going, Eddie!' message, a 'Next Unit' section for 'Interactive Circuit Simulations Simulation 01', and a 'My Progress' section. The 'My Progress' section features a gauge showing 20% completion and text indicating that 23% of the course has been completed by peers. Below this is a table of simulation parts:

Part	Status	Score
Part 1	Completed	Score: 6/8
Try these questions about how our animation shows charges moving	✗	6/8
Part 2	Completed	Score: 13/17
Try this one first about using our animation to find current	✗	0/1
Now try these questions about finding current using our animation	✓	6/6
A quick question about using an ammeter to measure current	✗	0/1
These multiple-choice questions will help you understand about speed and current	✗	4/5
Multiple Choice	✗	3/4
Part 3	Completed	Score: 14/18

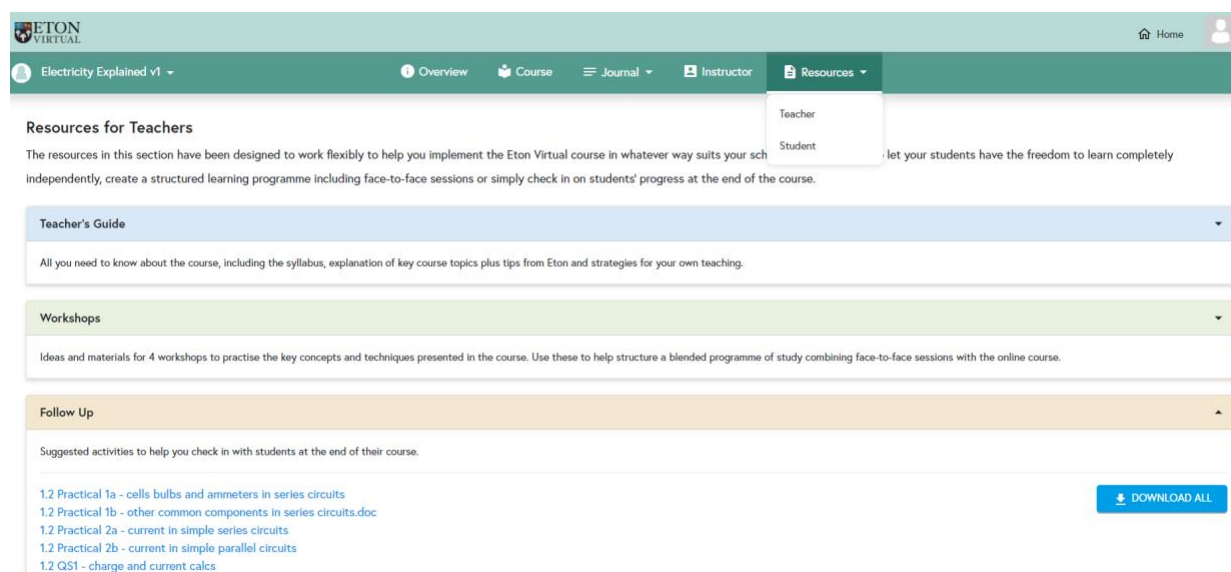
The functionality is very much a work in progress. Play around with the features and let us know what works well, but more importantly what doesn't and how we can improve things to make the software easier for you to use and to incorporate into your teaching.

E. Additional Resources

Eton Virtual Electricity Explained is being trialled by teachers in the maintained sector and our plan is to make it available for free to all teachers and pupils in the maintained sector in the UK.

We are building a library of additional and follow-up resources that teachers can download and use in their classes (for example as hardcopy question sheets).

If you go to the "Resources" tab on the menu bar and then click on "Teacher" you will find additional resources by clicking on "Follow-Up" (see below).



The screenshot shows the Eton Virtual Electricity Explained v1 course interface. The top navigation bar includes 'Overview', 'Course', 'Journal', 'Instructor', and 'Resources'. The 'Resources' dropdown menu is open, showing 'Teacher' and 'Student' options. The 'Teacher' section is selected, displaying the following content:

Resources for Teachers

The resources in this section have been designed to work flexibly to help you implement the Eton Virtual course in whatever way suits your school. They allow you to let your students have the freedom to learn completely independently, create a structured learning programme including face-to-face sessions or simply check in on students' progress at the end of the course.

Teacher's Guide

All you need to know about the course, including the syllabus, explanation of key course topics plus tips from Eton and strategies for your own teaching.

Workshops

Ideas and materials for 4 workshops to practise the key concepts and techniques presented in the course. Use these to help structure a blended programme of study combining face-to-face sessions with the online course.

Follow Up

Suggested activities to help you check in with students at the end of their course.

- [1.2 Practical 1a - cells bulbs and ammeters in series circuits](#)
- [1.2 Practical 1b - other common components in series circuits.doc](#)
- [1.2 Practical 2a - current in simple series circuits](#)
- [1.2 Practical 2b - current in simple parallel circuits](#)
- [1.2 QS1 - charge and current calcs](#)

[DOWNLOAD ALL](#)

They are catalogued according to the relevant sections of the Electricity Explained course. For example 1.2 QS1 is the first set of questions one might use to follow up on Section1 (Electric Current) - Part 2 (What's an electric current). For each question sheet (QS) we have also included an exemplar answer sheet (MS) with a link to an explanatory video which goes through the question sheet.

F. How you can help

We want to make this resource as good as it can be and welcome feedback on what works well and what can be improved. We are also hoping to build up the resource library by adding more question sheets with accompanying mark schemes and explanatory videos. If you have some feedback or if you have a tried and tested resource that complements the material covered in a particular section of the course and would be happy to share it, together with an exemplar answer sheet and explanatory video, then we would be delighted to hear from you. The more voices the better.