

1. How do the lesson plans work?

Please begin using the lesson plans with your students from the start of January 2021.

Please complete the <5 mins 'Project Activity' at the top of each plan in preparation for your CPD sessions, as follows:

Timing	Pre-training task
Before CPD session 1 (w/c 7th December 2020)	Skim through the lesson plans
Before CPD session 2 (w/c 11th January 2021)	'Project activities' from lessons 1 and 2
Before CPD session 3 (w/c 25th January 2021)	'Project activities' from lessons 3, 4 and 5 (& bring your next module's planning with you)
Before CPD session 4 (w/c 8th March 2021)	'Project activities' from lessons 6, 7 and 8

You can access the project activities from either the Lesson Plan Word documents or the Powerpoint slides.

There are three documents per lesson:

1. Lesson Plan
 - a. Please read the brief notes in the 'Research' column to learn the research that the lesson activities are based on.
 - b. You are not expected to click on the links that appear in this column unless you are interested (the only requirement is that you complete the 'project activity' at the top of the plan, in advance of the corresponding CPD session).
2. Slides
 - a. Each slide deck currently contains four teacher-facing slides at the beginning
 - i. Lesson title
 - ii. Project Activity (this also appears in the Lesson Plan; you can access it from either document)
 - iii. Need to know (what you need to know to prepare for the lesson)
 - iv. Plan (a really short summary of the plan for the lesson)
 - b. These are followed by student-facing slides
 - c. The notes sections beneath the slides contain notes to help you teach the lesson
 - d. These notes sections also contain copies of the 'research notes' that appear in the 'Research' column of the Lesson Plan document. Unfortunately, the links here are not clickable because PowerPoint does not support this.
3. Student worksheet

2. How have the lesson plans been designed?

The plans have been designed by a team of education researchers, ex-teachers and current physics teachers. They are based on research from three main sources:

1. [The EEF Improving Secondary Science Guidance Report](#)
2. [The EEF Teaching and Learning Toolkit](#)
3. [IOP's research-based database of student misconceptions](#)

And they draw on lesson resources from [IOP](#) and [Best Evidence Science Teaching](#).

[STEM Learning](#) (the UK's largest provider of education and careers support in STEM) are co-developers and co-facilitators of the CPD.

The lesson plans have been designed to make it easy for teachers to engage with academic research about teaching. But we are looking for your feedback to help refine them.

3. What do the lesson plans cover?

The lesson plans cover electric circuits for year 7/8. There are 8 one-hour lessons:

1. Making circuits
2. Components
3. Current
4. What affects current?
5. Potential difference and energy
6. Resistance
7. Adding extra loops
8. Electricity in the home

There are also two optional homeworks (for lessons 1 & 7) and an optional end-of-unit assessment.

4. Can I adapt the lesson plans?

Yes, absolutely.

Please feel free to adapt the plans to the needs of your classes, however you see fit.

We recognise that practicals may not be possible in spring term due to COVID-19 regulations. These practicals could be replaced with simulations on [PhET](#) or teacher demonstrations under a visualiser.

The PhET simulation should work on Android devices, iPhones, iPads and Chromebooks, as well as Windows and Macintosh Systems. If you experience technical issues, try updating to the latest version of Google Chrome and, otherwise, contacting phethelp@colorado.edu.

Please watch the video on how to use PhET (for teacher demonstrations, as well as practical simulations).