# circuits (lesson one)

## Year 6 science

### Australian curriculum Learning objectives

* [ACSSU097](http://www.australiancurriculum.edu.au/Elements/ACSSU097)[[1]](#footnote-1) Electrical circuits provide a means of transferring and transforming electricity. Elaborations:
	+ recognising the need for a complete circuit to allow the flow of electricity
	+ investigating different electrical conductors and insulators
	+ exploring the features of electrical devices such as switches and light globes.

### Resources required

* [Electric vocabulary](http://www.youtube.com/watch?v=MBRTR2dlwvA&cc=1)[[2]](#footnote-2) captioned online video (duration: 6.56) plus facilities to watch video.
* [Worksheet](http://www.capthat.com.au/sites/www.capthat.com.au/files/Electricity%20vocabulary%20worksheet%20%28Circuits%20Lesson%20One%29.docx)[[3]](#footnote-3) on electricity vocabulary x class set.
* Scootle animations - *Wiring: the series circuit*, *Wiring: extra stuff for students* and *Circuits and Conductors quiz*. Animations from Scootle are available to all Australian teachers via password. [Find out more about registering with Scootle](http://www.scootle.edu.au/ec/p/accessing_scootle).[[4]](#footnote-4) Once registered and logged in, search for animations by name.

Lesson outcome: Students learn that a complete circuit is needed to allow for the flow of electricity

#### Lesson outline:

1. Teacher opens lesson with a brief brainstorm discussion about electricity.
2. Class watches *Electric vocabulary* video to introduce the historical story behind the discovery of electricity.
3. Class discussion follows the video.
4. The following list of words is displayed on interactive whiteboard/board: phenomena, metaphor, attract, repel, metaphor, electrical conductors, insulators, filament, circuit, electricity.
5. Students work with partners to source and fill in definitions of the above words using Worksheet 1.
6. Still with partners, students draw up a list of all the uses of electricity in their daily lives.
7. Class discussion and contribution on definitions and the uses of electricity.
8. Teacher draws up mind map (using software on IWB) or on whiteboard/ butchers paper, for uses of electricity in our daily lives. Explain circuits using *Wiring: the series circuit* animation for the whole class to view and discuss.
9. To view further information about circuits teacher uses same animation but proceeds to the *Wiring: extra stuff for students* page. Class discusses the different wiring options and what could be made using them.
10. Students access the *Circuits and Conductors quiz* online and complete the quiz.

### Homework/extension

Students use *Wiring: Extra stuff for students* page to develop ideas for making simple circuits.

### Opportunity for further activity

Circuits Lesson Two to follow.

1. <http://www.australiancurriculum.edu.au/Elements/ACSSU097> [↑](#footnote-ref-1)
2. <http://www.youtube.com/watch?v=MBRTR2dlwvA&cc=1> [↑](#footnote-ref-2)
3. <http://bit.ly/R5LOm2> [↑](#footnote-ref-3)
4. <http://www.scootle.edu.au/ec/p/accessing_scootle> [↑](#footnote-ref-4)