

• Unit Title	Electricity				
Subject group and discipline	Sciences	MYP year	3	Unit duration (hrs)	24

### Inquiry: Establishing the purpose of the unit

Key concept	Related concept(s)	Global context <i>choose 1 and then drill down to exactly which aspect of these the unit will focus on</i>
Systems	Function Interaction	Scientific and technical innovation
<b>Statement of inquiry</b>		
The <i>interaction</i> of components in systems leads to functions which are important in <b>scientific and technical innovation</b> .		
<b>Inquiry questions</b>		
<p>Factual—</p> <p>What is current?</p> <p>What is voltage?</p> <p>What are the circuit symbols?</p> <p>What makes current go?</p> <p>What's the difference between a magnet and an electromagnet?</p> <p>How does the length of a wire affect resistance?</p> <p>How can magnetic fields be represented?</p> <p>What's inside an atom?</p> <p>Conceptual—Why do we get electric shocks when you go down a slide?</p> <p>Why are wires coated in plastic? (conductors/insulators)</p>		

How do fairy lights work? (series vs parallel)

Why do computers need fans? (resistance)

How can a solar farm be designed?

Why are plugs different around the world?

Debatable—

Why do we use circuit symbols?

When should we use electromagnets

Why is it important to recycle?

**Potential alternative questions for the unit:**

- Why do computers need fans? (electrical resistance)
- Why do some materials conduct electricity? Why are wires coated in rubber?
- How do fairy lights work? (series vs parallel) -
- Why do street lights come on at night (LDRs)
- How can we model circuits?
- What is current and voltage?
- Why does a shower need two circuits?
- Why do we use circuit symbols?
- How can the strength of an electromagnet be changed?
- How can magnetic fields be represented?
- What are the different types of circuits?
- What are electromagnets used for?
- Why are wires coated in plastic?

**Objectives**

**Summative assessment** *This does not always have to be a GRASPS task but it does need to involve students demonstrating progress by transferring the skills and knowledge they have learnt to a real-life context. An analytical essay or practice exam*