

Progression toolkit: Electrical safety

Learning focus	Fuses, circuit breakers and earth connections, used correctly, can prevent excess mains current and electric shocks.				
As students' conceptual understanding progresses they can:	<div> <div>CONCEPTUAL PROGRESSION</div> <div></div> </div>				
	Describe the effects of an electric shock on a person.	Explain why there are no standard mains sockets in a bathroom.	Explain how electric circuits are wired in a home, with circuit breakers for safety.	Explain the effects of a short circuit in an appliance or in a mains circuit.	Explain how earth wires can protect people from electric shock.
Diagnostic questions	Shocking!	Resisting a shock	Consumer unit Mains circuits	Short circuit	Metal case
Response activities		Shocking calculations	A working fuse		Earthing

Key:

P Prior understanding from earlier stages of learning

B Bridge to later stages of learning

