

Unit outcomes

It's electrifying

Science outcomes

It's electrifying is a Stage 3 unit. Unit outcomes have been identified for Level 3 and Level 4 of the *National Scientific Literacy Progress Map*, allowing teachers to cater for the range of abilities in the sixth and seventh years of schooling. Summative assessment will need to take account of the levels of achievement expected for a cohort of students. Summative assessment of conceptual learning outcomes (c) occurs in the *Evaluate* phase and summative assessment of the investigating outcomes (i) occurs in the *Elaborate* phase.

Level 3

- c Describe a circuit in terms of components that form a continuous path for the flow of electrons.
- c Describe how energy is stored and transferred within an electric circuit.
- c Explain the characteristics of conductors and insulators in terms of categories of materials.
- i Formulate a question for investigation and make a prediction.
- i Plan for the investigation showing awareness of the need for fair testing.
- i Summarise and explain observations made during an investigation.

Level 4

- c Explain energy transfer within a circuit in terms of a flow of electrons.
- c Explain that electrical energy is changed into other forms of energy in a circuit and is not used up—that is, energy is transformed and not destroyed.
- c Explain differences between conductors and insulators in terms of electron flow through these materials.
- i Change one factor at a time when modifying circuits to test predictions about possible conductors and insulators and test sufficient samples to make reliable conclusions.
- i Formulate generalisations based on observations made during an investigation.
- i Make suggestions for improving the investigation.

Literacy focuses

It's electrifying engages students in activities that reflect the mutually supportive relationship between science and literacy. Learning activities are designed to introduce explicitly the literacy focuses and to provide students with the opportunity to use them as they think about and represent their understanding of science.

The interdependence of science and literacy is demonstrated throughout the unit when students participate in discussions and use talk to: inquire, report on observations, clarify understanding and reflect on experience. The use of gestures and oral, written and visual language to relate science to students' personal worlds is another important aspect, as is the ability to formulate questions, provide evidence for conclusions and critically analyse material.

The literacy focuses identified for *It's electrifying* are:

- science journals
- cutaway diagrams
- word walls
- circuit diagrams
- labelled diagrams
- biographies
- chronological lists
- role-plays
- annotated diagrams
- tables
- procedural texts.