



## Electricity Safety Activities for K-6

Developed by Ausgrid in collaboration with the NSW Department of Education. Resources are aligned with the NESA PDHPE syllabus for K-6.



## Early Stage 1 Electricity Safety - Outcomes and Indicators

<p><b>PDHPE Objectives:</b></p> <p>PDe-6 - Students understand the significance of contextual factors that influence health, safety, wellbeing and participation in physical activity.</p>	<p><b>Outcomes:</b></p> <ul style="list-style-type: none"> <li>• explores contextual factors that influence an individual's health, safety, wellbeing and participation in physical activity</li> </ul>
<p>PDe-7 - Students enact and strengthen health, safety, wellbeing and participation in physical activity</p>	<ul style="list-style-type: none"> <li>• identifies actions that promote health, safety, wellbeing and physically active spaces</li> </ul>
<p>PDe-9 - Students develop and use self-management skills that enable them to take personal responsibility for their actions and emotions and take positive action to protect and enhance the health, safety and wellbeing of others</p>	<ul style="list-style-type: none"> <li>• identifies actions that promote health, safety, wellbeing and physically active spaces</li> </ul>
<p><b>ENGLISH Outcomes:</b></p> <p>ENe-1A - communicates with peers and known adults in informal and guided activities demonstrating emerging skills of group interaction</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• communicates effectively in pairs or groups through speaking, listening, reading and writing</li> <li>• express a point of view about texts read and/or viewed</li> <li>• respond to simple questions either verbally or non-verbally</li> <li>• contribute appropriately to class discussions</li> <li>• use questions and statements in class discussions</li> </ul>
<p>ENe-2A - composes simple texts to convey an idea or message</p>	<ul style="list-style-type: none"> <li>• create short texts to explore, record and report ideas using familiar words and beginning writing knowledge</li> <li>• identify and use words around the classroom during writing</li> <li>• compose texts using some sight words and known words</li> <li>• compose texts on familiar topics using pictures and graphics</li> </ul>
<p>ENe-3A - produces most lower case and upper case letters to construct texts</p>	<ul style="list-style-type: none"> <li>• understand movements that underpin NSW Foundation Style</li> <li>• begin to understand the sequence of letters</li> <li>• use foundation movements when composing texts</li> <li>• develop basic skills of writing, including correct pencil grip, good posture and handwriting movements</li> <li>• write from left to right and leave spaces between words</li> <li>• produce letters using learned letter formations</li> </ul>

## Early Stage 1 Electricity Safety - Outcomes and Indicators

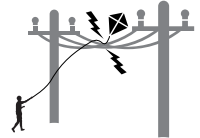
<p>ENe-4A - demonstrates developing skills and strategies to read, view and comprehend short, predictable texts on familiar topics in different media and technologies</p>	<ul style="list-style-type: none"> <li>• identify some familiar symbols in context, eg logos, signs</li> <li>• identify unfamiliar words and attempt to use experience and context to work out word meanings</li> <li>• understand direction of print, return sweeps and spaces</li> <li>• identify a sentence in informative texts and understand its meaning</li> <li>• read and understand sight words in simple, predictable texts</li> </ul>
<p>ENe-5A - demonstrates developing skills in using letters, simple sound blends and some sight words to represent known words when spelling</p>	<ul style="list-style-type: none"> <li>• attempt to spell unknown words using simple strategies</li> <li>• spell some common words accurately in their own writing</li> </ul>
<p>ENe-6B - recognises that there are different kinds of spoken texts and shows an awareness of some purposes for spoken language</p>	<ul style="list-style-type: none"> <li>• identify the difference between a question and a statement</li> </ul>
<p>ENe-7B - recognises some different purposes for writing</p>	<ul style="list-style-type: none"> <li>• compose texts using drawings to create meaning</li> <li>• reread own texts with peers and known adults and explain the purpose for the writing</li> </ul>
<p>ENe-8B - demonstrates emerging skills and knowledge of texts to read and view, and shows developing awareness of purpose, audience and subject matter</p>	<ul style="list-style-type: none"> <li>• recognise key differences between imaginative and informative texts</li> <li>• identify the intended audience for a particular text and give reasons</li> </ul>
<p>ENe-9B - demonstrates developing skills and knowledge in grammar, punctuation and vocabulary when responding to and composing texts</p>	<ul style="list-style-type: none"> <li>• show a growing awareness of words that enrich their vocabulary</li> </ul>
<p>ENe-11D - responds to and composes simple texts about familiar aspects of the world and their own experiences</p>	<ul style="list-style-type: none"> <li>• compose simple written and visual texts that include aspects of home, personal and local community life</li> </ul>
<p><b>CAPA Outcomes:</b></p> <p>DRAES1.1 - Uses imagination and the elements of drama in imaginative play and dramatic situations.</p>	<p><b>Content:</b></p> <ul style="list-style-type: none"> <li>• participates in imaginative play by taking on basic roles</li> <li>• works with other students and the teacher to develop dramatic situations</li> </ul>

## Early Stage 1 Teacher Background Notes

Most of the time, electricity is safe. But sometimes a dangerous electrical situation can happen and we risk being electrocuted if we don't know what to do. We have to be smart and careful or we could be in for a big shock!

### Outside safety

We all like to play outside, but there are electrical hazards that we need to know about. Electricity poles and wires are all around us. They can be above us, next to us and even below us. Play in open spaces away from electricity poles, towers and power lines.



### Remember:

If you fly a kite and it gets caught in the overhead power lines, live electricity could travel down the string and seriously hurt you. So be careful!

- Never climb a tree that is near power lines. Look up before you climb!
- After a storm if you see fallen power lines stay well clear of them.
- Never swim or go near water in an electrical storm.
- Never play near high voltage areas – substations, transformers or power stations.
- If you see a dangerous situation - stay clear and tell an adult.

### Safety around water

Water can conduct electricity because electrons can flow by hitching a ride on atoms and molecules in the water. Water contains dissolved substances, such as salt. These greatly increase the ability of water to conduct electricity. That's why electricity passes easily through our bodies – because our bodies contain water and salt. This is also why it's important to keep water away from electrical appliances.



### Electrical emergencies

We all hope that we are never in an emergency involving electricity, but if we are, it's important to know what to do.

### If you come across an emergency involving electricity:

- Ensure your own safety.
- Turn the power off at the power point and remove the plug (if you are able to do so).
- Get an adult.
- Ring 000.

### Key safety messages

It is important to ensure that all students are aware of the four safety messages at the completion of the activities.

- Be careful when you play around poles and wires
- If you see a dangerous situation, tell an adult
- Know what to do in an electrical emergency
- Be safe

## Early Stage 1 Activities

### Activity 1 – Safe outdoor play [PDe-6; PDe7; PDe-9]

- Discuss playing safely outdoors with the whole class.
- Ask students to give examples of types of play that are safe and types of play that are unsafe. (Discourage students from telling tales about the play habits of other students in this discussion)
- Have students offer suggestions about what they should do if they see someone playing unsafely.
- Discuss the emergency and safety messages.
- Ask the students whom they should go to in an emergency.
- Make a list of the suggestions for safe and unsafe play.
- Go outside and role-play safe play and what to do when someone is playing unsafely.
- Ask students to draw a picture of someone playing safely and have them write a safe message under the drawing. (This can be a modeled sentence for beginner writers)
- Have students show and discuss their messages and drawings.
- Highlight new words and topic words by adding them to the whiteboard.
- Create a display wall to place the lists and some chosen drawings.
- Add topical words to the display.

### Activity 2 – What to do in unsafe outdoor situations [PDe-6; PDe7; PDe-9]

- Discuss places that are safe and unsafe to play outdoors. Encourage the students to give examples of where it is safe to play and where it is not safe to play.
- Make a list of the safe and unsafe places.
- Divide the class into groups and give each group a set of picture cards (p6).
- Ask the students to sort the cards into safe places and unsafe places and to discuss what is unsafe in the pictures.
- Ask each child to choose a card and draw a picture of what they should do when they encounter this situation.
- Have students write under their drawing what to do in unsafe situations. (Model the writing to make sure each student has the correct message.)
  - Stay clear
  - Tell an adult
  - Call 000
- Add chosen drawings, words and safety tips to the display wall.

## Early Stage 1 Activities

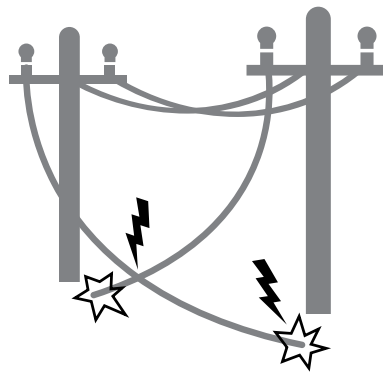
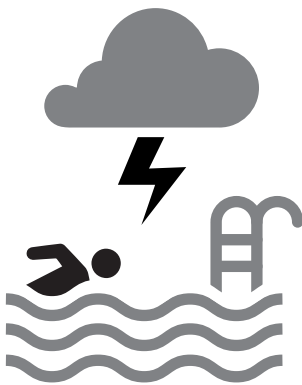
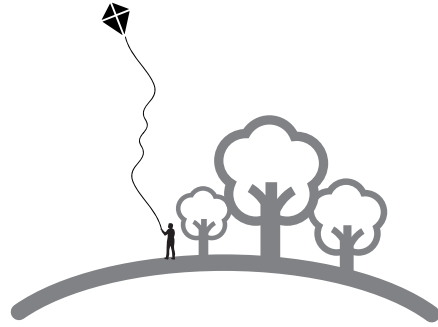
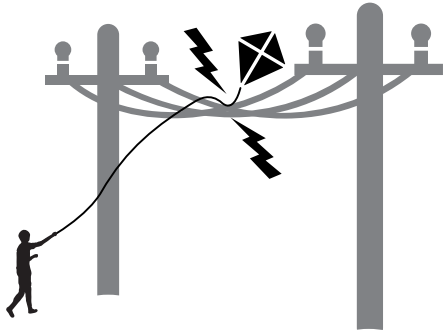
### Activity 3 – Safe indoor play [PDe-6; PDe7; PDe-9]

- Discuss playing safely indoors with the whole class.
- Ask students to give examples of types of play that they think might be safe and types of play that are unsafe.
- Brainstorm a list of safe and unsafe indoor games.
- Divide the class into groups and ask each group to discuss the rooms in the house that are unsafe to play in.
- Give each group some magazines and a set of word cards (p7) that depict rooms in a house. Ask the students to cut out pictures of electrical devices that they might find in each room.
- Have the students' copy the names of each room onto a piece of paper and glue the pictures they have cut out for each room to make a poster.
- Add any new words to the wall display.

### Activity 4 – What to do in unsafe indoor situations [PDe-6; PDe7; PDe-9]

- Regroup the class and ask them to bring their room posters with them.
- Discuss with the students the possible dangers associated with each appliance.
- Display a set of picture cards (p8) that depict dangers.
- Ask the students to suggest what to do if they encounter a dangerous situation with each appliance.
- Remind students of the safety tips that they have learnt for dangerous situations.
  - Stay clear
  - Tell an adult
  - Call 000
- Ask the students to write a safety message on each poster.
- Place some of the posters on the display wall.
- Have children role play some dangerous situations.
  - What should they do to prevent danger?
  - What should they do when danger occurs?

## Picture Cards - Activity 2



**Picture Cards - Activity 3**

Kitchen

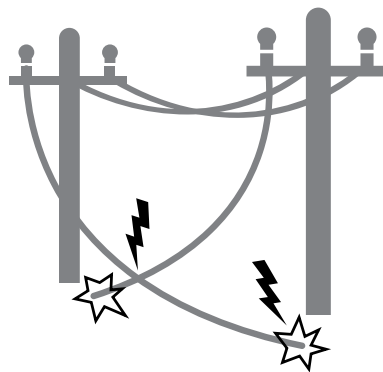
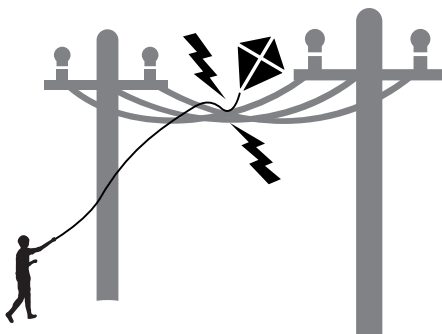
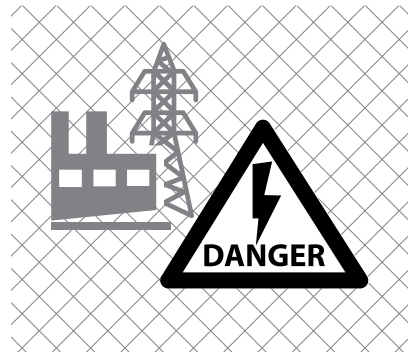
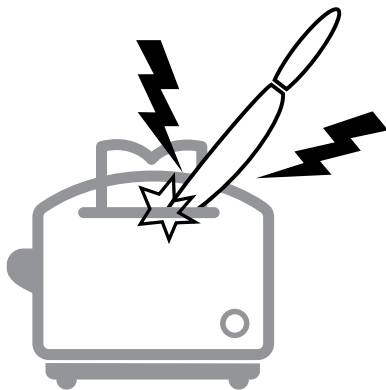
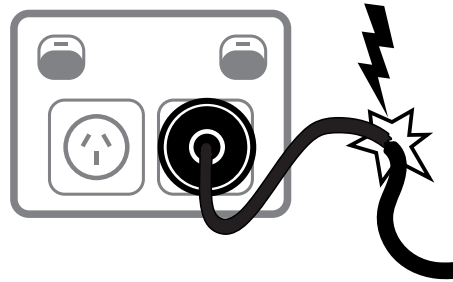
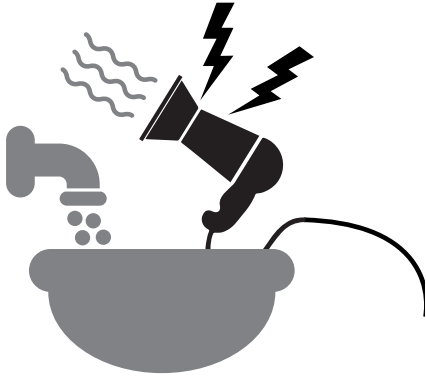
Bathroom

Living room

Bedroom



## Picture Cards - Activity 4



## Stage 1 Electricity Safety - Outcomes and Indicators

<p><b>PDHPE Objectives:</b></p> <p>PD1-6 - Students understand the significance of contextual factors that influence health, safety, wellbeing and participation in physical activity</p>	<p><b>Outcomes:</b></p> <ul style="list-style-type: none"> <li>• understands contextual factors that influence themselves and others health, safety, wellbeing and participation in physical activity</li> </ul>
<p>PD1-7 - Students enact and strengthen health, safety, wellbeing and participation in physical activity</p>	<ul style="list-style-type: none"> <li>• explores actions that help make home and school healthy, safe and physically active spaces</li> </ul>
<p>PD1-9 - Students develop and use self-management skills that enable them to take personal responsibility for their actions and emotions and take positive action to protect and enhance the health, safety and wellbeing of others</p>	<ul style="list-style-type: none"> <li>• demonstrates self- management skills in taking responsibility for their own actions</li> </ul>
<p><b>ENGLISH Outcomes:</b></p> <p>EN1-1A communicates with a range of people in informal and guided activities demonstrating interaction skills and considers how own communication is adjusted in different situations</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>• communicates with a range of people in informal and guided activities demonstrating interaction skills</li> <li>• use turn-taking, questioning and other behaviours related to class discussion</li> <li>• communicate with increasing confidence in a range of contexts</li> <li>• engage in conversations and discussions, using active listening behaviours, showing interest, and contributing ideas, information and questions</li> <li>• use role-play and drama to represent familiar events and characters in texts</li> <li>• formulate open and closed questions appropriate to the context</li> <li>• use a comment or a question to expand on an idea in a discussion</li> <li>• use some persuasive language to express a point of view</li> </ul>
<p>EN1-2A plans, composes and reviews a small range of simple texts for a variety of purposes on familiar topics for known readers and viewers</p>	<ul style="list-style-type: none"> <li>• plan, compose and review simple informative texts on familiar topics</li> <li>• compose texts supported by visual information (eg diagrams and maps)</li> <li>• draw on personal experience and topic knowledge to express opinions</li> <li>• reread and edit text for spelling, punctuation and text structure</li> </ul>

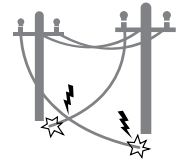
## Stage 1 Electricity Safety - Outcomes and Indicators

<p>EN1-3A composes texts using letters of consistent size and slope and uses digital technologies</p>	<ul style="list-style-type: none"> <li>• develop clear and consistent writing using NSW Foundation Style</li> <li>• write legibly using unjoined upper case and lower case letters</li> </ul>
<p>EN1-4A draws on an increasing range of skills and strategies to fluently read, view and comprehend a range of texts on less familiar topics in different media and technologies</p>	<ul style="list-style-type: none"> <li>• discuss different texts on a similar topic, identifying similarities and differences between the texts</li> <li>• sequence a summary of events and identify key facts or key arguments in imaginative, informative and persuasive texts</li> </ul>
<p>EN1-5A uses a variety of strategies, including knowledge of sight words and letter-sound correspondences, to spell familiar words</p>	<ul style="list-style-type: none"> <li>• spell known words using letter names</li> <li>• spell high-frequency and common sight words when composing texts</li> </ul>
<p>EN1-6B recognises a range of purposes and audiences for spoken language and recognises organisational patterns and features of predictable spoken texts</p>	<ul style="list-style-type: none"> <li>• make short presentations using some introduced text structures and language, for example opening statements</li> <li>• rephrase questions to seek clarification</li> </ul>
<p>EN1-7B identifies how language use in their own writing differs according to their purpose, audience and subject matter</p>	<ul style="list-style-type: none"> <li>• compose and review written and visual texts for different purposes and audiences</li> </ul>
<p>EN1-8B recognises that there are different kinds of texts when reading and viewing and shows an awareness of purpose, audience and subject matter</p>	<ul style="list-style-type: none"> <li>• recognise a range of purposes and audiences for imaginative, informative and persuasive print and visual texts</li> </ul>
<p>EN1-9B uses basic grammatical features, punctuation conventions and vocabulary appropriate to the type of text when responding to and composing texts</p>	<ul style="list-style-type: none"> <li>• begin to understand that choice of vocabulary adds to the effectiveness of text</li> </ul>

## Stage 1 Teacher Background Notes

### Dangerous situations

Always be on the look out for dangers in and around your home. This could be anything from a faulty electrical lead to a 'stacked' power point – one with too many plugs in it. These situations could be life threatening and an electrician should be called in to fix them.



#### Remember:

- Faulty appliances and damaged electrical leads should be disconnected at the power point and fixed or replaced by an electrician.
- Never stack power points. Use a power board or have an extra power point installed. Stacked power points can cause fires.
- Before you or your family do any major digging in the yard you should get Mum or Dad to ring Dial Before you Dig on 1100 to make sure there are no underground cables near your property. If you hit one you could be electrocuted, as well as possibly interrupting the power to your suburb.

### Safety around metal

We all come into contact with metal objects on a daily basis – turning on a tap, playing with our computers and toys and even using the fridge. Because metal conducts electricity, you have to be very careful when you use metal items.



#### Remember:

- Never put a metal object, like a knife into a toaster. It is very dangerous!
- Never put anything in a power point that's not meant for it. Electricity will travel right up the metal object into your body.
- Be careful when climbing a ladder at home. The power lines connected to your house are usually protected, but they can be damaged by rubbing against the gutter or a tree, or through exposure to the sun. If a person is on a metal ladder and touches the exposed line, the electricity will travel through their body to the earth. Switch on to safety

### Electrical emergencies

We all hope that we are never in an emergency involving electricity, but if we are, it's important to know what to do.

If you come across an emergency involving electricity:

- Ensure your own safety
- Turn the power off at the power point and remove the plug (if you are able to do so)
- Get an adult
- Ring 000.

## Stage 1 Teacher Background Notes

### Key safety messages

It is important to ensure that all students are aware of the four safety messages at the completion of the activities.

- Be careful when you play around poles and wires
- If you see a dangerous situation, tell an adult
- Know what to do in an electrical emergency
- Be safe

## Stage 1 Activities

### Activity 1 – Safety around electrical cables [PD1-6; PD1-7; PD1-9]

- Assemble the class and tell them that they are going to learn about electricity and why we must be very careful and very sensible around electrical appliances.
- Show the class some samples of electrical wires, cables and cords.
- Ask the students to discuss where they may have seen each sample and what it might be used for.
- Ask the students if they can identify a safe wire, cable or cord and an unsafe one.
- Discuss the fact that electricity is invisible and wires should never be touched. (If in doubt ask an adult.)
- Divide the class into groups and ask each group to present a role-play of what to do in an emergency situation such as unsafe wires.
- Provide each group with paper and pens.
- Ask them to make a pictograph list of when wires and cords might be dangerous. (or a word list if students are capable)
- Have each group report back to the class about their list.
- Discuss the safety messages associated with each situation.

- 1. Be careful when you play around poles and wires**
- 2. If you see a dangerous situation, tell an adult**
- 3. Know what to do in an electrical emergency**
- 4. Be safe**

- Create a wall display of any topical words and messages.

### Activity 2 – Safety messages for electrical cables [PD1-6; PD1-7; PD1-9]

- Tell the class that they are going to use the lists that they created in the previous lesson to create a safety poster.
- Divide the class into groups and ask them to discuss the hazards they identified in their list and to choose one that they would like to illustrate.
- Ask each group to make a poster for one hazard they have chosen. The poster must include a safety message for avoiding the hazard.
- Assign roles for each group member and make sure they understand their individual roles. e.g. designer, scribe, reporter, etc.
- Ask each group to have their reporters share their posters with the class and discuss why they chose this hazard to illustrate and what their safety message is.
- Ask the class whether they agree with the safety message and what they would do in this situation.
- Add the posters and any new words and messages to the display wall.

## Stage 1 Activities

### Activity 3 – Identifying safety signs and symbols [PD1-6; PD1-7; PD1-9]

- Show the class some samples of common warning or safety signs.
- Ask the class to identify each one and to discuss what the safety message is.
- Brainstorm other safety signs that the students may have seen and where they have seen them.
- Discuss why we have safety signs and what purpose they serve.
- Divide the class into groups and ask the students to think about some dangerous situations that they may encounter around electricity.
- Ask the students to create a group artwork that incorporates safety messages and safety symbols. (A combination of painting and collage from magazine pictures would work well for this activity.)
- Give each group the opportunity to display and discuss their artwork.
- Encourage the students to ask critical questions about each piece of art like:
  - “How did you make the decisions about what your art would look like?”
  - “Why did you choose those pictures?”
  - “Why did you choose those colours?”
  - “Do you think your art gives a safety message?”
  - “Do you think you could have made your message stronger?”, etc.
- Display the art on the display wall.

### Activity 4 – Electrical safety signs and symbols [PD1-7; PD1-9]

- Review the safety messages:

- 1. Be careful when you play around poles and wires**
- 2. If you see a dangerous situation, tell an adult**
- 3. Know what to do in an electrical emergency**
- 4. Be safe**



- Show the class some electrical safety signs and symbols.
- Discuss where these might be displayed and why.
- Ask the students to consider what the safety message would be for each sign.
- Ask the students why it is important to have safety signs in some locations.
- Divide the class into groups and ask them to make a list of all the dangerous electrical hazards that they can think of. (Appliances near water, forks in toasters, overloaded power boards, frayed electrical cords, sticking objects in sockets, ladders near power lines, kites near power lines, etc.)

## Stage 1 Activities

- Have each group choose one dangerous situation that does not have a safety or warning sign associated with it.
- Provide the students with the materials to design a safety sign for their chosen dangerous situation.
- Ask students to share their safety signs with the class and discuss any new words.
- Add new words to display wall.
- Display their safety signs near the appropriate location. e.g. a picture warning against placing objects in sockets could be placed next to a socket.



## Stage 2 Electricity Safety - Outcomes and Indicators

<p><b>PDHPE Objectives:</b></p> <p>PD2-6 - Understand the significance of contextual factors that influence health, safety, wellbeing and participation in physical activity</p>	<p><b>Outcomes:</b></p> <ul style="list-style-type: none"> <li>describes how contextual factors are interrelated and how they influence health, safety, wellbeing and participation in physical activity</li> </ul>
<p>PD2-7 - Students enact and strengthen health, safety, wellbeing and participation in physical activity</p>	<ul style="list-style-type: none"> <li>describes strategies to make home and school healthy, safe and physically active spaces</li> </ul>
<p>PD2-9 - Develop and use self-management skills that enable them to take personal responsibility for their actions and emotions and take positive action to protect and enhance the health, safety and wellbeing of others.</p>	<ul style="list-style-type: none"> <li>demonstrates self- management skills to respond to their own and others' actions</li> </ul>
<p><b>ENGLISH Outcomes:</b></p> <p>EN2-1A - communicates in a range of informal and formal contexts by adopting a range of roles in group, classroom, school and community contexts</p>	<p><b>Content:</b></p> <ul style="list-style-type: none"> <li>interact effectively in groups or pairs, adopting a range of roles</li> <li>demonstrate understanding of ideas through role-play and simulations</li> <li>identify key elements of planning, composing, reviewing and publishing</li> </ul>
<p>EN2-2A - plans, composes and reviews a range of texts that are more demanding in terms of topic, audience and language</p>	<ul style="list-style-type: none"> <li>plan, draft and publish informative and persuasive texts</li> </ul>
<p>EN2-3A - uses effective handwriting and publishes texts using digital technologies</p>	<ul style="list-style-type: none"> <li>write using NSW Foundation Style cursive, as appropriate, and explore joins that facilitate fluency and legibility</li> <li>recognise that legibility requires consistent size, slope and spacing</li> </ul>
<p>EN2-4A - uses an increasing range of skills, strategies and knowledge to fluently read, view and comprehend a range of texts on increasingly challenging topics in different media and technologies</p>	<ul style="list-style-type: none"> <li>skim a text for overall message and scan for particular information</li> <li>recognise high frequency sight words</li> <li>recognise how aspects of personal perspective influence responses to texts</li> </ul>
<p>EN2-5A - uses a range of strategies, including knowledge of letter–sound correspondences and common letter patterns, to spell familiar and some unfamiliar words</p>	<ul style="list-style-type: none"> <li>use a variety of spelling strategies to spell high-frequency words correctly</li> <li>discuss and use strategies for spelling difficult words</li> </ul>

## Stage 2 Electricity Safety - Outcomes and Indicators

<p>EN2-6B - identifies the effect of purpose and audience on spoken texts, distinguishes between different forms of English and identifies organisational patterns and features</p>	<ul style="list-style-type: none"> <li>• plan, rehearse and deliver presentations incorporating learned content and taking into account the particular purposes and audiences</li> <li>• listen to and contribute to conversations and discussions to share information and ideas and negotiate in collaborative situations</li> <li>• plan and deliver short presentations</li> <li>• use persuasive language to compose simple persuasive texts</li> <li>• enhance presentations by using some basic oral presentation strategies</li> </ul>
<p>EN2-7B - identifies and uses language forms and features in their own writing appropriate to a range of purposes, audiences and contexts</p>	<ul style="list-style-type: none"> <li>• discuss how texts are adjusted to appeal to different audiences</li> <li>• understand how audience and purpose influence the choice of vocabulary</li> <li>• express a point of view for a particular purpose in writing</li> </ul>
<p>EN2-9B - uses effective and accurate sentence structure, grammatical features, punctuation conventions and vocabulary relevant to the type of text</p>	<ul style="list-style-type: none"> <li>• learn extended and technical vocabulary and ways of expressing opinion</li> <li>• including modal verbs and adverbs</li> </ul>
<p><b>MATHEMATICS Outcomes:</b></p> <p>MA2-18SP - selects appropriate methods to collect data, and constructs, compares, interprets and evaluates data displays, including tables, picture graphs and column graphs</p>	<p><b>Content:</b></p> <ul style="list-style-type: none"> <li>• create a survey and related recording sheet</li> <li>• choose effective ways to collect and record data for an investigation</li> <li>• refine survey questions as necessary after a small trial</li> <li>• conduct a survey to collect categorical data</li> <li>• after conducting a survey, discuss and determine possible improvements</li> <li>• represent given or collected categorical data in tables, column graphs</li> <li>• mark equal spaces on axes, name and label axes, and choose appropriate titles for graphs</li> </ul>

## Stage 2 Teacher Background Notes

### Dangerous situations

Always be on the lookout for dangers in and around your home. This could be anything from a faulty electrical lead to a 'stacked' power point – one with too many plugs in it. These situations could be life threatening and an electrician should be called in to fix them.

#### Remember:

- Faulty appliances and damaged electrical leads should be disconnected at the power point and fixed or replaced by an electrician.
- Never stack power points. Use a power board or have an extra power point installed. Stacked power points cause fires.
- Before you or your family do any major digging in the yard you should get Mum or Dad to ring Dial Before you Dig on 1100 to make sure there are no underground cables near your property. If you hit one you could be electrocuted, as well as possibly interrupting the power to your suburb.



### Electricity substations

You will find electricity substations and power equipment all over the place. They are behind fences, in buildings, or on the side of the footpath, and most have danger signs. Substations transform the voltage generated at power stations so it can be distributed to homes, schools and businesses. Sometimes they are near parks and play areas. Substations are safe, but you must follow the rules.



#### Remember:

- Sometimes it's tempting to ignore signs and fences around substations. Remember the warnings are there for everyone's protection, so make sure you follow them!
- Substations contain special equipment with invisible hazards. You don't even have to touch anything to get hurt. Just being too close to some substation equipment can be dangerous and may even kill you!

### Electrical emergencies

We all hope that we are never in an emergency involving electricity, but if we are, it's important to know what to do.

If you come across an emergency involving electricity:

- Ensure your own safety.
- Turn the power off at the power point and remove the plug (if you are able to do so).
- Get an adult.
- Ring 000.

## Stage 2 Teacher Background Notes

### Key safety messages

It is important to ensure that all students are aware of the four safety messages at the completion of the activities.

- Be careful when you play around poles and wires
- If you see a dangerous situation, tell an adult
- Know what to do in an electrical emergency
- Be safe

## Stage 2 Activities

### Activity 1 – Electrical safety in and around the home [PD2-6; PD2-7; PD2-9]

- Assemble the class and lead a discussion on electrical safety.
- Ask the class to identify all of the electrical safety hazards that they can think of in and around the home.
- Discuss what might happen when people are not aware of the potential hazards around electricity.
- Ask the students to explain the need for rules for safe behavior around electricity.
- Divide the class into groups and ask them to research possible hazards around electricity and what people should be aware of to stay safe around electricity.
- Remind students of the safety messages:
  - 1. Be careful when you play around poles and wires**
  - 2. If you see a dangerous situation, tell an adult**
  - 3. Know what to do in an electrical emergency**
  - 4. Be safe**
- Have each group take notes on electricity hazards and safety tips.
- Based on their notes encourage each group to create a list of questions to survey others on their knowledge of electrical safety.
- Ask each group to design a survey from the questions they have compiled. (This could be done on paper or using an online survey program)
- Start a word wall to display any new words or meta-language introduced in the lesson.

### Activity 2 – Electrical safety survey

- Assemble the class and ask each group to share their surveys.
- Discuss the similarities in questions and allow time for each group to add or change their questions if they feel the need.
- Give each group the opportunity to survey teachers and students from other classes using the surveys they have created.
- Have students survey family members for homework.
- Have students tally up all of the results from their surveys.
- Ask the students to create a table for the responses and add all of the responses to the table.
- Ask the students to compile a graph of the responses with the use of technology or by drawing up their graph on a poster.
- Have each group present their graphs to the class.
- Make a note of any trends in the data presented and discuss these trends with the class.
- Ask students why they think the community is not aware of some dangers around electricity.
- Add any new words to the word wall.

## Stage 2 Activities

### Activity 3 – Electrical safety messages [PD2-6; PD2-7; PD2-9]

- Assemble class and ask students to recite safety messages and what to do in emergencies.
  - 1. Ensure your own safety**
  - 2. Turn the power off at the power point and remove the plug (if you are able to do so)**
  - 3. Get an adult.**
  - 4. Ring 000**
- Quiz students on electricity hazards, safety precautions and who to seek help from in an emergency situation.
- Explain to the class that they are going to continue to work in their groups to come up with some solutions to the lack of education around electrical safety that they identified in their surveys.
- Divide the class into their groups and ask them to select the messages that they feel the community knew the least about.
- Ask each group to design an education campaign to teach their safety message. This could include signs, logos, mantras, jingles, skits, videos etc.
- Encourage groups to assign roles for the project.
- Provide time for the planning phase of the education campaign, emphasising the need to ensure a strong key message.
- Encourage the students to make notes and draw up plans for their project including scripts where necessary.
- Allow students to use technology for recording, filming and researching their project.
- Have students add any new words and meta-language to the word wall.

### Activity 4 – Electrical safety message presentation [PD2-6; PD2-9]

- Assemble the class and quiz the students on safety messages and what to do in emergencies.
- Ask each group to give a progress report on their safety message project.
- Ensure that each group has taken into consideration just who their target audience is and how they can distribute their message to educate that audience.
- Ask students to give feedback and offer suggestions to other groups.
- Allow time for each group to complete their project and prepare to present their work to the class.
- Reassemble the class for group presentations.
- After the presentations, discuss with the class how each group should spread their message. (Visit junior classes, play jingles at assembly, put on skits as an assembly item, place an ad in the school newsletter).
- Encourage each group to take their presentation to their target audience.

## Stage 3 Electricity Safety - Outcomes and Indicators

<p><b>PDHPE Objectives:</b></p> <p>PD3-6 - Understand the significance of contextual factors that influence health, safety, wellbeing and participation in physical activity</p>	<p><b>Outcomes:</b></p> <ul style="list-style-type: none"> <li>distinguishes contextual factors that influence health, safety, wellbeing and participation in physical activity which are controllable and uncontrollable</li> </ul>
<p>PD3-7 - Students enact and strengthen health, safety, wellbeing and participation in physical activity</p>	<ul style="list-style-type: none"> <li>describes strategies to make home and school healthy, safe and physically active spaces</li> </ul>
<p>PD3-9 - Students develop and use self-management skills that enable them to take personal responsibility for their actions and emotions and take positive action to protect and enhance the health, safety and wellbeing of others</p>	<ul style="list-style-type: none"> <li>demonstrates self- management skills to respond to their own and others' actions</li> </ul>
<p><b>ENGLISH Outcomes:</b></p> <p>EN3-1A - communicates effectively for a variety of audiences and purposes using increasingly challenging topics, ideas, issues and language forms</p>	<p><b>Indicators:</b></p> <ul style="list-style-type: none"> <li>participate in and contribute to discussions, clarifying and interrogating ideas, developing and supporting arguments, sharing and evaluating information, experiences and opinions</li> </ul>
<p>EN3-2A - composes, edits and presents well-structured and coherent texts</p>	<ul style="list-style-type: none"> <li>understand and use the key elements of planning, composing, reviewing and publishing in order to meet the increasing demands of topic</li> <li>present a point of view about particular literary texts using appropriate metalanguage, and reflecting on the viewpoints of others</li> <li>assess the reliability of resources, including digital resources, when researching topics</li> </ul>
<p>EN3-3A - uses an integrated range of skills, strategies and knowledge to read, view and comprehend a wide range of texts in different media and technologies</p>	<ul style="list-style-type: none"> <li>recognise the effect of multimedia elements, eg film techniques, animation, voice-overs, sound effects, framing, close-ups</li> <li>understand that the starting point of a sentence gives prominence to the message in the text and allows for prediction of how the text will unfold</li> </ul>
<p>EN3-4A - draws on appropriate strategies to accurately spell familiar and unfamiliar words when composing texts</p>	<ul style="list-style-type: none"> <li>recognise most misspelt words in their own writing and use a variety of resources for correction</li> <li>use morphemic, visual, syntactic, semantic and phonological strategies</li> </ul>

## Stage 3 Electricity Safety - Outcomes and Indicators

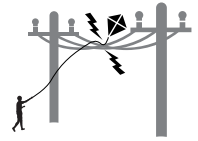
<p>EN3-5B - discusses how language is used to achieve a widening range of purposes for a widening range of audiences and contexts</p>	<ul style="list-style-type: none"> <li>• discuss how the intended audience, structure and context of an extended range of texts influence responses to texts</li> <li>• analyse strategies authors use to influence readers</li> </ul>
<p>EN3-6B - uses knowledge of sentence structure, grammar, punctuation and vocabulary to respond to and compose clear and cohesive texts in different media and technologies</p>	<ul style="list-style-type: none"> <li>• understand that choices in grammar, punctuation and vocabulary contribute to the effectiveness of texts</li> </ul>
<p>EN3-7C - thinks imaginatively, creatively, interpretively and critically about information and ideas and identifies connections between texts when responding to and composing texts</p>	<ul style="list-style-type: none"> <li>• think critically about aspects of texts such as ideas and events</li> <li>• interpret a range of texts, eg through role-play or drama, for pleasure and enjoyment, and express an analytical conclusion about those texts</li> </ul>
<p>EN3-8D - identifies and considers how different viewpoints of their world, including aspects of culture, are represented in texts</p>	<ul style="list-style-type: none"> <li>• identify and describe events in film and the media</li> </ul>
<p><b>SCIENCE Objective:</b></p> <p>ST3-9PW - Students develop knowledge and understanding of the natural world including living things, materials, forces, energy, and Earth and space</p>	<p><b>Outcome:</b></p> <ul style="list-style-type: none"> <li>• explains how energy is transformed from one form to another</li> </ul>



## Stage 3 Teacher Background Notes

### Outside safety

We all like to play outside, but there are electrical hazards that we need to know about. Electricity poles and wires are all around us. They can be above us, next to us, and even below us. Play in open spaces away from electricity poles, towers and powerlines.



### Remember:

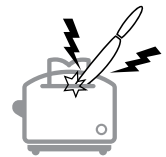
- If you fly a kite and it gets caught in the overhead powerlines, live electricity could travel down the string and seriously hurt you. So be careful!
- Never climb a tree that is near powerlines. Look up before you climb!
- After a storm if you see fallen powerlines stay well clear of them. There is a strong chance they are still alive.

### Safety around metal

We all come into contact with metal objects on a daily basis – turning on a tap, playing with our computers and toys and even using the fridge. Because metal conducts electricity, you have to be very careful when you use metal items.

### Remember:

- Never put a metal object, like a knife into a toaster. It is very dangerous!
- Never put anything in a power point that's not meant for it. Electricity will travel right up the metal object into your body.
- Be careful when climbing a ladder at home. The power lines connected to your house are usually protected, but they can be damaged by rubbing against the gutter or a tree, or through exposure to the sun. If a person is on a metal ladder and touches the exposed line, the electricity will travel through their body to the earth.



### Safety around water

Water can conduct electricity because electrons can flow by hitching a ride on atoms and molecules in the water. Water contains dissolved substances, such as salt. These greatly increase the ability of water to conduct electricity. That's why electricity passes easily through our bodies – because our bodies contain water and salt. This is also why it's important to keep water away from electrical appliances.



### Dangerous situations

Always be on the look out for dangers in and around your home. This could be anything from a faulty electrical lead to a 'stacked' power point – one with too many plugs in it. These situations could be life threatening and an electrician should be called in to fix them.

## Stage 3 Activities

### Remember:

- Faulty appliances and damaged electrical leads should be disconnected at the power point and fixed or replaced by an electrician.
- Never stack power points. Use a power board or have an extra power point installed. Stacked power points can cause fires.
- Before you or your family do any major digging in the yard you should get Mum or Dad to ring Dial Before you Dig on 1100 to make sure there are no underground cables near your property. If you hit one you could be electrocuted, as well as possibly interrupting the power to your suburb.

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- Get an adult.
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### Key safety messages

It is important to ensure that all students are aware of the four safety messages at the completion of the activities.

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- If you see a dangerous situation, tell an adult
- Know what to do in an electrical emergency
- Be safe

## Stage 3 Activities

### Activity 1 - Electricity hazards [PD3-7; PD3-9]

- Lead a discussion on the hazards that students might encounter around electricity.
- Discuss the safety messages and emergency procedures for electricity.

#### Safety messages

- 1. Be careful when you play around poles and wires**
- 2. If you see a dangerous situation, tell an adult**
- 3. Know what to do in an electrical emergency**
- 4. Be safe**

#### Emergency procedures

- 1. Ensure your own safety**
- 2. Turn the power off at the power point and remove the plug  
(if you are able to do so)**
- 3. Get an adult**
- 4. Ring 000**

- Divide the class into groups and ask the students to create a list of potential electricity hazards in and around the home.
- Encourage them to think of dangerous situations in addition to those found at school, at home and in the playground eg: the beach, the sporting field, shopping centres etc.
- Ask the students to create a “what to do” list for each hazard that they have listed.
- Have the students choose their top three hazards and create a poster to warn others of the dangers.
- Reassemble the students and ask each group to share their hazards and safety tips with the class.
- Display the posters in the classroom or around the school.
- Create a word wall for any new words or meta-language.

### Activity 2 – Electricity safety audit [PD3-6; PD3-7; PD3-9]

- Assemble the class and quiz them on the safety messages and emergency procedures.
- Explain to the class that they are going to conduct an electricity safety audit in the classroom and around the school.
- Discuss what things they may be looking for when conducting an electricity safety audit, eg: overloaded power boards, frayed chords etc.
- Divide the class into groups and ask the students to design an electricity safety audit sheet.
- Ask the students to compose a message notifying the classroom teachers that they will be conducting an electricity safety audit of their classrooms.
- Ask the students to carry out the electricity safety audit of the school.

## Stage 3 Activities

- At the completion of the audit the students should compose letters to teachers with safety advice on making their classrooms safe.
- The letters should be delivered to the teachers.
- Ask the students to carry out their safety audit at home for homework.
- Add new words to the word wall.

### **Activity 3 – Safety message cartoons [PD3-6; PD3-7; PD3-9]**

- Assemble the class and ask the students to reflect on what they have learnt so far about electrical safety.
- Ask them to discuss what they believe the biggest issues of electrical safety are both in the school and at home.
- Explain that you would now like them to create a cartoon strip or short story that highlights a dangerous situation and delivers a safety message.
- Have the students work individually or in groups to create their cartoon strips and stories.
- Ask the students to share their completed cartoons and stories with the class.
- Take the stories to a buddy class or younger class in the school and have the students read their stories to buddies to spread the safety message.
- Compile a safety book of the short stories and cartoons.
- Add new words to the word wall.

### **Activity 4 – Safety message role-play [PD3-6; PD3-7; PD3-9]**

- Ask the class to recite the safety messages and emergency procedures.
- Divide the class into groups and ask each group to work together to write a script for a skit or a commercial that delivers a safety message.
- Explain to students that while the script may be humorous the safety message must be very serious and must be designed to educate a particular audience.
- The group should discuss who their target audience is and why the message they have chosen is appropriate.
- Students may choose to act out their play, or video their performance for the class.
- Have each group perform their skit or commercial for the class, or organise a time for the videos to be viewed.
- The best of the productions, or those written for children, could be presented at the weekly assembly.



For more electricity safety information  
visit [ausgrid.com.au](https://www.ausgrid.com.au)