



THE STORY

An ELECTRIFYING EMERGENCY is at hand and The Eco Guardians need to act!

Agent Y, Head of Gadgets and Gizmos at The Eco Guardians, has put a call out to our band of superheros to solve their toughest mission to date. Infamous supervillain **Dr NeverReady** is back in town and causing environmental havoc!

Short on staff and stature, Agent Y calls on reluctant rookie **The Conservation Kid** to take on an almost impossible mission: stop Dr NeverReady from stealing all the batteries in town and throwing them into landfill.

The Conservation Kid's mission, with no choice but to accept it, means he will have to first track down **Nikki Nickel** to learn about the important resources we use in batteries. Only then can he discover the secret from disco-dancing dynamo **John Travoltage** about why we need to recycle all our batteries.

Can The Conservation Kid find all the knowledge he seeks, track down Dr NeverReady, and crack the code to save our resources and the environment?!?

Maybe you can help!

It's a daring mission...but it's possible!

EDUCATIONAL CONCEPTS

- What is a BATTERY and how we USE them
- The RESOURCES used in batteries
- Why it's important to RECYCLE batteries
- What YOU can do

WORDS TO KNOW		
Battery	A container that stores energy and turns it into electricity.	
Conserve	To save or use wisely.	
Environment	The world around us.	
Landfill	A big hole in the ground where our rubbish gets buried.	
Natural Resource	Something found in nature that can be used by people.	
Non-Renewable Resource	A natural resource that can't be replaced after use.	
Pollute	To make dirty or unclean.	
Rechargeable	A battery that can have energy replaced after use.	
Recycle	To turn things into new things.	
Resource	Something we can use.	
Single Use	Batteries that can only be used once.	
Toxic	Something that is poisonous.	

John Travoltage

Dr NeverReady





Colour the poster to share an important message about recycling batteries. Hang it where friends and family will see it.



Suggested Grades: P-2 • Learning Area: English, The Arts, Science General Capability: Personal and Social Capability



Suggested Grades: P-2 • Learning Area: Maths, Science General Capability: Numeracy, Personal and Social Capability



Go around the wheel and write down every second letter. The first two are already done for you. Share the message with one other person.





Suggested Grades: 1-4 • Learning Area: English, Mathematics, Science General Capability: Literacy, Numeracy, Personal and Social Capability



WRITE A STORY ABOUT NECKSEL

Write a story about Nikki Nickel and The Eco Guardians! Include what you learned about batteries, the environment and battery recycling. Use another piece of paper if you need it. Share what you know by reading your story to your family.

*Younger students can write a simple story about the show



ENERGY HUNT	
START Smoke alarm, remotes, heating/cooling control panel, iPad, portable speakers	
<complex-block>COUNT how many batteries you use in your how of a store type of a store type of the store is where the how how of the batteries is remember to always tape both terminals where batteries is the batteries is the type of the batteries is the batteries to make sure the batteries.</complex-block>	

KITCHEN

Mobile phone, home phone handset, portable appliances

A

11

BEDROOMS

Alarm clock, ear pods, nightlight, electric toys

STUDY AREA

Computer, bluetooth keyboard, mouse

BATHROOM

Electric toothbrush, electric razor

111

SHED

Power tools, torches, portable vacuum



AGENTY'S MATHS MESSAGE

Do the maths and fill in the spaces below to complete the message. Read the message out loud once you've completed it.





Suggested Grades: 3-5 • Learning Area: Maths, English, Science General Capability: Numeracy, Literacy, Personal and Social Capability



Down:

1. A type of single use battery that uses chemicals to create electricity

3. A type of rechargeable battery used in mobile phones and computers

5. To make dirty or unclean

Across:

2. A big hole in the ground where rubbish gets buried

4. A container that stores energy and turns it into electricity

6. Something found in nature that can be used by people

7. To turn used things into new things

8. A type of rechargeable battery used in cars and trucks

Suggested Grades: 3-6 • Learning Area: English, Science General Capability: Literacy, Personal and Social Capability



Batteries are an essential and growing part of modern life. Over 700 million batteries are sold in Australia each year and of these, only 10% are recycled – the rest go into landfill.

This has significant consequences. Firstly, batteries contain valuable natural resources like lead, mercury, cadmium and nickel. They're valuable because they're non-renewable, which means the rate at which we're using them is faster than the rate nature can replace them. Batteries can also harm the environment when thrown into landfill because these resources can leach into the soil and water, potentially poisoning plants, animals and us.

The good news is that these resources can be recycled an indefinite number of times and it's so easy to do. Just collect your old batteries from home, tape up the terminals with clear sticky tape or electrical tape, bring them to school and drop them into the recycling bucket in your classroom. And remember - never throw batteries in regular bins or your yellow lid recycling bin!

- T/F 1. Most Australians recycle their old batteries
- T/F 2. Recycling batteries means you're protecting the environment and saving natural resources
- T/F 3. Resources in batteries like lead, cadmium and mercury are renewable
- T/F 4. The resources inside batteries can be recycled over and over again
- T / F 5. It's ok to throw old batteries in the yellow lid recycling bin

Suggested Grades: 4-6 • Learning Area: English, Science General Capability: Literacy, Critical and Creative Thinking



BUILD A BATTE

Batteries are everywhere—in our toys, in our cars, in torches and mobile phones. But how do they work? Make your own lemon battery to learn how!

Materials:

- A lemon
- 1 galvanised nail (Find these at the hardware store)
- A 5cm length of copper wire
- 2 binder clips
- Voltmeter

What to do:

- 1. Give your lemon a few strong squeezes. Be careful not to break its skin. Squeezing the lemon releases juices inside the lemon.
- 2. Place the copper wire in lemon.
- 3. Next place the galvanized nail in the lemon, approximately 2cm away from the wire.
- 4. Test it with the voltmeter! Connect the red test lead to the nail and the black lead to the copper wire with binder clips. You should see a reading of almost 1 volt.



WITH AGENT Y!

FACT:

The lemon battery works through an electro-chemical reaction. When in a complete circuit, the citric acid in the lemon acts as an electrolyte, a solution that conducts electricity, just like the sulfuric acid in a lead acid battery.



LET'S GET CREATIVE!

1. Find a clean, empty plastic container at home like an ice cream or yoghurt tub in which to store used batteries.

2. Decorate with art materials and label the outside of the container.

3. Through the week, collect your family's used batteries and don't forget to ask your grandparents, cousins and even neighbours for theirs!!

4. Tape up the terminals and store them in the container. (Make sure to keep the container in a cool, dry place).

5. Every week, bring the container to school and tip it into your classroom battery recycling bucket.

How many batteries can your class collect?





BATTERY SAFETY!

It's important to store batteries safely! Why? They can heat up and cause skin burns or, if terminals connect – with each other or with other metal objects such as keys – it can cause a spark.

What to do? Ensure used batteries have both terminals covered with electrical or sticky tape before storing them together in a plastic container.

Suggested Grades: P-6 • Learning Area: The Arts, Science General Capability: Personal and Social Capability

NOW'S YOUR CHANCE!

Work together with your classmates to SAVE THE ENVIRONMENT. SAVE THE PLANET. MAKE A DIFFERENCE WITH...

THE BIG

: 1



NATIONAL SCHOOLS CHALLENGE

Collect your used batteries from home, drop them into your school recycling buckets and win up to \$2,000 for your school! The more batteries you recycle, the more your school wins!

> For more information visit: **BIGBATTERYRESCUE.COM**

BATTERY SAFETY FOR STUDENTS & FAMILIES

Source: Australian Battery Recycling Initiative

It's important to educate students to store batteries safely. Batteries can heat up and cause skin burns or, if terminals connect - with each other or with other metal objects such as keys - it can cause a spark.

Ensure all used batteries have both terminals covered with electrical or sticky tape before storing them together in a plastic container.Button cell batteries can be placed in a row between two pieces of sticky tape.

A better way to live with access to lifelong education



Stockland is committed to creating thriving communities

That is why we are providing an opportunity to educate children through our partnership with *The National Theatre for Children,* who specialise in creating educational and curriculum-aligned programs nationwide.

This year, we are offering schools and students a **FREE** battery recycling year-round education and behaviour change program.

This includes a live-in-school theatrical presentation along with curriculum-aligned materials and battery recycling kits.

The program will include a year-long national challenge, where schools, students and families will have the opportunity to collect all batteries they use during the year and deposit them for recycling collection.

Their efforts will be measured by the weight of batteries collected, and the positive environmental impact by the rate of diversion from landfill.

Together we will teach, entertain and inspire future generations to become leaders of tomorrow.

Visit **bigbatteryrescue.com** to learn more about how Stockland is supporting education in our communities.



stockland.com.au/sustainability