



The National Theatre for Children

**CLASSROOM AND  
FAMILY ACTIVITIES**

# *SMART* ENERGY ACADEMY



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## Welcome to Smart Energy Academy.

Smart Energy Academy is a live theatrical production that presents three hilarious sketches all about energy efficiency.

In the first sketch we meet Al Dente, a laid-back pizza maker at Fluffy's Spaghetti, and his new helper. Together, they struggle to make a pizza when the oven stops working. Under pressure from their boss, the stressed-out Tara Misu, Al explains all about watts, natural resources, and how electricity is generated using both renewable and non-renewable resources.

In the second sketch, John Travoltage arrives home in a burst of energy only to have his dog remind him of all the devices left on around the house. Dog explains how wasting electricity harms the environment and how renewable energy sources can help. Together, they learn the importance of turning off lights, unplugging devices, and making small energy-saving changes.

Lastly, we follow "A Day in the Life" of an ordinary school student, who, after taking on an energy-saving assignment, discovers how small actions—like turning off lights and adjusting the air conditioning—can make a big difference in conserving energy. What seems like an ordinary day turns into an energy-saving adventure!

**After watching the show, enjoy this playbook and learn even more about energy efficiency.**



**AL DENTE**



**TARA MISU**



**JOHN TRAVOLTAGE**



**DOG**

## WORDS TO KNOW

Aerator	A small attachment on a tap to save water in kitchens and bathrooms
Conserve	To save or use wisely
Efficient	Producing very little waste
Electricity	A source of energy that runs our appliances
Energy	The ability to do work and the force that makes things change
Kilowatt	One thousand watts of electricity
Kilowatt Hour (kWh)	A way to measure how much electricity you use over time
LED Lightbulb	A lightbulb that uses less energy than a regular one. LED stands for light-emitting diode
Natural Resource	A resource we find in the environment
Power Plant	A building where electricity is generated
Programmable Thermostat	An appliance that controls the temperature in your house and saves energy
Renewable Resource	A resource like the sun, the wind or moving water
Resource	Something we use to make electricity, like natural gas, water, solar and wind
Waste	To use more than necessary
Watt	A unit of electricity, used to show how much energy something uses

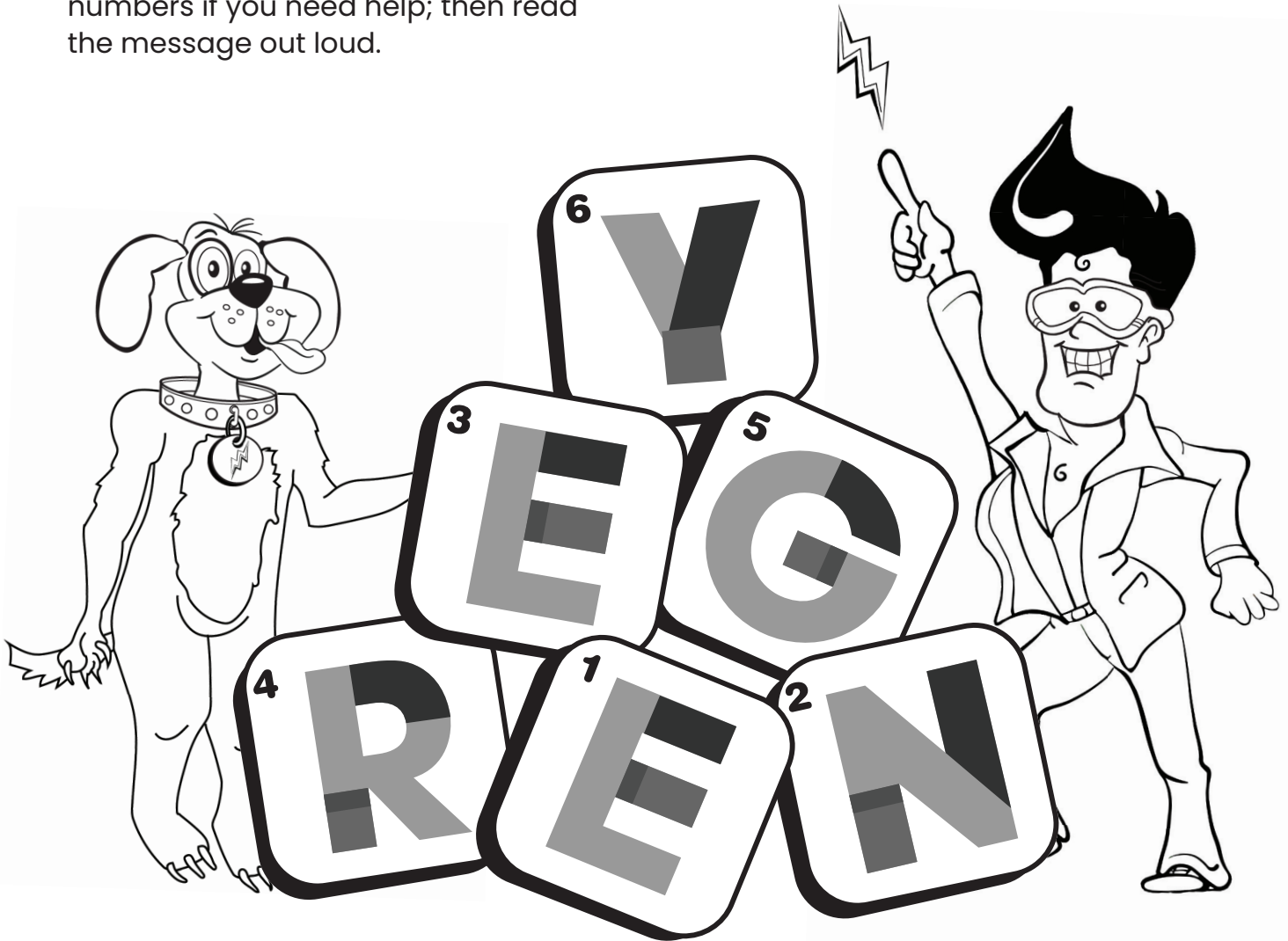
## EDUCATIONAL CONCEPTS

- What are **ENERGY** and **ELECTRICITY**
- What are energy **RESOURCES**
- How energy is **WASTED**
- How **YOU** can save energy



# John Travolta's MIX-UP

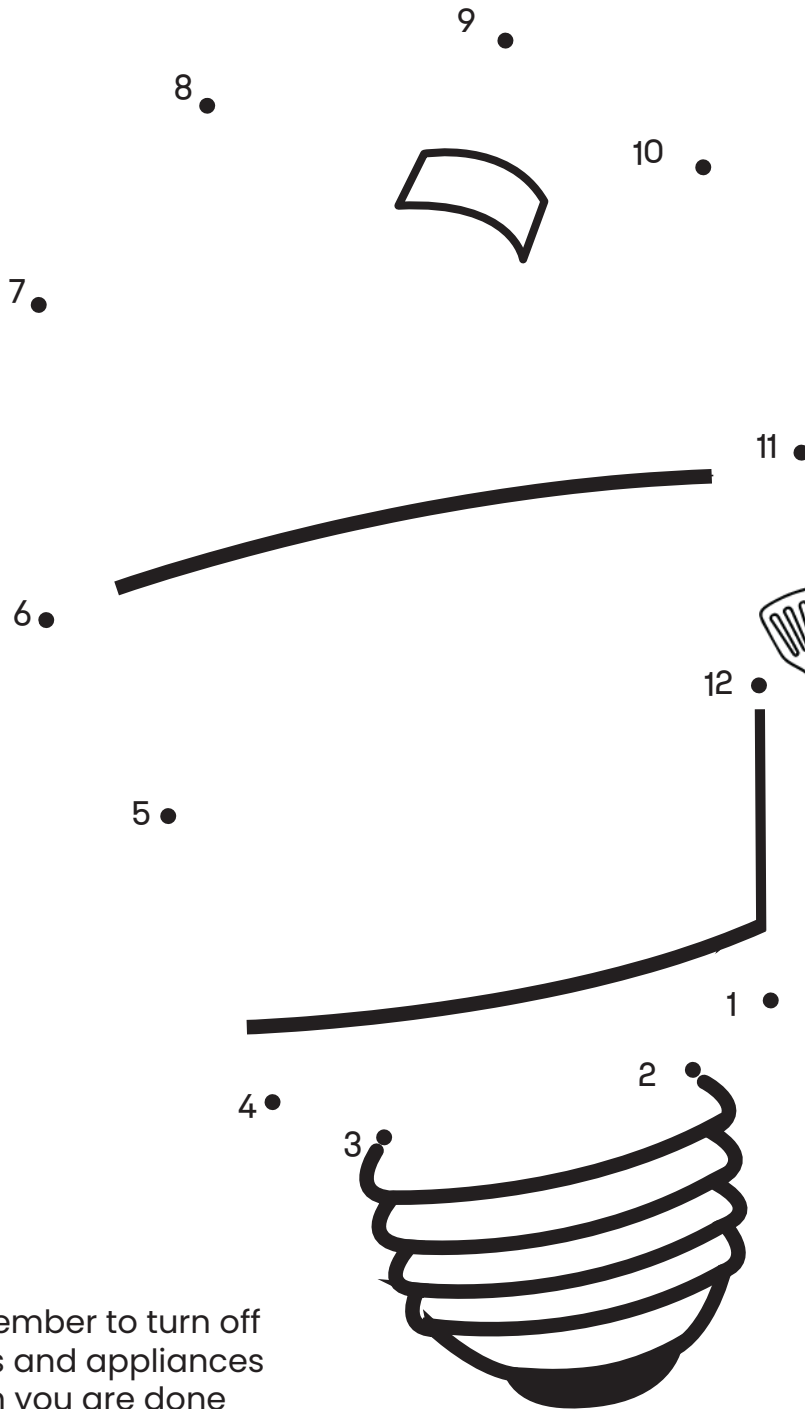
John Travolta has mixed up Dog's message. Unscramble the letters and fill in the spaces below to fix it. Use the numbers if you need help; then read the message out loud.



SAVE

\_\_\_\_\_ ●  
1                      2                      3                      4                      5                      6

# DOT TO DOT



Connect the dots to complete the picture. Colour the picture and share with your friends.

Remember to turn off lights and appliances when you are done using them.



# ENERGIZED

## WORD FIND



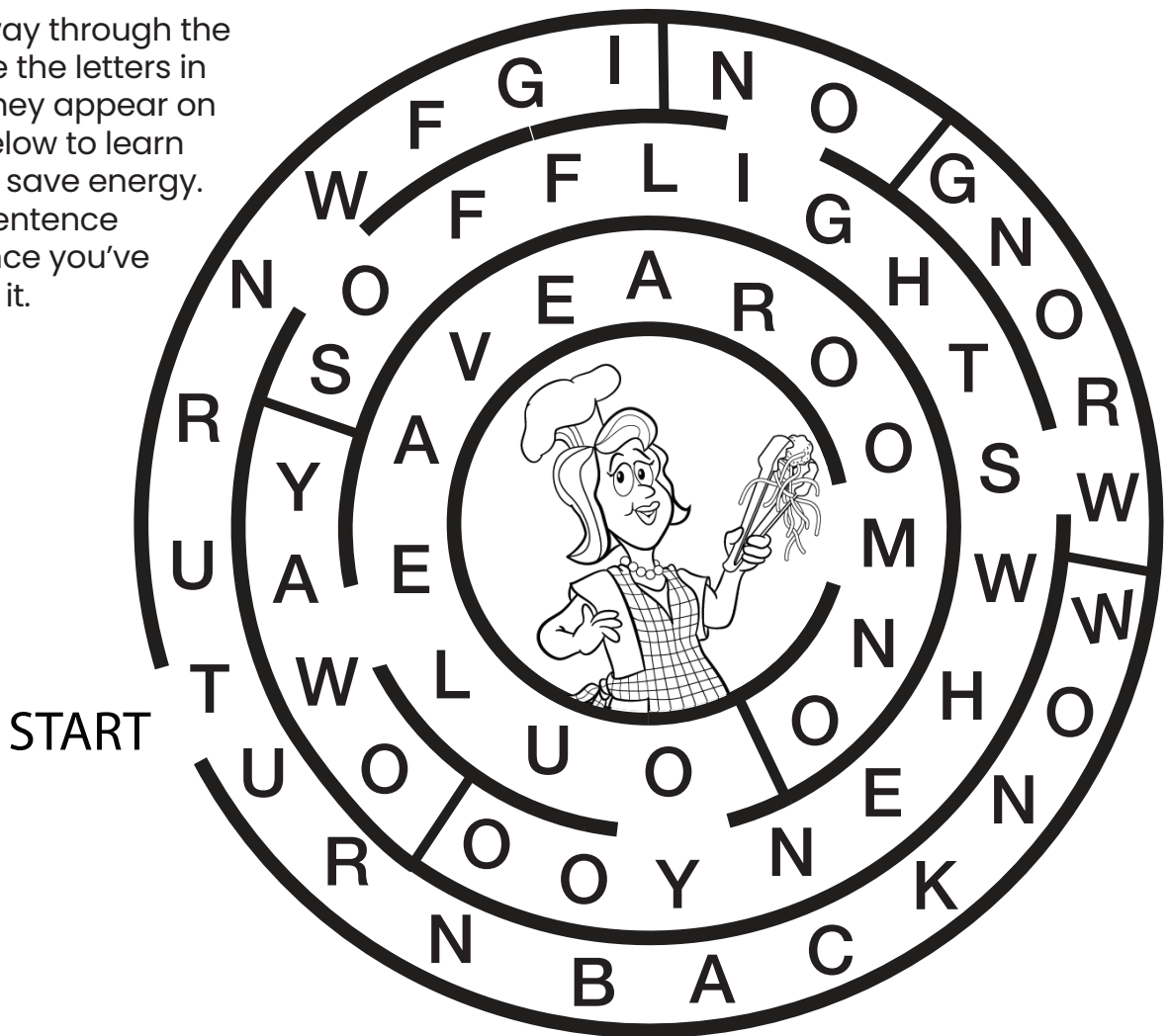
You and your friends can find and circle all of the words from the list below. Do you remember what the words mean? Review their meanings on the inside front cover.

CONSERVE  
EFFICIENT  
ENERGY  
POWER PLANT  
RESOURCE  
WASTE

W	Y	S	L	R	C	H	T	W	F	W	Q
A	Z	J	Y	B	C	K	B	B	R	U	J
S	J	P	O	W	E	R	P	L	A	N	T
T	R	Z	Q	F	G	S	M	V	I	Z	X
E	U	Q	R	E	S	O	U	R	C	E	C
E	Q	C	H	P	O	D	O	V	B	N	O
N	E	F	F	I	C	I	E	N	T	W	N
E	C	W	G	C	I	D	S	U	Z	K	S
R	M	B	Y	I	U	U	U	W	A	I	E
G	G	H	C	L	I	K	D	Q	I	U	R
Y	S	R	D	D	N	U	G	N	S	O	V

# SUPER Maze

Find your way through the maze. Write the letters in the order they appear on the lines below to learn one way to save energy. Read the sentence out loud once you've completed it.



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ •

Write a **STORY** about  
**NATURAL RESOURCES**

Write a story about natural resources. Include what you learned about energy, resources and saving energy. Use another piece of paper if you need it. Share what you know by reading your story to your family.

We use natural resources to... \_\_\_\_\_

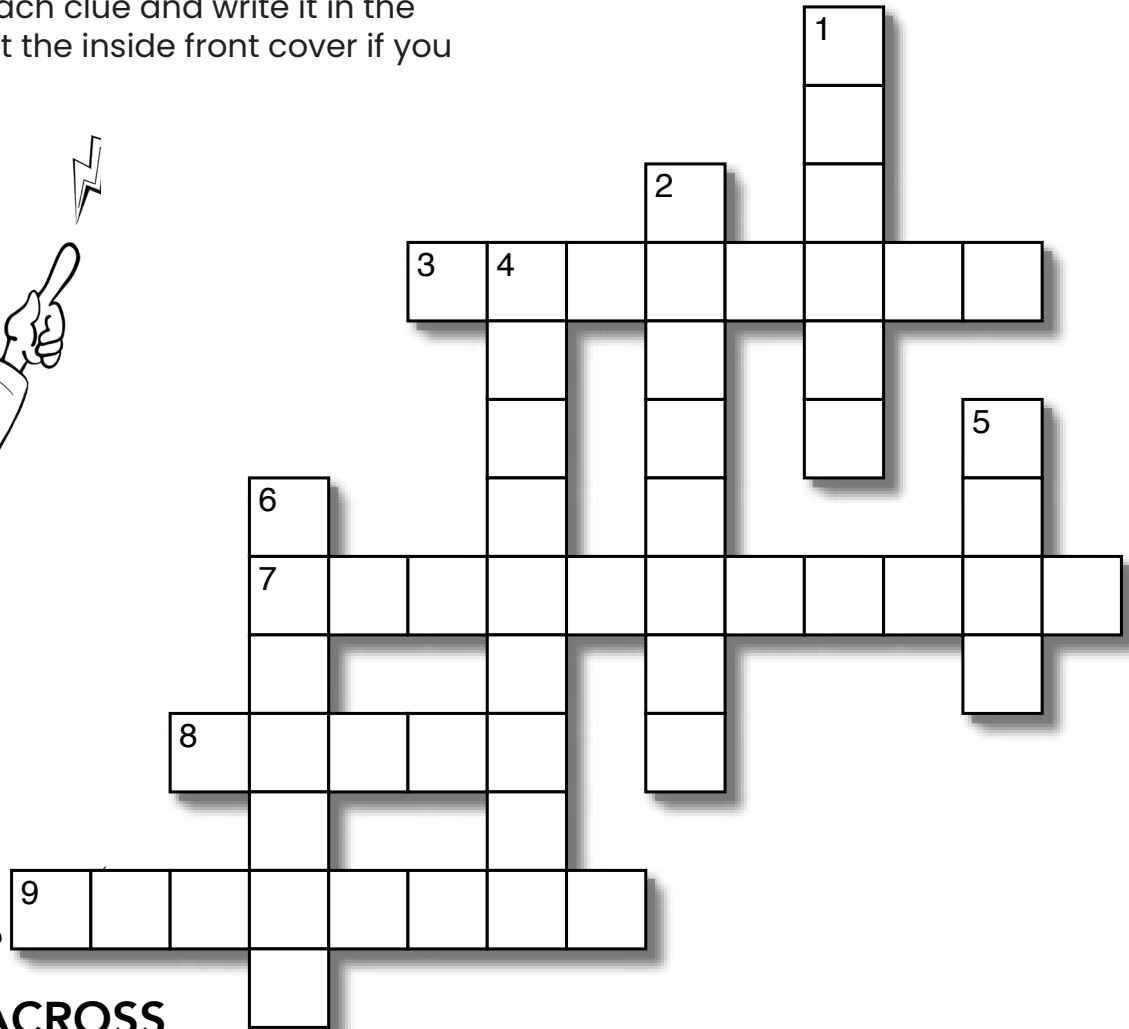
[illegible]



John's

# CROSSWORD

Find the answer for each clue and write it in the correct space. Look at the inside front cover if you need some tips.



## ACROSS

3. Something we use to make electricity, like natural gas, water, solar energy and wind
7. A useful source of energy used in many ways
8. To use more than necessary
9. One thousand watts of electricity

## DOWN

1. The ability to do work and the force that makes things change
2. To save or use wisely
4. Producing very little waste
5. A unit of electricity
6. A small attachment on a tap to save water in kitchens and bathrooms

AERATOR  
CONSERVE  
EFFICIENT  
ELECTRICITY  
ENERGY  
KILOWATT  
RESOURCE  
WASTE  
WATT

# Knowing What's WATT



Appliances that heat or cool require lots of electricity. Below is a list of the wattage (electricity) needed to operate different appliances.

Air Conditioner .....	3000W	Lightbulb (LED) .....	10W
Ceiling Fan .....	60W	Microwave .....	800W
Clock .....	2W	Oven .....	3500W
Clothes Dryer .....	3000W	Power Tools .....	800W
Computer .....	400W	Games Console .....	180W
Dishwasher .....	1800W	Sewing Machine .....	100W
Electric Blanket .....	100W	Toaster .....	1000W
Electric Toothbrush .....	5W	LED TV .....	100W
Hair Dryer .....	1500W	PLASMA TV .....	300W
Iron .....	1100W	Vacuum .....	1500W
Lightbulb (standard incandescent) ..	50W	Washing Machine .....	1200W

Which appliances do you think use more electricity?  
Circle the correct answer.

Air Conditioner or Ceiling Fan?

Iron or Sewing Machine?

Oven or Microwave?

TV or Computer?

Hair Dryer + Clock or Vacuum + Microwave?

Standard Lightbulb or LED?

Tara Misu's

# ENERGY 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.

$97 - 5 = \boxed{\phantom{00}} \text{ S}$

$40 + 5 = \boxed{\phantom{00}} \text{ L}$

$3 \times 17 = \boxed{\phantom{00}} \text{ T}$

$15 \div 5 = \boxed{\phantom{00}} \text{ H}$

$10 \times 8 = \boxed{\phantom{00}} \text{ I}$

$18 + 7 = \boxed{\phantom{00}} \text{ G}$



$99 + 15 = \boxed{\phantom{00}} \text{ P}$

$36 \div 6 = \boxed{\phantom{00}} \text{ N}$

$13 + 7 = \boxed{\phantom{00}} \text{ D}$

$12 - 12 = \boxed{\phantom{00}} \text{ A}$

$33 \times 3 = \boxed{\phantom{00}} \text{ E}$

$65 - 9 = \boxed{\phantom{00}} \text{ C}$

**To save energy, turn off**

45

80

25

3

51

92

0

6

20

0

114

114

45

80

0

6

56

99

92



# WATT'S it worth?

You and your family are on a mission to save energy. Every time you save energy you also save money! Over one week, track how many energy saving actions you take at home, then calculate how much potential electricity (kWh) and money you could have saved!

Track your actions			
Energy Saving Action	Energy Saved per action*	Action Tally <i>Keep a count every time you complete an action</i>	Total Energy Saved per action
Turn off lights when leaving a room	0.34 kWh	X _____	= _____ kWh
Turn off appliances at the wall	0.6 kWh	X _____	= _____ kWh
Take 4 minute showers	0.82	X _____	= _____ kWh
TOTAL Energy Saved			= _____ kWh

\*kWh Saved per Action is an estimate. Actual savings may vary depending on your home and appliances.

From Watts to Wallet			
Using electricity at home adds to your family’s energy bill. Each kWh costs about \$0.30! When you save energy, you’re saving money too! Multiply your total kWh saved by \$0.30 to find out how much money you could have saved this week.			
Average Energy Cost			
\$0.30	X	_____ kWh	= \$ _____
		TOTAL Energy Saved	Potential weekly savings

Watt’s That Worth Over a Year?!			
How much would your family save in a whole year if you kept up these habits every week? Multiply your weekly savings by 52 weeks in a year.			
Total Weekly Savings		Weeks	
\$0.30	X	52	= \$ _____
			Potential yearly savings

Energy-saving starts with small actions. There are lots of other ways to make a difference at home.  
**Visit [energyacademy.com.au](http://energyacademy.com.au) to find out more!**

SAVE ENERGY. SAVE RESOURCES. SAVE THE PLANET.

# **SMART** ENERGY ACADEMY

## STUDENTS, TEACHERS & FAMILIES

Participate in the **Smart Energy Academy School Challenge** and do your bit to help save 2 million kWh of energy!

Teachers will handout a Take Home Energy Survey for all students and families to complete.

Return the completed survey to your classroom teacher to enter the challenge.

And while saving energy is a reward in itself, the **Smart Energy Academy School Challenge** offers exciting cash prizes:

**\$100 for YOUR SCHOOL**

**\$500 for one lucky FAMILY**

**\$500, \$1,000, or \$2,000 for three SCHOOLS**

For full reward details, visit

**EnergyAcademy.com.au**