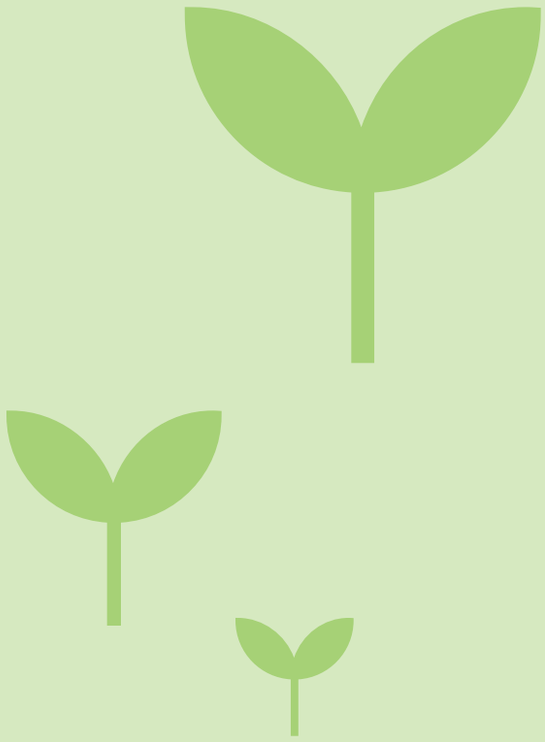
GENERATION E

LET'S EXPLORE ENERGY EFFICIENCY!





THIS BOOK BELONGS TO:

Materials in this activity book align with
the Manitoba Grade 1-2 curriculum.

WHAT IS ENERGY EFFICIENCY?

Energy is what makes things work and move. It makes our toys light up, helps us travel from one place to another, helps us cook, and gives us the strength to run and play. It's important to use energy carefully so we don't waste it.

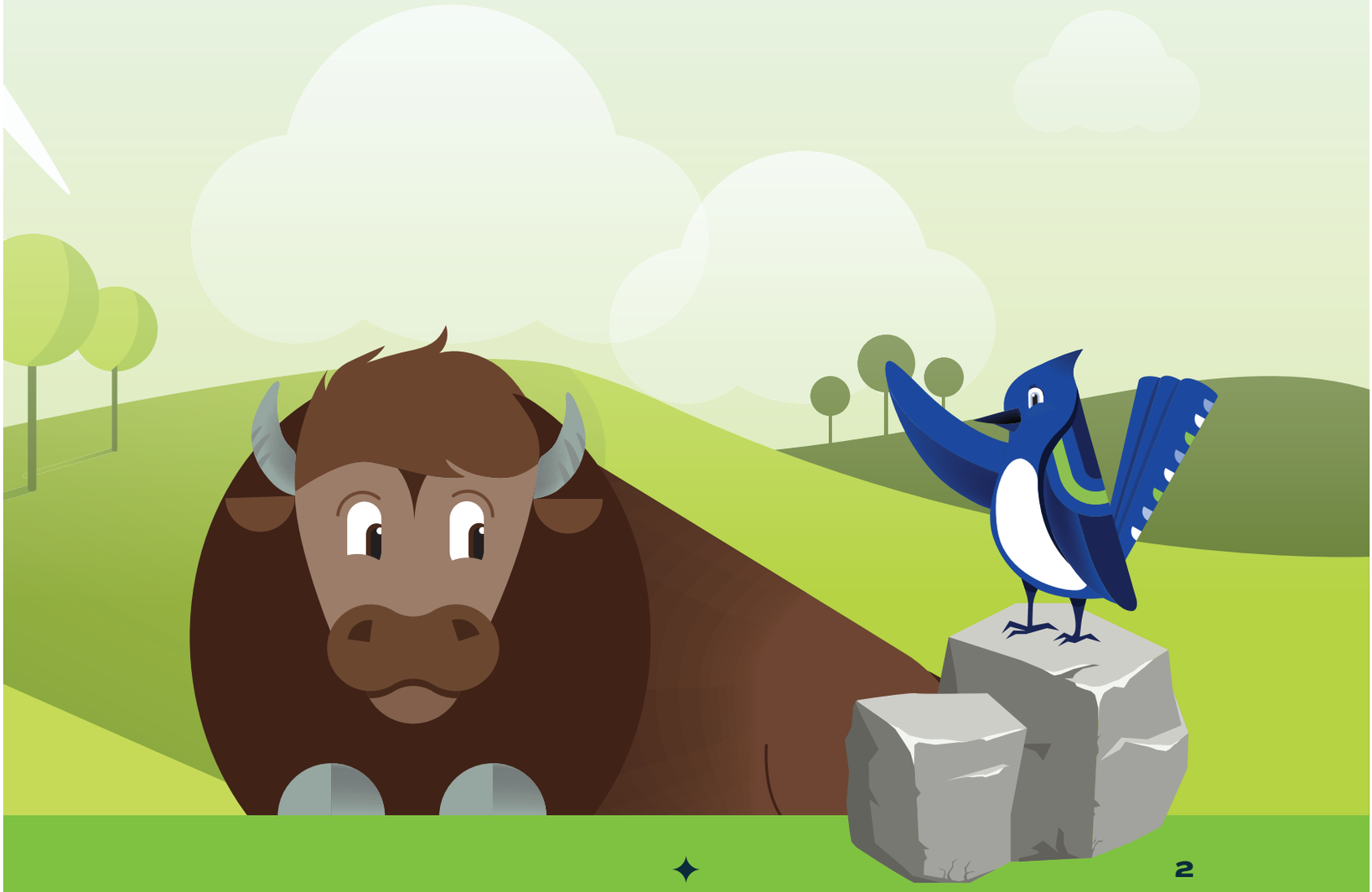
Energy efficiency is doing the same things with less energy. Being efficient with energy helps the planet by using less resources. Each of us can change some habits to use energy more wisely. Join our friends Energy Ed and Jenny Jay to learn how!



MEET ENERGY ED AND JENNY JAY!

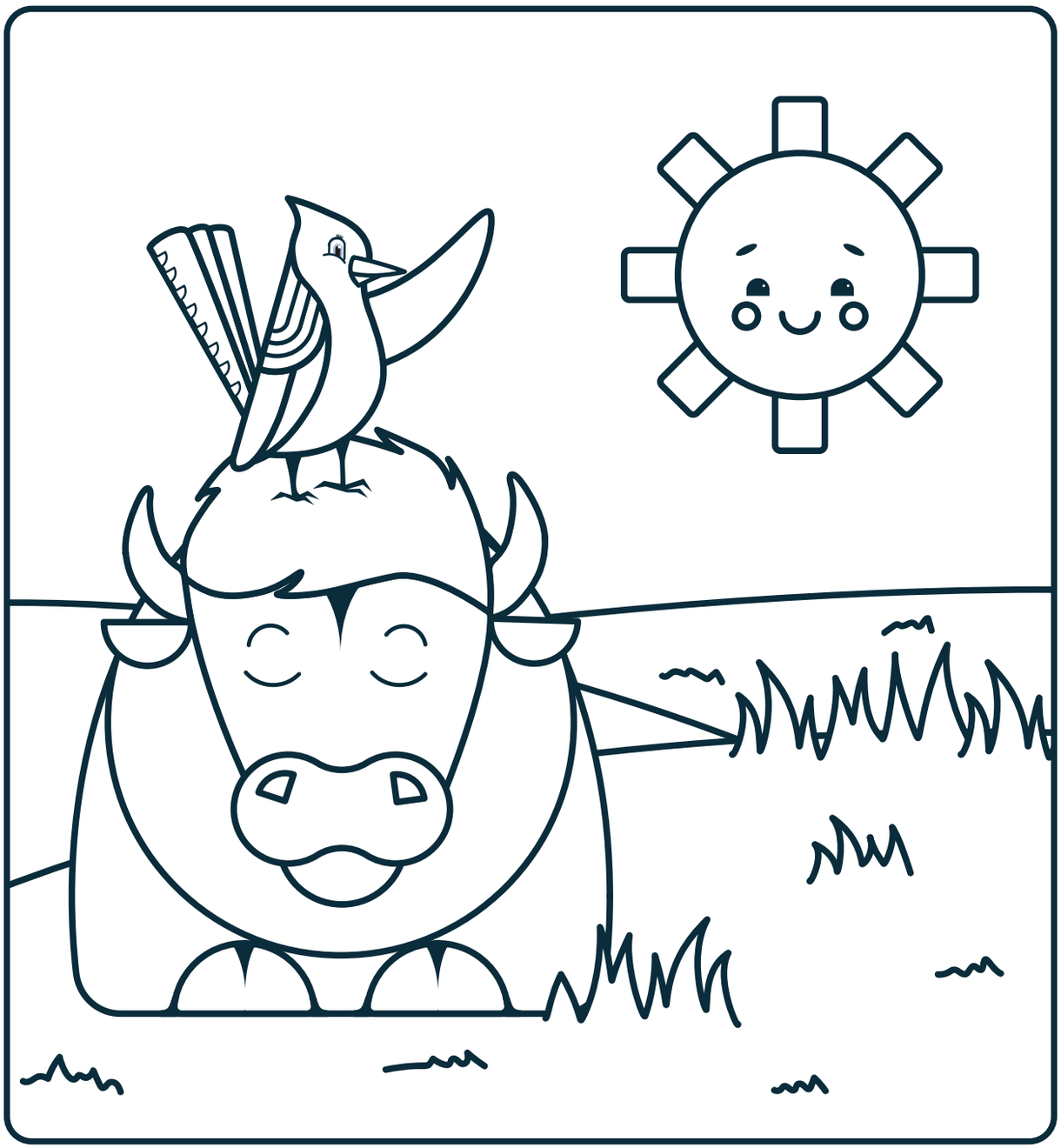
Energy Ed is a curious bison from Riding Mountain National Park. He grew up listening to stories about how we as humans use energy. With his best friend Jenny Jay, he discovers and shares fun ways to save energy.

Jenny Jay is a clever bird from Birds Hill Provincial Park. She loves finding ways to save energy. She shares her ideas with Energy Ed to show that saving energy can be smart and fun!



ACTIVITY 1

COLOUR JENNY JAY AND ENERGY ED



DID YOU KNOW/ FUN FACTS

1. We can make electricity using moving water.
2. Turning lights off saves energy.
3. Opening blinds lets sunlight light up a room and keeps you toasty.
4. Some lights use less energy than others.
5. Devices can use energy even when they look like they’re off.
6. Closing doors helps keep rooms warm or cool.
7. Some windows keep heat inside better than others.
8. The sun gives us light and heat.

ACTIVITY 2

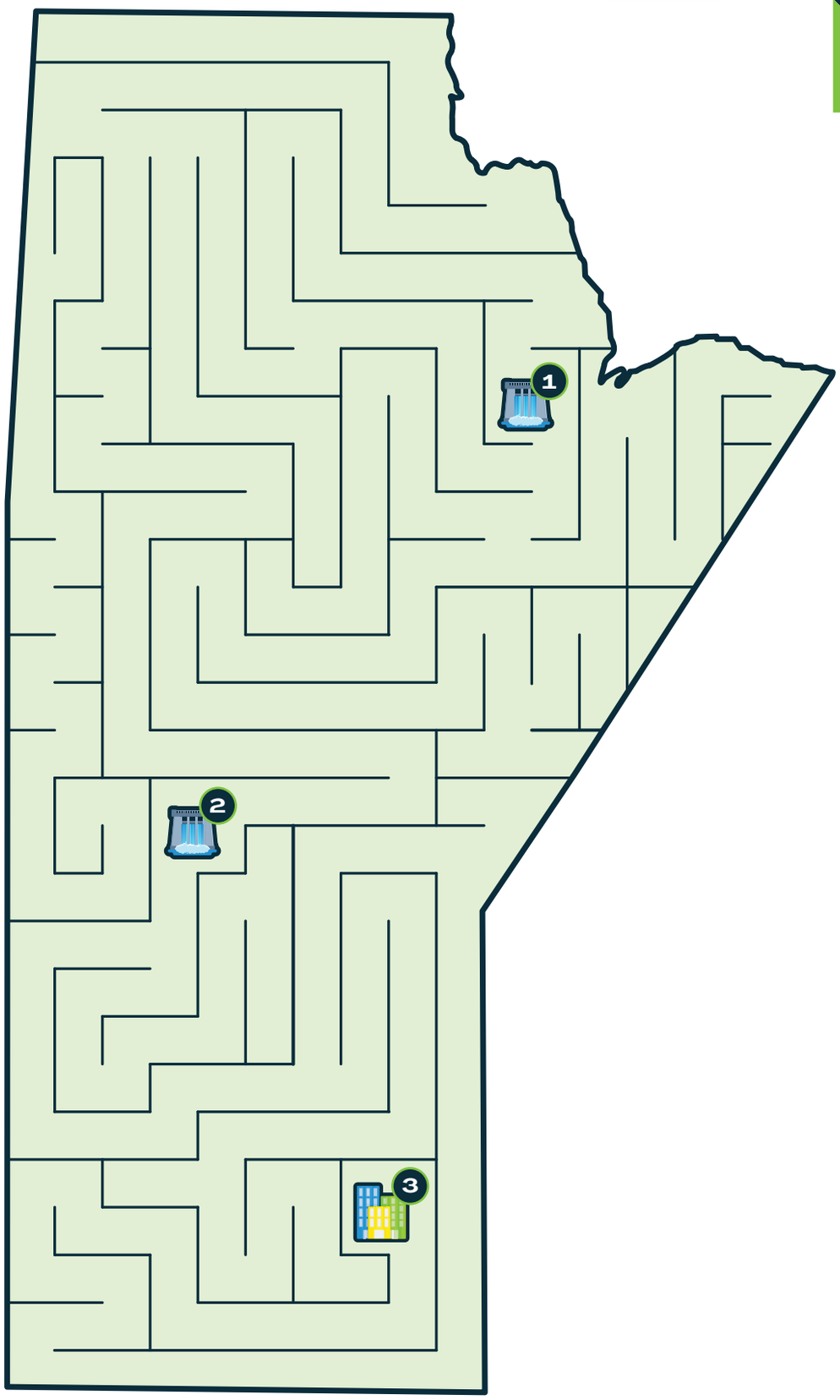
MANITOBA MAZE

Help Jenny Jay and Energy Ed visit generating stations before heading back to Winnipeg. Starting at the Limestone Generating Station (#1), draw a path to Grand Rapids (#2), and finish in Winnipeg (#3)!

Maze points

1. Limestone
2. Grand Rapids
3. Winnipeg




1
2
3

ACTIVITY 3

WORD SEARCH

Can you find the words related to energy efficiency hidden in the puzzle? Words may go across, up, down, or diagonally, so look closely to find them all!

Word list

SWITCH
POWER
THERMOSTAT
HEAT
WATER
SUN
DIMMER
LIGHT
ENERGY
EFFICIENCY
EDUCATION
ENVIRONMENT
PHANTOM
SENSOR
SOLAR

Bonus find:
SAVE ENERGY







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

ACTIVITY 4

SPOT THE DIFFERENCES

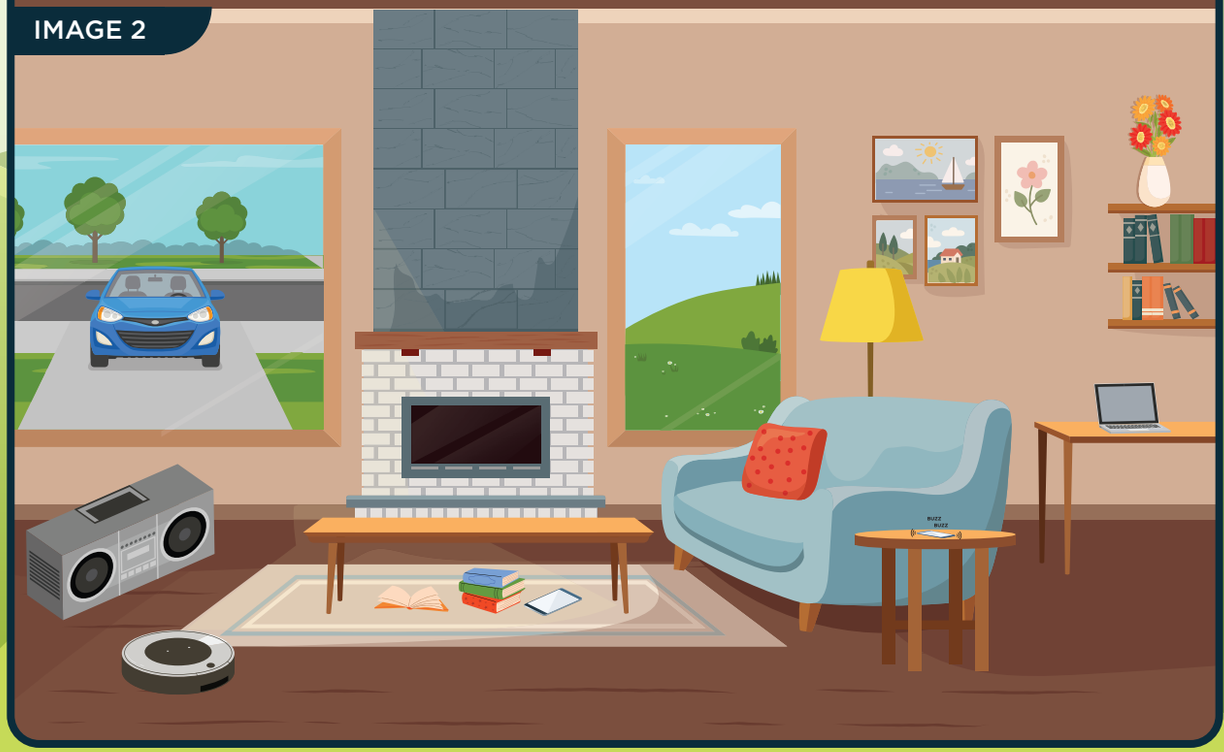
Jenny Jay and Energy Ed are visiting a friend's house. Can you spot all 12 differences between these pictures? Circle the differences between the two images in image 2.



IMAGE 1



IMAGE 2



ACTIVITY 5

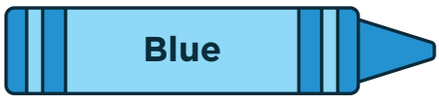
COLOUR BY NUMBER

Biking to school instead of driving saves energy and keeps the air clean!

Each number in the picture matches a colour. To find out which colour goes where, solve the equation next to it!



15 + 5 = _____



10 + 2 = _____



20 - 5 = _____



5 + 5 = _____



9 - 8 = _____



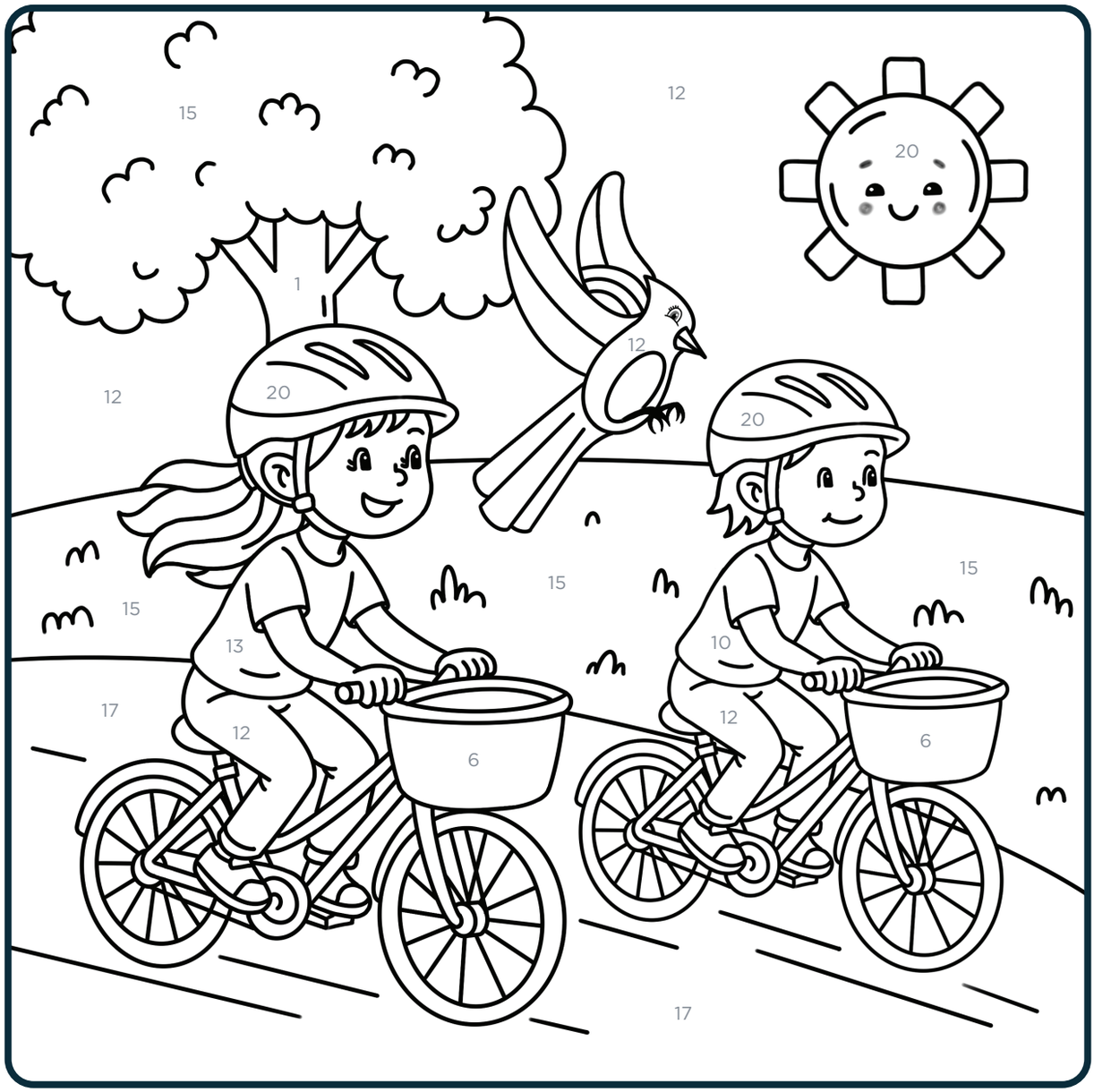
10 + 7 = _____



12 - 6 = _____



15 - 2 = _____


15
12
20
1
12
12
20
20
15
15
13
10
17
12
12
6
6
17

ACTIVITY 6

CROSSWORD

Jenny Jay and Energy Ed have learned lots about energy efficiency, and they want to see what you know! Use the clues to finish the crossword puzzle.

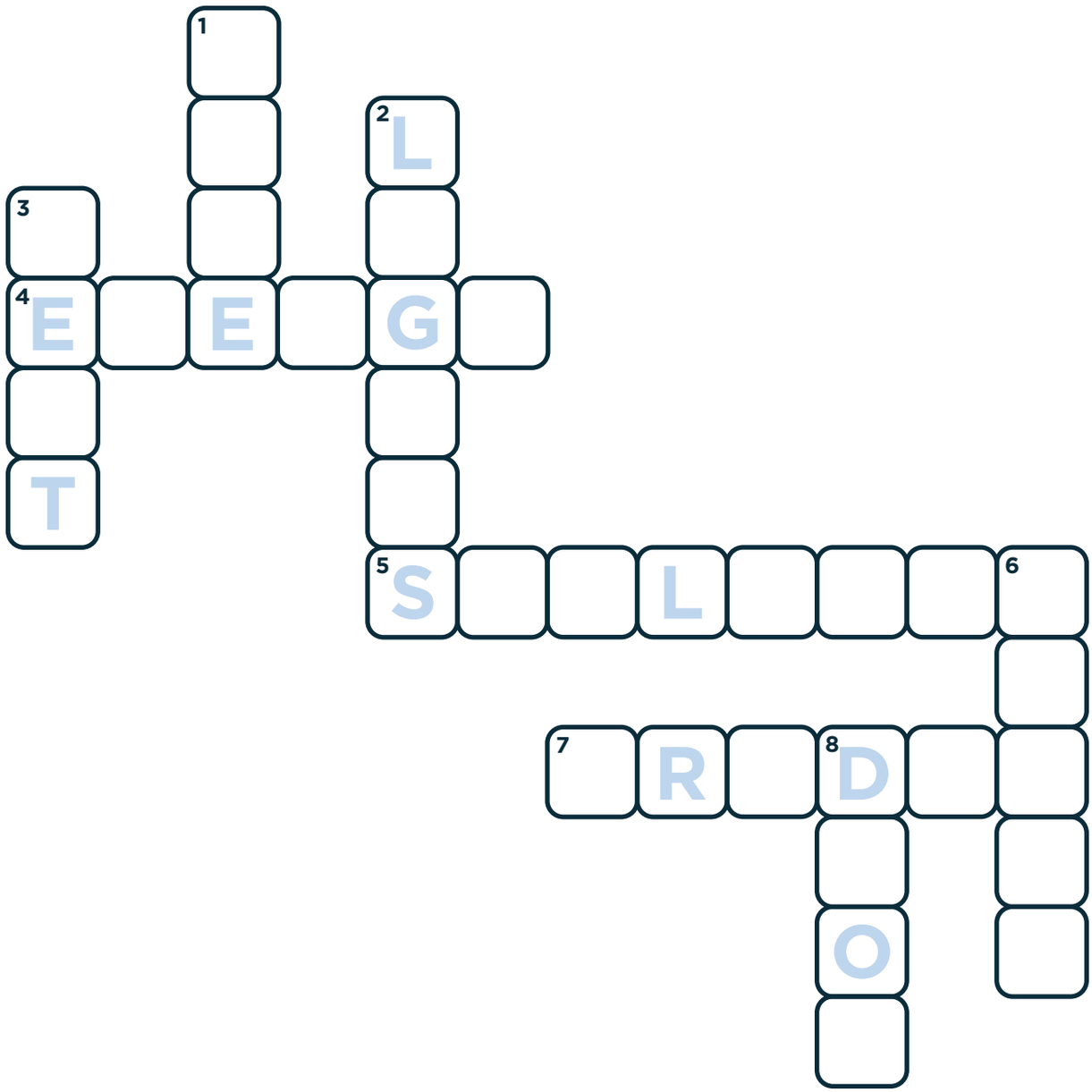
Across

4. Save_____every day.
5. Open the blinds and let_____warm the room.
7. Decide what you want before opening the_____door.

Down

1. Walk or_____to save energy.
2. Turn off the_____.
3. Turn down the_____at bedtime.
6. Turn off the tap while brushing your_____.
8. Close the_____to keep the heat in.

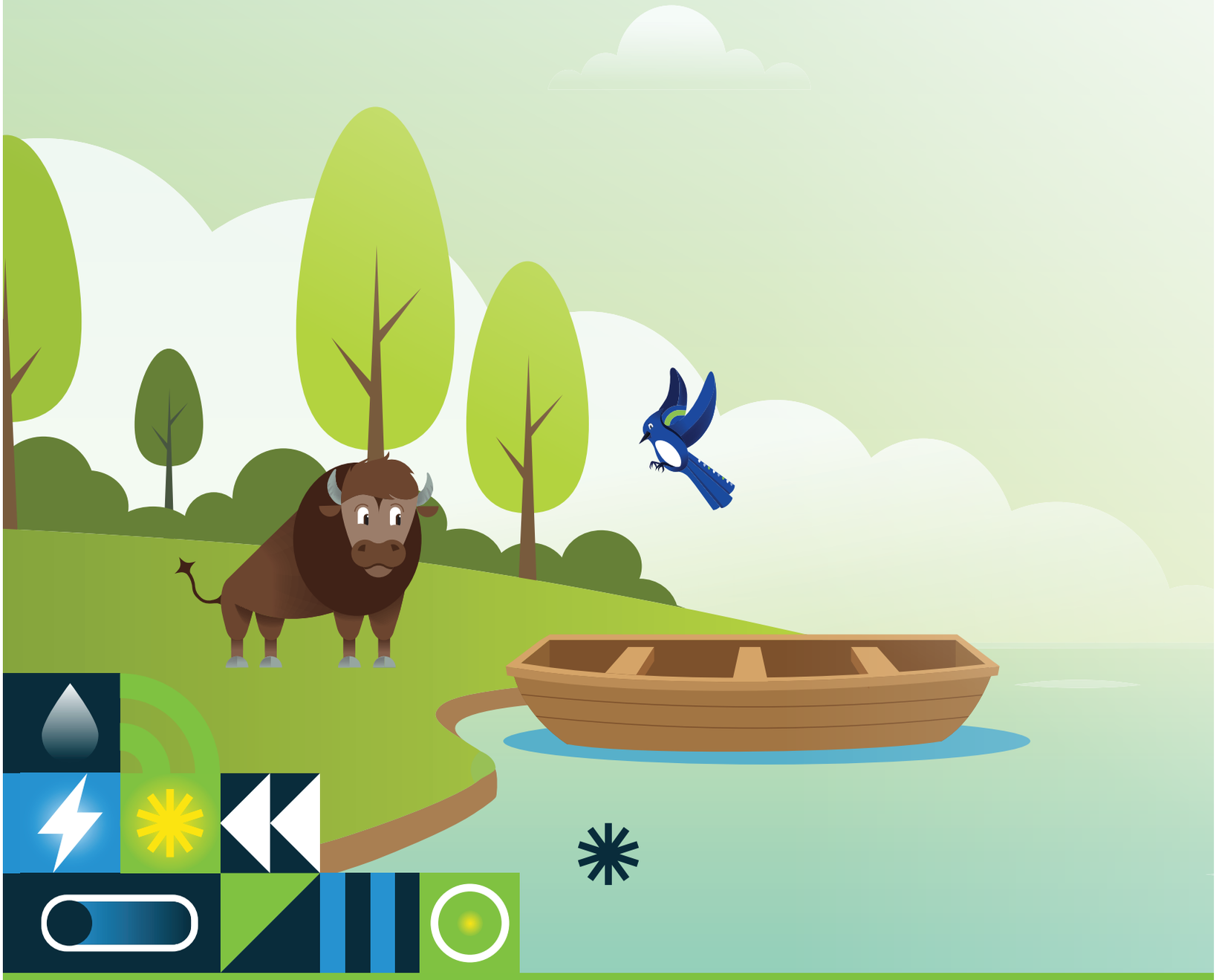



1
2
L
3
4
E
E
G
T
5
S
L
6
7
R
8
D
O

ACTIVITY 7

MATCHING GAME

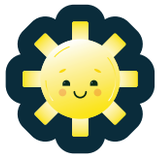
Different types of energy are all around us. Draw a line to match each type of energy to the correct picture.



What gives us energy to play?



What helps plants grow?



What makes the ball move?



What turns on the lights?



What makes the soup hot?



What do we hear with our ears?



What flows through the dam to make electricity?



ELECTRICAL ENERGY
LIGHT BULB

SOUND ENERGY
MUSIC

CHEMICAL ENERGY
FOOD

GRAVITATIONAL ENERGY
FLOWING WATER

KINETIC ENERGY
MOVEMENT

THERMAL ENERGY
HEATED STOVETOP

RADIANT ENERGY
SUNSHINE

ED AND JENNY'S TOP TIPS FOR SAVING ENERGY

If you're chilly in the winter, open up your curtains or blinds! The sunshine helps to keep you toasty.



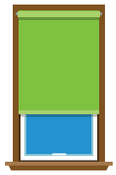
Ask your grown-up to unplug any electronics that aren't being used, even if they're turned off!



Turn off the lights if you're the last one leaving the room.



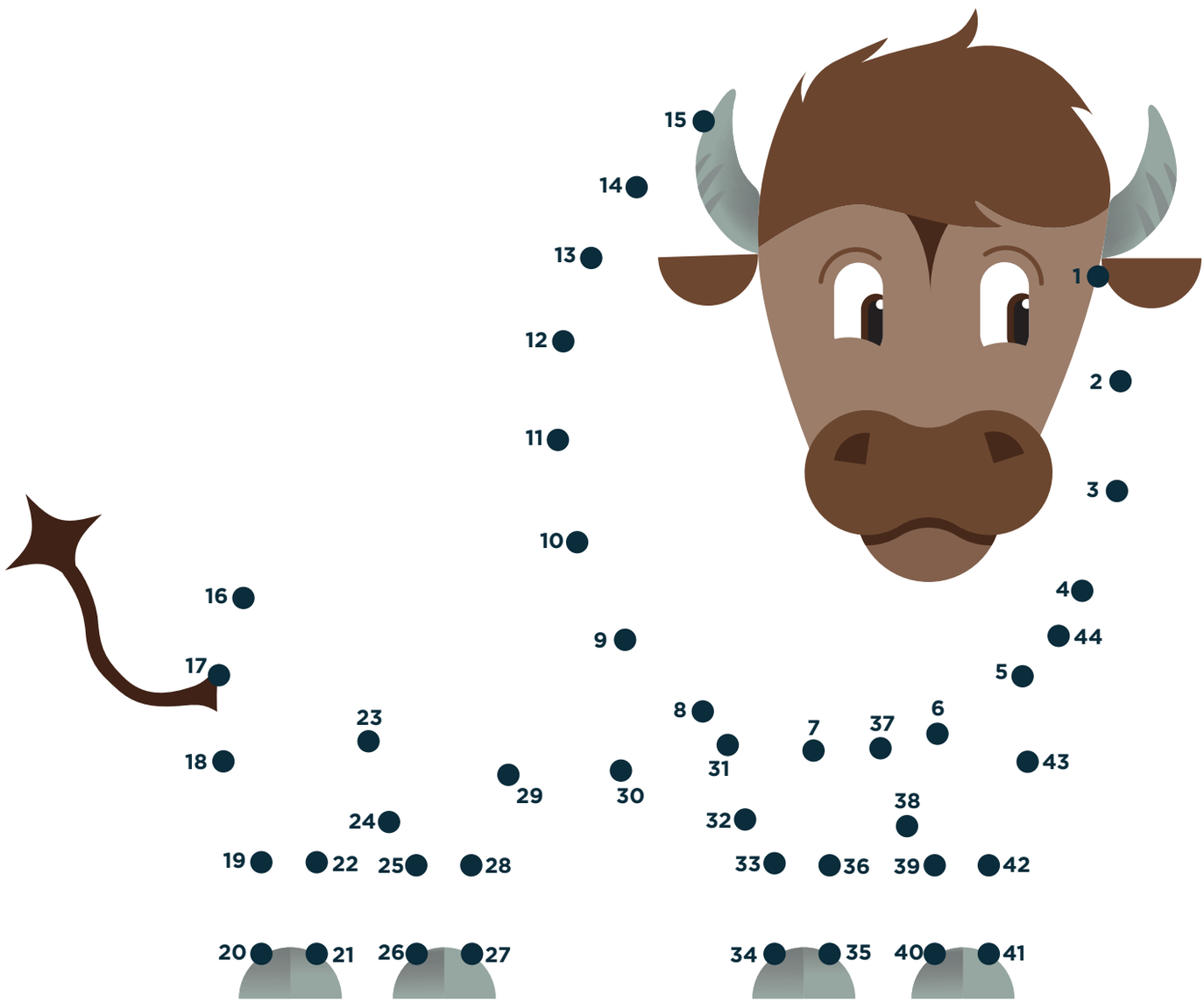
In the summer, close your curtains or blinds to keep the heat out and the inside cooler.



ACTIVITY 8

CONNECT THE DOTS

Connect the dots to create a picture of Energy Ed.



ENERGY DETECTIVE STICKER CHART

Save energy at home and earn stickers!

What you need:

- Coloured paper or cardstock
- Crayons, markers, or colouring pencils
- Stickers
- Glue (optional)
- Pictures to glue (optional)

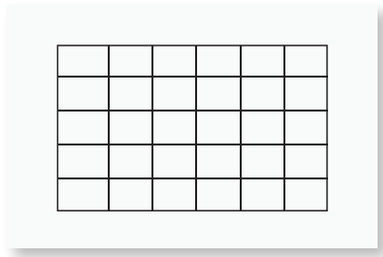
Note for adults: *Help with cutting, gluing, and reading.*



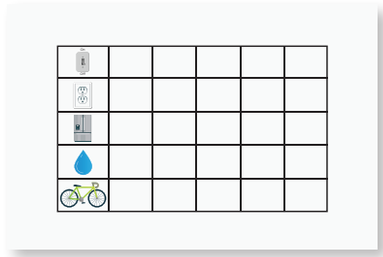


Instructions:

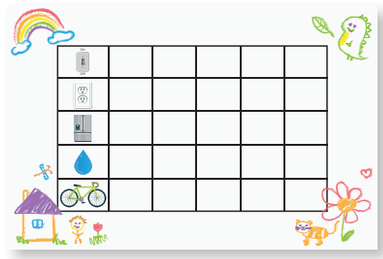
1. Draw a 6×5 grid. Don't forget to make the boxes large enough to draw or glue your pictures into!



2. In the first column, draw or glue pictures of energy saving actions like:

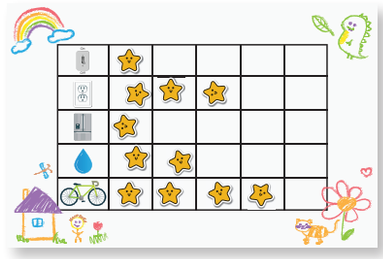


   - Turning off the lights
   - Unplugging devices
   - Closing the fridge quickly
   - Using less water
   - Riding your bike or walking



3. Add decorations to your paper.

4. Every time you do an energy saving action, put a sticker on your chart. Great job!



SOLAR OVEN SNACK

Use the sun to warm a snack!

What you need:

- Shoebox or pizza box
- Aluminum foil
- Plastic wrap
- Black construction paper
- Snack (s'mores or other small snack)
- Sunny spot

Note for adults: *Help with setting up, food handling, and checking the snack.*



Instructions:

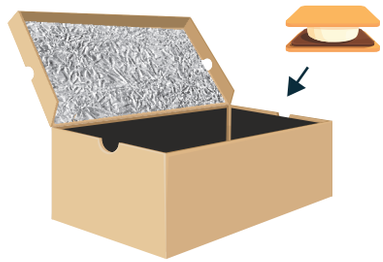
1. Line the box with black construction paper.



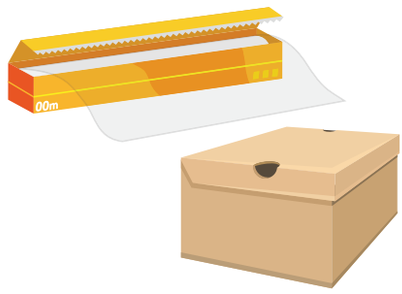
2. Cover the inside of the lid with foil.



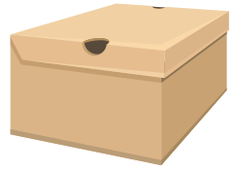
3. Place your snack inside the box, close the lid, and cover with plastic wrap.



4. Put the box in the sun and wait 30 to 60 minutes.

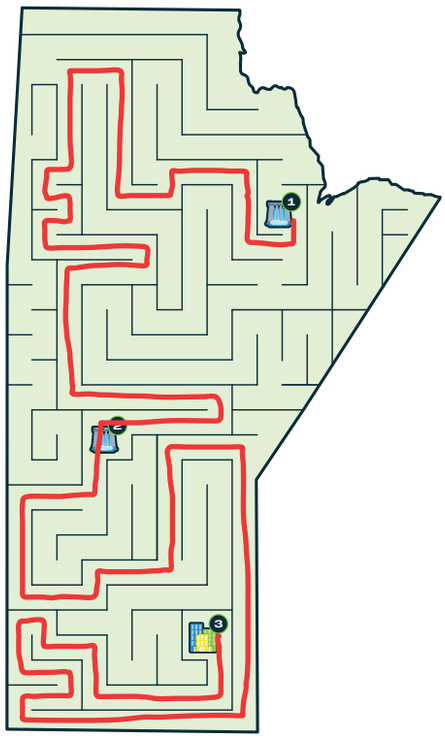




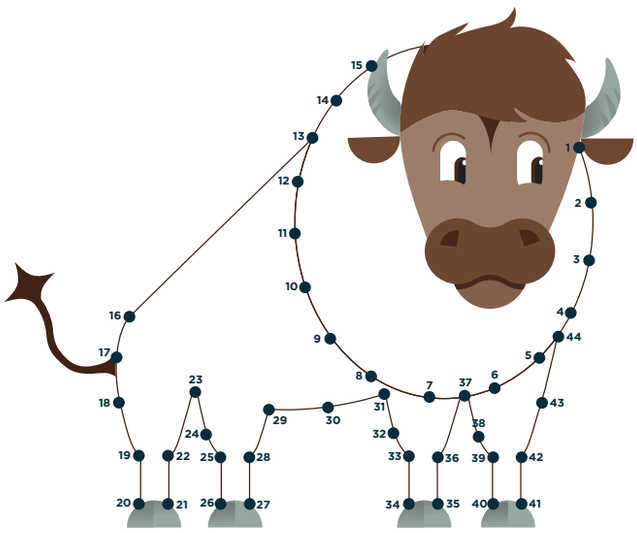


5. Watch the snack melt!

ANSWER KEY

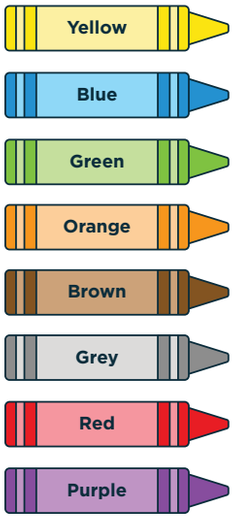


N	H	S	U	H	B	W	D	U	E	N	E	R	G	Y
R	I	S	E	F	F	I	C	I	E	N	C	Y	I	T
M	S	O	P	N	R	D	L	B	M	F	F	E	Y	J
L	M	M	M	G	S	X	G	S	L	M	T	U	S	S
C	M	P	J	X	E	O	O	E	I	S	E	T	O	O
G	B	P	O	W	E	R	R	D	G	M	N	R	C	L
P	L	Q	T	C	K	L	I	U	H	X	V	K	N	A
V	W	N	A	D	V	D	P	C	T	Z	I	Q	Z	R
B	U	Y	T	P	T	M	C	A	L	Y	R	N	H	Z
I	X	C	S	R	F	B	I	T	Y	K	O	I	Y	B
K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





ANSWER KEY



15 + 5 = 20

10 + 2 = 12

20 - 5 = 15

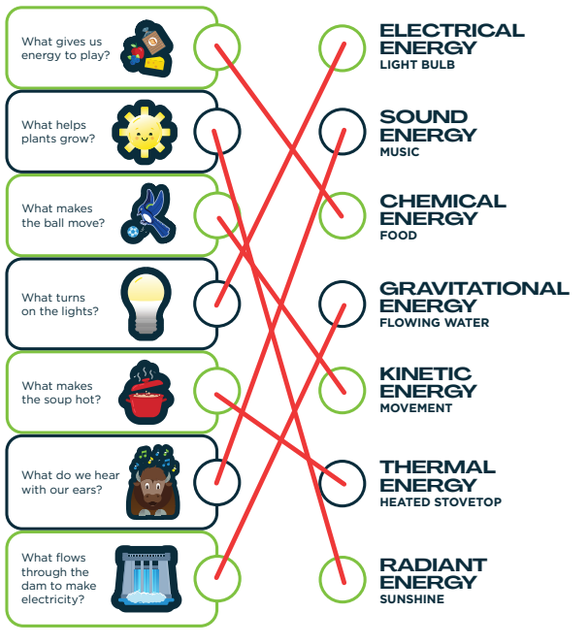
5 + 5 = 10

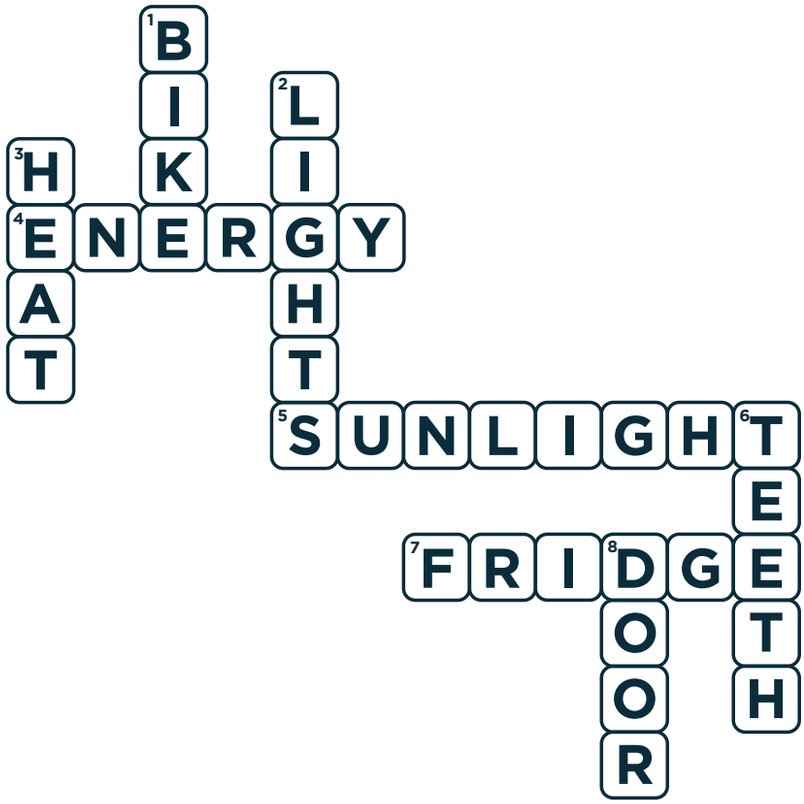
9 - 8 = 1

10 + 7 = 17

12 - 6 = 6

15 - 2 = 13





ENERGY CATCHER

Cut out the square energy catcher on the next page and follow the steps below on how to fold and use it.

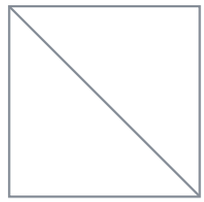
1. Cut



2. Fold



3. Unfold



4. Fold



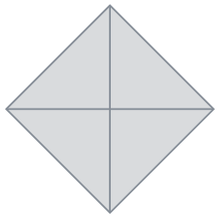
5. Unfold



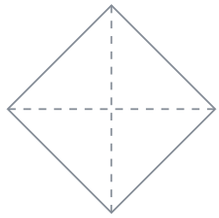
6. Fold corners



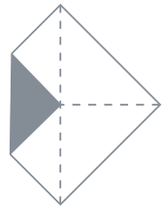
7.



8. Flip over



9. Fold corners



10.



11. Flip over



12. Fold in half



13. Unfold



14. Fold in half and slip fingers into flaps



15.



1. Ask a friend to pick one of the four top squares. Spell the word out loud, like E-N-E-R-G-Y, while moving the Energy Catcher up and down and side to side.

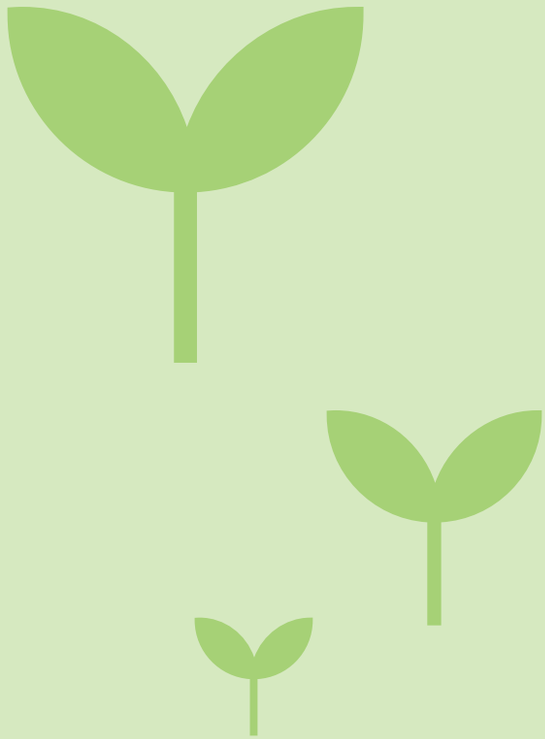
2. Stop and ask your friend to pick a number. Move the Energy Catcher again while counting to that number.

3. Stop and ask your friend to pick one more number. Open the flap to reveal an energy-saving question or activity!



FIND THE ENERGY

Draw pictures of all the things
in the classroom that use energy!



EFFICIENCY MANITOBA

Find our other educational resources at generation-e.ca.

GENERATION E

A program of Efficiency Manitoba

GENERATION E

A program of Efficiency Manitoba

