





Future Energy Systems



The Puzzle of the Power Outage Grade 3 and Under



Match the type of energy storage with its name and picture by writing the letter in the blank.

Answers are on the bottom of the page.

A. Pumped Storage Hydropower	B. Battlery
C. Flywheel	D. Hydrogen Electrolysis
that use batteries:	
	Hydropower C. Flywheel

On the back of this sheet (or on your own paper), draw your house with an added energy source (like solar or wind), along with a way to store that energy!





The Puzzle of the Power Outage Grades 4-6



Match the type of energy storage with its name and picture by writing the letter in the blank.

Answers are on the bottom of the page.

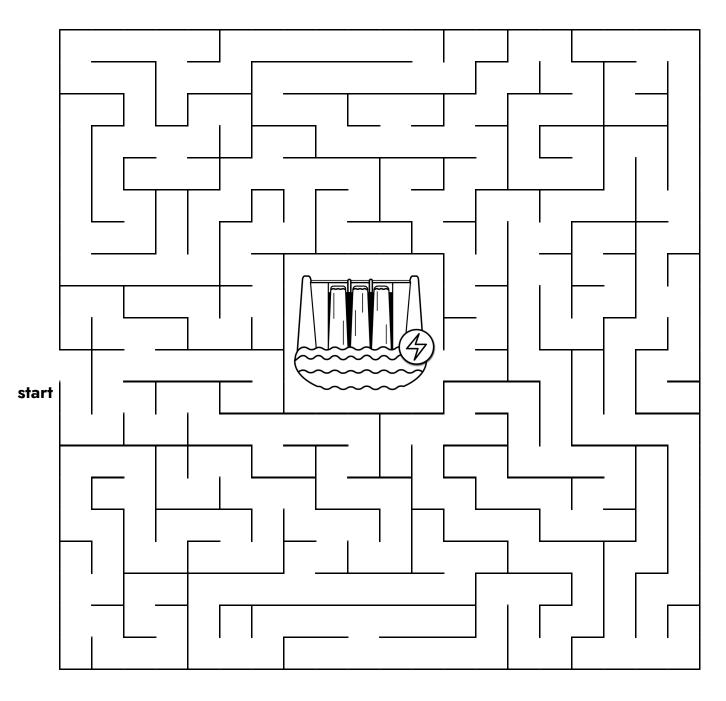
 2. 	Electricity is stored by pumping water up a hill. Electricity is stored using a spinning disk.	A. Pumped Storage Hydropower	B. Battlery
 4. 	Electricity is stored using an anode, cathode, and electrolyte. Electricity is stored by breaking apart water to release oxygen and hydrogen.	C. Flywheel	D. Hydrogen Electrolysis
	onsider the energy technologies you lear uld work best for your:	ned in the book. W	/hich one
Но	ome:		
Scl	hool:		
Cit	y:		

On the back of this sheet (or on your own paper), draw a community, including energy sources and energy storage. This could be something as small as a neighbourhood with a few houses or as big as a whole city. Remember, the size of your community should help you decide how to store energy.



The Energy Adventures of Tommy and Remi The Puzzle of the Power Outage

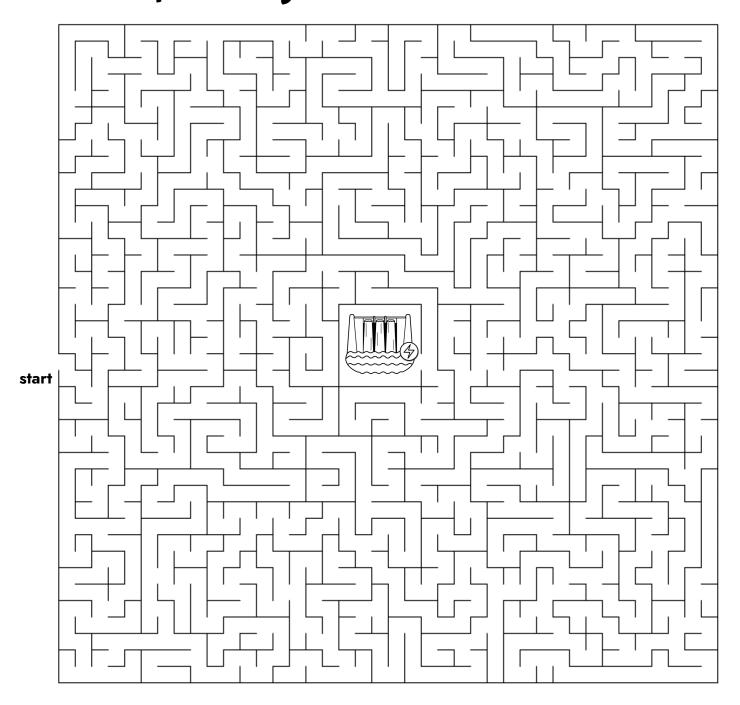
Help Tommy and Remi find the dam!





The Energy Adventures of Tommy and Remi The Puzzle of the Power Outage

Help Tommy and Remi find the dam!









D	Χ	M	G	0	S	Τ	0	R	Α	G	\mathbf{E}
V	Q	N	Р	G	Τ	Р	Χ	Η	G	R	M
Τ	D	Ε	J	Ν	Н	G	\bigvee	Y	Q	Ε	F
J	L	G	R	I	G	Q	0	D	Y	С	L
E	Α	Y	Ε	Ν	Ι	Χ	Y	R	R	Η	Y
I	Ν	Χ	M	Ν	L	Y	R	0	0	Α	M
Ν	I	0	Ι	Ι	Τ	Н	Ε	G	Τ	R	Н
Ν	G	U	D	Р	Н	Τ	Τ	Ε	0	G	Ε
Α	Ε	Η	J	S	G	Α	Τ	N	M	E	Ε
D	R	Ε	Y	S	Ι	С	Α	Ε	M	Y	L
S	Τ	0	R	M	Ν	M	В	Z	Y	С	Χ
0	I	Ε	Ν	Ε	R	G	Y	M	Ι	R	Ε

ANNIE BATTERY CATHY	FLYWHEEL HYDROGEN MOTOR	RECHARGE REGINALD REMI	STORM TOMMY
DREYS	NIGHTLIGHT	SPINNING	WIRE
ENERGY	OXYGEN	STORAGE	





The Puzzle of the Power Outage



N	Ε	G	N	Z	F	С	0	Ι	N	R	J	L	В	Ε	Y	J	U	Z	А
M	J	D	F	S	D	Р	Ι	D	Н	Χ	R	Ι	W	Ι	Y	Н	U	\bigvee	Q
D	L	Р	U	Ε	С	D	L	Ι	0	R	G	M	N	Α	S	Α	N	L	I
R	Р	Ε	Τ	\bigvee	R	Н	Α	U	A	Y	G	K	Ε	Y	Ε	Α	J	Q	M
M	Ι	L	M	U	Ε	G	D	R	Ε	Y	S	L	G	F	L	U	Ε	В	Ε
R	Ι	В	Y	J	M	N	Y	M	Q	S	L	A	Y	U	Ε	S	Τ	Ε	R
0	D	A	R	U	0	Ι	F	S	R	M	Н	M	Χ	J	С	K	Н	L	Τ
Τ	L	M	Ε	D	Р	N	G	Q	Ε	0	Η	R	0	Ι	Τ	Ε	G	Ε	M
S	Α	Ε	С	Ε	0	N	F	L	Y	M	Н	Ε	Ε	L	R	Ι	Ι	С	Y
J	Ν	N	Η	N	R	Ι	L	V	Ε	Ε	Y	Н	Τ	U	0	Ν	L	Τ	R
V	Ι	Ε	Α	Н	D	Р	\bigvee	Y	G	Ζ	Τ	Τ	J	Χ	N	Τ	Τ	R	Ε
Q	G	R	R	G	Y	S	U	Q	A	M	Α	0	Y	M	Н	Ε	Н	0	Τ
K	Ε	С	G	Y	Η	Н	Ε	D	R	U	Р	Ε	F	0	Y	R	G	L	Τ
Ε	R	M	E	J	Z	Z	V	Ν	0	Τ	J	G	\bigvee	Τ	D	М	Ι	Y	A
I	Η	Τ	E	N	Ε	R	G	Y	Τ	0	Χ	Р	\bigvee	0	R	Ι	N	Τ	В
Ν	M	Ι	R	Ε	Χ	Χ	M	Τ	S	M	Q	J	Y	R	0	Τ	L	Ε	Ε
Ν	Ν	J	J	R	R	K	С	J	M	M	Р	Χ	Н	В	G	Τ	\bigvee	J	S
A	F	R	M	F	Ι	С	С	S	R	Y	Z	J	Τ	\bigvee	Ε	Ε	L	Ε	Χ
С	Ι	R	С	U	Ι	Τ	Н	\bigvee	Q	\bigvee	W	0	A	N	N	N	Ι	D	I
V	R	С	M	D	F	K	J	С	J	G	R	М	С	Ε	0	Τ	R	Ε	S

ANNIE	ENERGY	ELECTRON	RENEWABLE
BATTERY	FLYWHEEL	NIGHTLIGHT	SPINNING
CATHY	GEOTHERMAL	OXYGEN	STORAGE
CIRCUIT	HYDROGEN	RECHARGE	STORM
DREYS	INTERMITTENT	REGINALD	TOMMY
ELECTROLYTE	MOTOR	REMI	WIRE

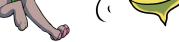




Can you find all of the objects in the park?











Tommy

Spinning Top

Sol the Snake

Solar Panel with Batteries



Camera



Remi



Balloon



2 AA Batteries



Cathy and Annie



Greenhouse



Drey (Squirrel Nest)



Nik the Pigeon



Reginald



Tommy's Bones



Merry-Go-Round



Blanket Flowers



Hydroelectric Dam



Midden (Squirrel Food Pantry)





Building Your Own Spinning Top

You saw the power of spinning as our friends played on the merry-go-round. Flywheels use electricity to make a disc spin, turning the electrical energy into kinetic energy.

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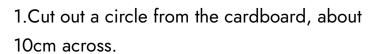
A motor makes the disk spin when we want to store energy. When we need electricity, a generator turns the movement into electrical energy.

Let's make a spinning top!



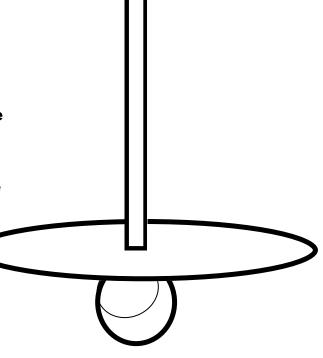
Here are the supplies you'll need:

Piece of cardboard	Marble	Short wooden dowel	- ¬
Marker	Scissors	Hot glue gun	j



- 2. Decorate both sides of the cardboard using markers. Decide which is the top and bottom.
- 3. Glue the marble on the bottom of the cardboard circles, in the centre. **Be careful, the glue gun will be hot!** Let it dry.
- 4. Glue the dowel in the centre on the top of the cardboard circles, pointing up. Let it dry.
- 5. Give it a spin!

Try different sizes of circles, sizes of marbles, and more. Create different designs on your tops. What works? What doesn't?



Keep exploring the energy all around you!







The Energy Adventures of Tommy and Remi Can you spot all 10 differences in the pictures?



The Energy Adventures of Tommy and Remi Can you spot all 10 differences in the pictures?

