



Buzz

PLANET WARRIORS

Energy Storage



Planet Warriors: Energy Storage — Teacher Notes

Welcome teachers! It's time to plug in and power up for the final instalment of the Planet Warriors series. In this episode, Bryce and Buzz explore how we store the energy made by renewables so that lights stay on, cars stay quiet, and the planet stays cool. Through sorting, decoding, graph reading, and creative design, students will learn why energy storage is essential for a clean-energy future.

Activity 1: It's got the Power

Students circle the things that store energy we can use later and cross those that use energy instantly or don't store usable energy.

Encourage discussion about chemical energy (food, batteries) and potential energy (raised water, compressed springs).

Follow-up Questions:

- *How do animals and humans store energy differently from machines?*
- *Why is energy storage important for renewables like solar and wind?*

Activity 2: Buzz's Battery Code

Students crack the code by matching each symbol to a letter using the key. As they decode, discuss what the message means and how it connects to the myth from the podcast.

Answer: Secret message → BATTERIES CAN BE RECYCLED

Follow-up Questions:

- *Where/ how can batteries be recycled?*
- *Why is it important to handle batteries for recycling with care?*

Extension: Invite students to make their own short code message about renewable energy or batteries.

Activity 3: How Batteries Help Out

Show the class the graph (solar = yellow, home use = blue, battery = green).

Ask students to describe what happens across a day, identifying which line represents generation, usage, and storage.

Activity 4: Buzz's Big Backup Mission

Read the storm scenario aloud and discuss which clean-energy system would work best for the school. Students choose a system, justify their reasoning, and then write a short "news report" explaining how their design saved the day.

Follow-up Question:

- *"Why is backup power important for places like hospitals, schools, or emergency centres?"*

Word Help

Battery: A device that stores chemical energy and turns it into electricity when needed.

Charge/ Discharge: When energy goes into and out of a battery.

Potential Energy: Stored energy that an object has because of its position — like water behind a dam or a stretched rubber band.

Chemical Energy: Energy stored in substances such as food, fuel, or batteries, which is released during a chemical reaction.



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Energy Storage

It's got the Power

1. Buzz says energy is everywhere — but not everyone keeps it the same way! Buzz has gathered a bunch of objects, but not all of them store energy we can use later.

Circle the things that store energy that can be used later.

Hint: Think carefully about how animals, plants, and machines store energy.



Follow-up discussion: Which store chemical energy? Which store potential energy?

Buzz's Battery Code

2. Buzz has intercepted a shocking rumour flying around the internet — and he's decided to zap it with the truth! But first, you'll need to crack his secret code to reveal the message.

Each symbol stands for a letter of the alphabet. Use the Key below to help you translate the symbols and uncover what Buzz is really saying about batteries.

Hint: You might spot words appearing as you go — that's your clue you're on the right track!

Then colour or decorate Buzz's lightning bolts to celebrate your success — you've just busted a battery myth!

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

Row 1: Banana, Green leaf, Brown bow, Brown poop, Yellow lightbulb, Blue kite, Brown poop, Brown clock, Brown bear, Green leaf, Brown chicken drumstick

Row 2: Banana, Brown poop, Yellow lightbulb, Brown poop, Brown bear, Red dynamite, Brown bear, Yellow lightning bolt, Brown poop, Grey alien



How Batteries Help Out

3. Energy doesn't sleep — it just changes who's doing the work! This graph shows what happens during a normal day when we use solar power and a home battery.

The **yellow line** shows how much energy the solar panels make.

The **blue line** shows how much energy people use at home.

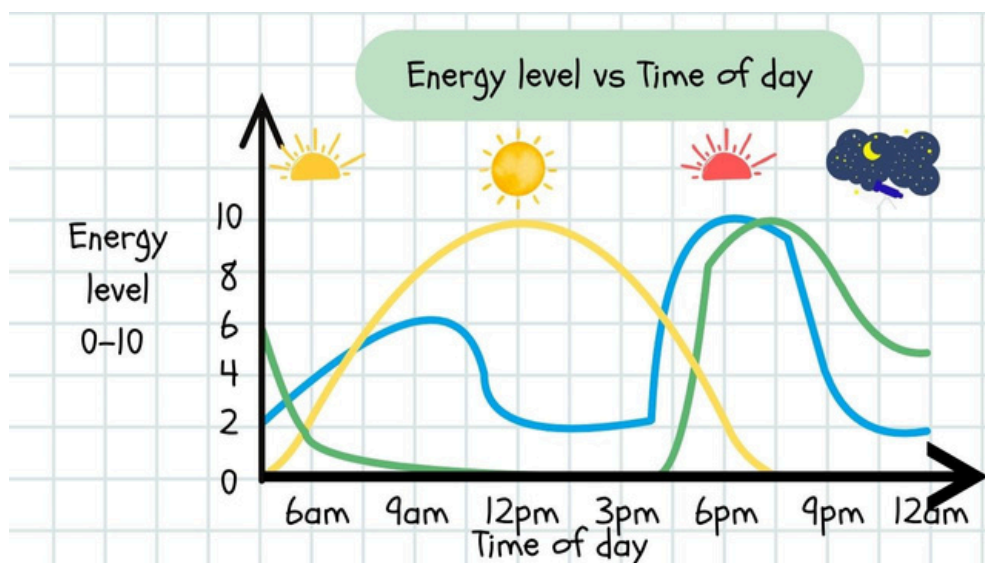
The **green line** shows when the battery releases power.

Look carefully at the lines, then answer the questions.

a) At what time does solar make the most energy?

b) At what time do people use the most energy?

c) How does the battery help?



Buzz's Big Backup Mission

Disaster strikes at Squiz Kids Primary! A huge storm has blown through, and the school's power is out — no lights, no Wi-Fi, and no canteen toasties!

Buzz is on the scene, ready to help power things back up. But which clean-energy backup system should he install to keep the school running safely and sustainably?

- Circle or highlight the backup system you think would work best.

Backup System Options:

Big Battery System — stores energy to use when power goes out.

Mini Wind Turbine — catches the breeze to create fresh power for the school.

Solar + Battery Combo — collects sunshine by day and stores it for night-time or emergencies.



On the next page, Write a short news report explaining how your system saved the day!

Start like this: "This just in from Planet Warriors HQ — thanks to a clever backup plan, Squiz Kids Primary is back online..." Add a quote from Buzz or a student, a fun headline and a picture.



This just in from Planet Warriors HQ — thanks to a clever backup plan, Squiz Kids Primary is back online...

Hint: Remember to include details explaining why you chose the system and how it helped.
Tell the readers where it went, what parts of the school it could power.
Draw a picture to illustrate the system in action.



✓ Planet Warriors: Energy Storage — Solutions

Activity 1: It's got the Power

Expected Answers:

✓ Stores energy we can use later:

- 🖱 Battery – stores chemical energy
- 🍌 Banana – stores chemical energy from the Sun
- 🐻 Bear – stores food energy as fat
- 🌱 Plant – stores the Sun's energy as sugars
- 🏰 Dam – stores potential energy in the form of water that can be pulled by gravity.

✗ Doesn't store usable energy:

- 💡 Lightbulb – uses energy instantly
- 🌀 Wind turbine – makes energy but doesn't store it
- ☀️ Solar Panel – makes energy but doesn't store it
- 🍳 Frying Pan - Conducts heat energy but doesn't store it.

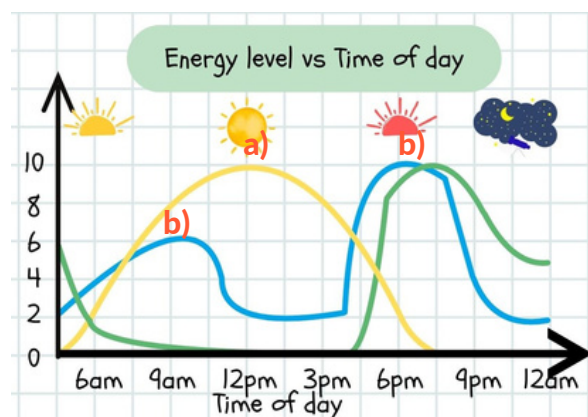
Activity 2: Buzz's Battery Code

Secret message → BATTERIES CAN BE RECYCLED

Activity 3: How Batteries Help Out

Answers:

- Solar makes the most energy around midday (12 pm).
- People use the most energy in the morning and evening.
- The battery helps by storing extra solar power made during the day and releasing it at night when the Sun isn't shining.



Activity 4: Buzz's Big Backup Mission

Option 3: Solar + Battery Combo

Solar panels collect power during the day and the battery stores it for night-time or storms. It's the most reliable and eco-friendly option for the whole school.

Student response example:

When heavy rain and wind caused a major blackout, Buzz and the Planet Warriors team jumped into action with a solar and battery combo system. The solar panels were installed on the school's library roof, catching sunlight all through the day. That energy was then stored in a big battery unit beside the science block, ready to be used whenever the power went out. The system powered classroom lights, computers, and the canteen fridge, keeping learning – and lunch – on track while the rest of the neighbourhood stayed dark. Even better, the school's new setup now helps cut emissions and lowers electricity bills year-round.

Buzz said, "Clean energy doesn't just help the planet – it keeps schools like this running when things get stormy!"