



Rocky

PLANET WARRIORS

Geothermal



Planet Warriors: Geothermal — Teacher Notes

Welcome teachers! It's time to turn up the heat! This worksheet takes your students deep underground to explore how the Earth's natural warmth can be transformed into clean, renewable power. Through storytelling, puzzles, and real-world problem solving, they'll uncover how geothermal energy works, bust a few myths, and discover where it fits in our planet's energy future.

Activity 1: Hot Rocks Comic Strip

Discuss how geothermal energy uses the Earth's heat to make electricity. Students complete the five panels showing water being pumped down, heating up, turning to steam, spinning a turbine, and powering homes. Encourage them to label or caption each stage using key terms from the episode.

Activity 2: Word Search: The Power Beneath

Students find the listed words in the grid. When all are found, the leftover letters (in order) spell the secret message:

☞ STEAM FROM HOT ROCKS SPINS TURBINES

Review key terms together and ask students to explain what each word means (e.g. "What is a geyser? What does a turbine do?").

Differentiation: Provide the word list for younger or emerging readers, or let confident students search without it.

Activity 3: Professor Amos' "Science Says..."

Read each statement aloud or in pairs. Students tick whether it's Fact or Fiction, then write what Professor Amos said in the podcast that supports their answer.

Discuss why scientists rely on evidence rather than opinions when studying energy.

Answers guide:

- a) Fiction — Geothermal doesn't only work near volcanoes.
- b) Fact — It can heat homes as well as generate electricity.
- c) Fiction — The Earth's heat will never run out.

Activity 4: The Energy Mix Challenge

Students read each scenario and choose the best energy source (Solar, Wind, Tidal/Hydro, Geothermal, or a Mix). Encourage them to explain their reasoning in one clear sentence. Emphasise that some locations benefit from more than one energy type.

🔍 Word Help

Geothermal Energy: Heat from inside the Earth used to make electricity or heat buildings.

Turbine: A machine with spinning blades that turns when steam or water moves through it.

Generator: Converts motion into electrical energy.

Crust: The solid outer layer of the Earth.

Geyser: A natural vent that shoots steam and hot water from underground.

☞ **Tip:** Wrap up by asking: "If you could design a renewable energy system for your town, what would it look like — and why?"



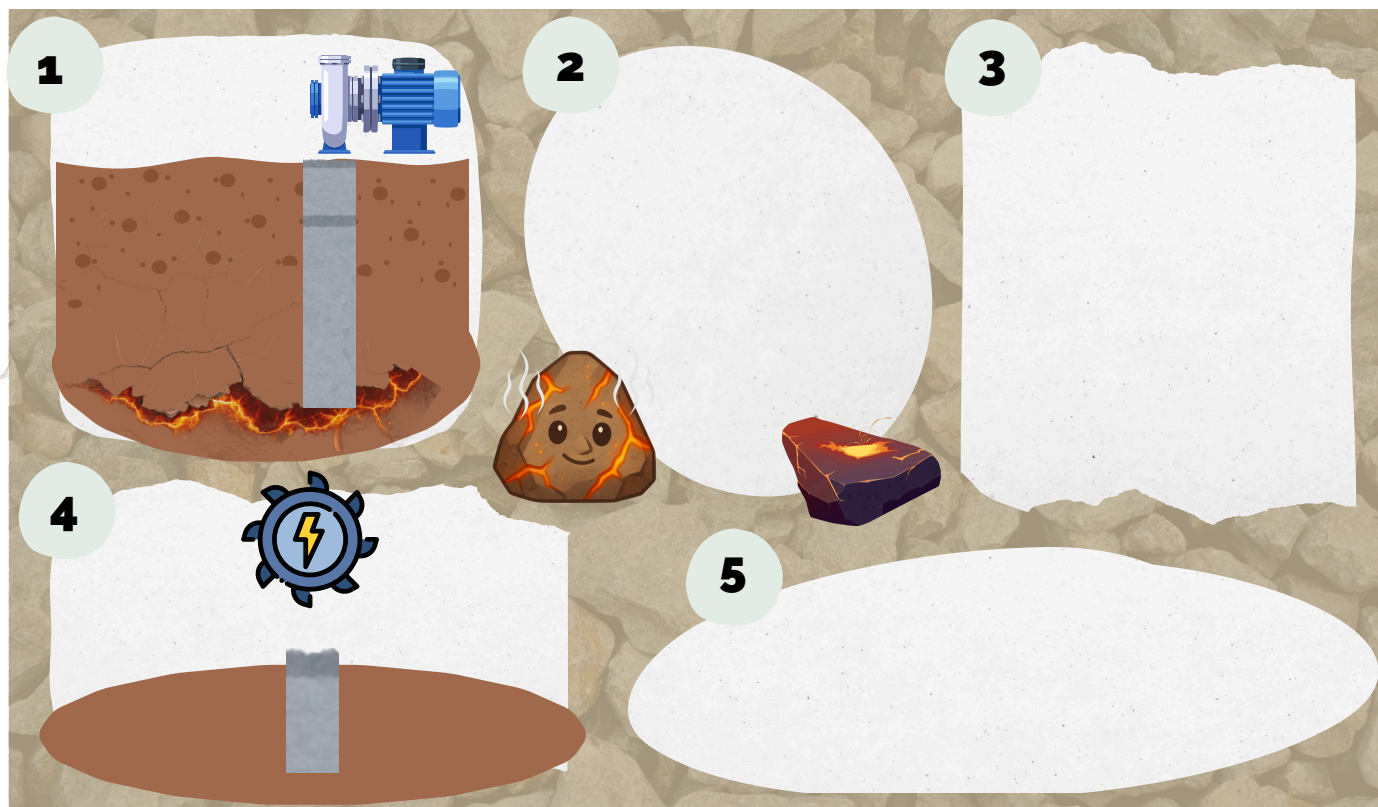
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Hot Rocks Comic Strip

1. Rocky's ready to take kids underground to discover how the Earth's heat turns into power! Complete a five-panel comic strip **showing the journey of a single drop of water** through a geothermal power system – from being pumped down (1), to heating up (2), turning to steam (3), spinning a turbine (4), to powering a home or school (5).



Extension idea: "Name your water drop character and add speech bubbles to tell its story!"

Word Search: The Power Beneath

2. Search for key geothermal words in the grid. When you've found them all, read the leftover letters (in order) to reveal the secret message:

G E O T H E R M A L . T U R B I N E . S T E A M . .
G E N E R A T O R . H O T S P R I N G . C R U S T . G E Y S E R .
V O L C A N O . P O W E R . D R I L L . R O C K

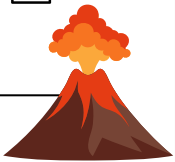
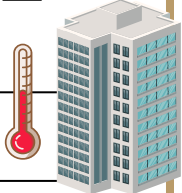
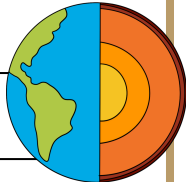
G	H	S	T	E	A	M	F	R	O
G	E	O	V	O	L	C	A	N	O
S	E	O	T	G	E	Y	S	E	R
T	M	N	T	S	H	O	T	R	D
E	U	C	E	H	P	R	O	O	R
A	P	R	C	R	E	R	K	C	I
M	O	U	B	S	A	R	I	K	L
S	W	S	P	I	I	T	M	N	L
N	E	T	S	T	N	U	O	A	G
R	R	B	I	N	E	E	S	R	L



Professor Amos' "Science Says..."

3. Professor Amos knows her rocks! But there are a few things people think they know about geothermal energy that aren't quite right. **Read each statement carefully and tick whether it's FACT or FICTION.**

Extension: Under each one, write what Professor Amos said that supports your answer.

	FACT	FICTION
a) Geothermal energy only works in countries with volcanoes.	<input type="checkbox"/>	<input type="checkbox"/>
Professor Amos says...		
b) Geothermal energy can heat buildings as well as make electricity.	<input type="checkbox"/>	<input type="checkbox"/>
Professor Amos says...		
c) The Earth's heat could run out one day if we use too much.	<input type="checkbox"/>	<input type="checkbox"/>
Professor Amos says...		

⚡ The Energy Mix Challenge

4. Different places need different kinds of clean energy. **Read each situation and decide which energy source(s) would work best — Solar, Wind, Tidal/Hydro, Geothermal, or a Mix!**

Then **explain why in one sentence.**

	Best Energy Source/s	Reason
a) Your town sits on a windy hill near the ocean, close to the mouth of a tidal river.	<hr/>	<hr/>
b) You're building a science base in a sunny outback location where natural hot springs bubble up from underground.	<hr/>	<hr/>
c) An eco-tourism town in a national park, known for its river that has a dam upstream and spectacular geyser.	<hr/>	<hr/>



✓ Planet Warriors: Geothermal — Solutions

Activity 1: Hot Rocks Comic Strip

Expected sequence and ideas for each panel:

1. Cold water is pumped deep underground into the Earth through pipes.
2. Water moves through hot rocks and heats up.
3. The hot water turns into steam.
4. Steam spins a turbine connected to a generator.
5. Electricity powers homes, schools, or cities.

Activity 2: Word Search: The Power Beneath



Secret Message: STEAM FROM HOT ROCKS
SPINS TURBINES

Activity 3: Professor Amos' "Science Says..."

- a) Fiction - "We don't have any active volcanoes in Australia, but we do have lots of geothermal energy."
- b) Fact - "We can bring up warm water from underground to heat buildings and houses."
- c) Fiction - "The Earth's heat will never, ever run out."

Activity 4: The Energy Mix Challenge

- a) **wind + tidal** The wind and tides with moving air and water can turn turbines.
- b) **solar + geothermal** Sunshine for daytime power, heat from the Earth for night-time use.
- c) **hydro + geothermal** Water released from the dam and heat energy can produce electricity and the underground heat can warm buildings.