## Geography Sub Plans

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cells soak up sunlight and turn it into electricity. One advantage to using solar panels is that they are a clean energy source. which means they are better for the wronment. They don't cause pollution, keeping the air clean and the

Earth healthy Using solar panels also means people could save money on electricity ecouse there are no delivery fees as electricity is being produced from the olar panels on the home.

shally, if can be expensive to pay for ne installation of solar panels. vever, in some places, governr bates might be offered to help fset the cost of purchasing this hnology, which means solar panels ning more offendable to

acticle Photo of Solar Pannels on a House Roof If someone moves houses, they most likely will not be able to bring the panels with them offer investing the money to There are many types of solar panel systems you can choose from such as ones that heat water, ones that work. on or off of the electrical and hybrid ones that work both ways. They can also improve property value. Solar panels can make electricity as long os the sun is shining Even on cloudy or rainy days, solar panels work. It is important to try and keep them clean and free from dirt or leaves so they can soak up the sunlight

Keeping solar panels clean might be challenging as someone needs to go up on the roof to clean them. Not everyone can go up on their root omeowners might not have the budget to pay a company for this service. Solar ponels do not last indefinitely, they entually need to be replace



Octailed Lesson Plan ✓ Non−Fiction Article Podcast & Video Links Graphic Organizers **S** Journal Response Question Oiscussion & Comprehension Activities Print & Digital Formats



# **LESSON OVERVIEW**

## In This Lesson Students Will:

- 1. Watch short videos about solar panels.
- 2. Read an informative non-fiction article on solar energy.
- 3. Complete a T-Chart to analyze the pros and cons of solar panels.
- 4. Reflect on their learning through a journal response.
- 5. Participate in a class discussion on renewable energy.
- 6. Use a podcast anticipation guide before listening.
- 7. Listen to a podcast episode on solar farms.
- 8. Answer post-listening comprehension questions.



#### **SOLAR PANELS**

The sun is a renewable resource. It will continue to give off sunlight for years to come, unlike other forms of resources that will eventually run out. This means that solar power is a sustainable form of energy.

Have you ever seen shiny panels on a roof? Those are called solar panels. They are like supercharged batteries that use sunlight to make electricity.

Solar panels are made up of many smaller parts called solar cells. These cells soak up sunlight and turn it into electricity.

One advantage to using solar panels is that they are a clean energy source, which means they are better for the environment. They don't cause pollution, keeping the air clean and the Earth healthy.

Using solar panels also means people could save money on electricity because there are no delivery fees as electricity is being produced from the solar panels on the home.

Initially, it can be expensive to pay for the installation of solar panels. However, in some places, government rebates might be offered to help offset the cost of purchasing this technology, which means solar panels are becoming more affordable to install

#### Photo of Solar Pannels on a House Roof

If someone moves houses, they most likely will not be able to bring the panels with them after investing the money to install them.

There are many types of solar panel systems you can choose from, such as ones that heat water, ones that work on or off of the electrical grid, and hybrid ones that work both ways. They can also improve property value.

Solar panels can make electricity as long as the sun is shining. Even on cloudy or rainy days, solar panels work. It is important to try and keep them clean and free from dirt or leaves so they can soak up the sunlight.

Keeping solar panels clean might be challenging as someone needs to go up on the roof to clean them. Not everyone can go up on their roof. Homeowners might not have the budget to pay a company for this service. Solar panels do not last indefinitely, they eventually need to be replaced.

### SOLAR PANELS

Your Task: After reading the Solar Panels article, fill in the advantages and disadvantages chart with information from the article.

Advantages of Solar Panels Disadvantages of Solar Panels

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## LESSON CAN BE USED IN: ✓ GEOGRAPHY ✓ SCIENCE ✓ ELA

# **DETAILED TEACHER PAGES**

# LESSON PLAN

Solar Panels

#### Lesson Overview:

Students will explore the advantages and disadvantages of solar panels.

#### Materials Needed:

- $\hfill\square$  Computer with projector, speakers and internet
- □ Video 1: Employed sheep hired to snack and nap #shorts #sheep
- Video <u>2: First look at Canada's largest solar farm</u>

ABC No

Video

Photoc

followir

FULL LESSON PLAN

- Solar Panels Advantages and Disadvantages Chart
- Solar Panels Thinking Question
- Cost of Living Graphic Organizer

#### Teacher Instructions:

- This lesson might take two class periods, depending on your students. It does not need to be completed in one class period.
- 2. Ask students to explain what they know about sheep. Write down their thoughts on the whiteboard.
- 3. Then, as a class, watch the video, <u>Employed sheep hired to snack and</u> <u>nap #shorts #sheep</u>.
- Have a quick class discussion on your students' thoughts about the video.

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	Advantages of Sola
FERENTIATED	They are a clean energy which means they are be the environment. They do pollution, keeping the air the Earth healthy.
tep-By-Step	Using solar panels also m could save money on elec because there are no del

- Instructions
- Student Pages
- Answer Keys

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SAMPLE	ANSWERS
Advantages of Solar Panels	Disadvantages of Solar Panels
They are a clean energy source, which means they are better for the environment. They don't cause pollution, keeping the air clean and the Earth healthy. Using solar panels also means people could save money on electricity because there are no delivery fees.	It can be expensive to initially pay for the installation of solar panels. If someone moves houses, they most likely will not be able to bring the panels with them after investing the money to install them. There is maintenance involved - they need to be kept clean and free from
which mean becoming n ANSW: They can also improve property value. They can make electricity as long as the sun is shining. Even on cloudy or rainy days, solar panels work.	the hele finitely, they eventually need to be replaced.

# SAMPLE LESSON PAGES

### **SOLAR PANELS**

The sun is a renewable resource. It will continue to give off sunlight for years to come, unlike other forms of resources that will eventually run out. This means that solar power is a sustainable form of energy.

Have you ever seen shiny panels on a roof? Those are called solar panels. They are like supercharged batteries that use sunlight to make electricity.

Solar panels are made up of many smaller parts called solar cells. These cells soak up sunlight and turn it into electricity.

One advantage to using solar panels is that they are a clean energy source.

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Using solar panels could save money because there are

electricity is being produced from the solar panels on the home.

Initially, it can be expensive to pay for the installation of solar panels. However, in some places, government rebates might be offered to help offset the cost of purchasing this technology, which means solar panels are becoming more affordable to install.

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### Solar Farms Pre-Listening

Read the statements below. Then check the answer box that aligns with your thoughts.

Statements	Yes	No
E think people complain about the cost of electricity.		
Public spaces should have solar panels on their roofs.		
JUDENT ge.		
PAGES Dar.		
Solar panels are allowed on roofs in the place where I live (e.g., town or city) .		
I know the source of the electricity that is used where I live (e.g., coal, nuclear, hydro, natural gas).		
E think about the environmental impact of different Types of electricity generation.		
People might be encouraged to install solar panels on their homes if they were paid for by the local government.		
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### SAMPLE ANSWERS

Advantages of Solar Panels	Disadvantages of Solar Panels		
They are a clean energy source, which means they are better for the environment. They don't cause	It can be expensive to initially pay for the installation of solar panels.		
pollution, keeping the air clean and the Earth healthy.	If someone moves houses, they most likely will not be able to bring		
Using solar panels also means peop could save money on electricity	<b>SOLAR PANELS THI</b>		

In some places, government rebat might be offered to help offset the cost of purchasing this technology, which means solar panels are becoming more affordable to insta

because there are no delivery fees

They can also improve property value.

They can make e the sun is shining rainy days, solar

#### ensive to initially pay ation of solar panels. noves houses, they

**ANSWER KEYS** 

**ASSESSMENT** 

### PANELS THINKING QUESTION

Assessment	Below	Meets	Above
	Expectations	Expectations	Expectations
	✓-	<b>\</b>	✓*

What are your thoughts about solar panels? Would you consider purchasing them for your home? Explain.

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# **LESSON FORMATS**





### THIS RESOURCE CAN BE USED IN-PERSON OR ONLINE

