

Warm-Up Activity:

1. Ways I Use Electricity	2. Where does the energy to produce the electricity you use come from? Explain below using words or a drawing.
<ul style="list-style-type: none">• _____• _____• _____• _____	
3. What do you think is the best way to produce energy and why? _____	
4. How does electricity make life easier? _____ _____	
5. Making Predictions: Niyah does not have electricity where she lives. How do you think this impacts her everyday life? _____ _____	

Word Bank

natural gas	reliable	environmental scientist	Africa
solar	electricity	wind	unreliable
uranium	renewable	coal	nuclear power plants

Directions: Use the word bank to fill in the blanks and the chart below.

1. Niyah lives in Central _____, and her village doesn't have

_____.



2. Leo and Layla's Uncle Will is a(n) _____.
3. There are two types of energy: _____ energy and _____ energy.
4. Wind and solar are also known as _____ forms of energy because even if they're limited, they will not run out.
5. Nuclear energy only requires a small amount of _____, which is a natural resource found all over the world.

Reliable Energy Sources	Unreliable Energy Sources
<ul style="list-style-type: none"> • _____ • _____ • _____ 	<ul style="list-style-type: none"> • _____ • _____

Short Response:

6. Why are reliable energy sources known as *reliable*?

7. Why are unreliable energy sources known as *unreliable*?

8. In the video, Layla claims renewable energy does not harm the environment. How does Uncle Will explain that she has been misled about its impact on the environment? Provide two examples from the video of the negative impact of unreliable or renewable energy.

9. According to Uncle Will, what is the best source of energy for Africa? Explain his reasoning using evidence from the video.

Making Connections:

10. Based on what you've learned from the video, which source of energy do you think is the best option for Niyah's village? Explain your reasoning using evidence from the video.

11. In the video, Layla was misled about renewable energy and its impact on the environment. How can you avoid being misled like Layla? Provide a specific example of how you can apply this lesson when forming opinions or making decisions.

Niyah | Answer Key

Warm-Up Activity:

Check students' work for completion.

Word Bank

natural gas	reliable	environmental scientist	Africa
solar	electricity	wind	unreliable
uranium	renewable	coal	nuclear power plants

Directions: Use the word bank to fill in the blanks and the chart below.

1. Niyah lives in Central Africa, and her village doesn't have electricity.
2. Leo and Layla's Uncle Will is a(n) environmental scientist.
3. There are two types of energy: reliable energy and unreliable energy.
4. Wind and solar are also known as renewable forms of energy because even if they're limited, they will not run out.
5. Nuclear energy only requires a small amount of uranium, which is a natural resource found all over the world.

Reliable Energy Sources	Unreliable Energy Sources
<ul style="list-style-type: none">• <u>coal</u>• <u>natural gas</u>• <u>nuclear power plants</u>	<ul style="list-style-type: none">• <u>solar/sun</u>• <u>wind</u>

Short Response

6. Why are reliable energy sources known as *reliable*?
Reliable energy, such as coal, natural gas, and nuclear power plants, takes a natural resource from the earth and creates energy that is always available for people to use. They are reliable because they are very dependable and do not rely on nature, like the sun or wind. They are also not too expensive.
7. Why are unreliable energy sources known as *unreliable*?
Unreliable energy, such as solar power from the sun and energy produced from windmills, is known as unreliable because it can only be made when nature cooperates, and nature is constantly changing and out of human control.
8. In the video, Layla claims renewable energy does not harm the environment. How does Uncle Will explain that she has been misled about its impact on the environment? Provide two examples from the video of the negative impact of unreliable or renewable energy.
Sample answer: While it's true that sun rays and wind don't harm the environment,

- Solar panels, windmills, and the batteries needed for these types of energy are all made from materials that have to be mined from the earth, cannot be recycled, and become hazardous waste.
 - Wind and solar power are just not powerful enough to power the modern world. Even places that have invested billions of dollars in wind and solar power still have to use reliable sources for most of their power.
 - Windmills kill birds, and solar farms disrupt huge amounts of natural habitat, harming plants and animals. The materials needed to create windmills, solar panels, and batteries required to store these forms of energy have to be dug up and taken from the earth.
 - Wind and solar power require the mining of natural resources similar to coal and natural gas, but the power created is less powerful and cannot be relied on.
 - Because windmills and solar panels can't be recycled, once they wear out, and they all do, they end up in giant metal trash heaps.
9. According to Uncle Will, what is the best source of energy for Africa? Explain his reasoning using evidence from the video.

Uncle Will thinks that nuclear energy is the best. This is because:

- Nuclear energy is cheap, and it is more environmentally friendly than any other option. Nuclear creates massive amounts of energy with zero pollution, and all it requires is a small amount of uranium, a natural resource that is found all over the world.
- The amount of waste is tiny too. America has been creating nuclear energy for almost 50 years, and all of the waste so far can be stored in an area the size of one football field.
- It takes dozens of wind and solar farms covering thousands of acres of land to match the energy produced by a single nuclear plant. Nuclear energy is so dense and powerful that it only takes a small amount of uranium to provide all the energy that a person will need in their entire life.

If Africa used nuclear energy, Niyah and her family would have all the electricity they ever needed. It would also be the best way to preserve Africa's wildlands, open spaces, and natural beauty.

Making Connections

10. Based on what you've learned from the video, which source of energy do you think is the best option for Niyah's village? Explain your reasoning using evidence from the video.

Answers will vary.

11. In the video, Layla was misled about renewable energy and its impact on the environment. How can you avoid being misled like Layla? Provide a specific example of how you can apply this lesson when forming opinions or making decisions.

Sample answer: I can avoid being misled by doing my own research on a topic before making a decision or forming an opinion. It is very important to be cautious of misleading information and not trust everything I hear from others or the internet.