

HMDC Elementary Debate Class (Summer 2024) - T-Chart

Topic: Switching to Renewable Energy would be desirable.

Switching to Renewable Energy

BACKGROUND:

Renewable energy is energy that comes from natural sources that can be replenished, like the sun, wind, water, and the Earth's heat. Unlike fossil fuels such as coal, oil, and natural gas, which can run out, renewable energy sources are always available. Fossil fuels are a major problem because when they are burned for energy, they release harmful gases into the air. These gases contribute to global warming and cause health problems. Mining and drilling for fossil fuels also damage the environment, leading to deforestation, oil spills, and destruction of natural habitats. Renewable energy can help reduce or eliminate these problems. Solar and wind power do not produce harmful gases, making the air cleaner and healthier to breathe. Hydropower and geothermal energy are also clean sources that do not contribute to air pollution. Those in favor of renewable energy believe... it can reduce our dependence on fossil fuels, protect the environment, and improve public health. Those who oppose renewable energy believe... it can be too expensive to set up and may not always provide a steady supply of energy.

Renewable Energy: Renewable energy is energy that we get from natural sources like the sun (solar power), wind (wind power), water (hydropower), and the heat from inside the Earth (geothermal energy). These sources can be used over and over again and do not run out.

Fossil Fuels: Fossil fuels are energy sources like coal, oil, and natural gas that come from the remains of ancient plants and animals buried for millions of years. When burned, they release harmful gases, contributing to pollution and climate change. Unlike renewable energy, fossil fuels can run out.

RENEWABLE ENERGY (PRO): General Ideas

1. **Cleaning the Air:** Renewable energy sources like wind and solar power do not produce harmful gases. This means the air we breathe is cleaner and healthier. Cleaner air helps reduce health problems like asthma and other respiratory issues. Using renewable energy helps keep the environment clean and safe for people, plants, and animals.
2. **Producing Endless Amounts of Energy:** Sources like the sun and wind will never run out. This means we can use them forever without worrying about depletion. Renewable energy is always available and reliable. Unlike fossil fuels, we do not have to worry about running out of resources.
3. **Protecting the Environment:** Renewable energy does not harm the land, water, or animals. It helps preserve natural habitats and keeps ecosystems healthy. Using renewable energy reduces the damage to our planet. This helps protect wildlife and natural resources for future generations.
4. **Reducing Harms of Climate Change:** Renewable energy reduces the amount of carbon dioxide and other harmful gases in the atmosphere. This helps slow down global warming and climate change. By using renewable energy, we can protect the environment and create a more stable climate for future generations.
5. **Creating Many New Jobs:** The renewable energy industry creates many new jobs in different areas like manufacturing, installation, and maintenance. These jobs help boost the economy and provide employment opportunities for many people. Renewable energy projects can also bring development to rural and underdeveloped areas.

HMDC Elementary Debate Class (Summer 2024) - T-Chart

Topic: Switching to Renewable Energy would be desirable.

RENEWABLE ENERGY (PRO): Specific Ideas

1. **Cleaning the Air:** Renewable energy makes the air cleaner because it uses sources like wind and solar power to produce energy without giving off harmful gases or particles.
2. **Providing Unlimited Energy:** Renewable energy provides unlimited energy because sources like the sun and wind will never run out, unlike fossil fuels which can be used up.
3. **Protecting Natural Habitats:** Renewable energy protects natural habitats because it does not involve drilling or mining, which can harm land and water.
4. **Reducing Climate Change:** Renewable energy helps reduce climate change because it lowers the amount of carbon dioxide and other greenhouse gases in the air.
5. **Creating New Jobs:** The renewable energy industry creates new jobs because it needs people to build, install, and take care of solar panels and wind turbines.
6. **Saving Money Long-Term:** Renewable energy can save money in the long term because, after the setup costs, the energy from sources like the sun and wind is free.
7. **Lowering Cost of Living:** Renewable energy can lower the cost of living because it can lead to lower and more stable energy prices, reducing household expenses.
8. **Using Local Resources:** Renewable energy uses local resources because it relies on natural sources available in the area, reducing the need for imported fuels.
9. **Increasing Energy Security:** Renewable energy increases energy security because it reduces dependence on imported fossil fuels, making countries less vulnerable to supply disruptions.
10. **Improving Public Health:** Renewable energy improves public health because it reduces air pollution, which can cause breathing problems and other health issues.
11. **Reducing Water Usage:** Renewable energy reduces water usage because it does not require large amounts of water for cooling, unlike fossil fuel and nuclear power plants.
12. **Promoting Energy Independence:** Renewable energy promotes energy independence because it allows countries to generate their own power using local resources.
13. **Supporting Rural Areas:** Renewable energy supports rural areas because projects like wind and solar farms can create jobs and development in these locations.
14. **Reducing Greenhouse Gases:** Renewable energy reduces greenhouse gases because it produces little to no carbon emissions, helping to combat global warming.
15. **Providing Reliable Energy:** Renewable energy provides reliable energy to areas without consistent access because it can be set up locally without needing large power plants.
16. **Encouraging New Ideas:** Renewable energy encourages new ideas because it drives the development of new technologies and solutions for generating and storing energy.
17. **Stable Energy Prices:** Renewable energy provides stable energy prices because it relies on free resources like the sun and wind, which are not affected by market changes.
18. **Reducing Dependence on Fossil Fuels:** Renewable energy reduces dependence on fossil fuels because it uses alternative sources like wind, solar, and hydropower.
19. **Supporting Community Projects:** Renewable energy supports community projects because local groups can create their own small energy systems.
20. **Promoting Sustainable Development:** Renewable energy promotes sustainable development because it meets current energy needs without harming future generations.

HMDC Elementary Debate Class (Summer 2024) - T-Chart

Topic: Switching to Renewable Energy would be desirable.

RENEWABLE ENERGY (CON): General Ideas

1. **High Initial Costs:** Setting up renewable energy sources like solar panels and wind turbines can be very expensive. The cost for technology, installation, and building everything needed is high. This makes it hard for some places to afford renewable energy.
2. **Inconsistent Energy Supply:** Renewable energy depends on natural resources like sunlight and wind, which are not always available. For example, solar power cannot be generated at night or on cloudy days, and wind power needs wind. This can make the energy supply unreliable.
3. **Large Land Requirements:** Some renewable energy projects need a lot of land. For instance, big solar farms and wind farms take up a lot of space. This can lead to conflicts over land use and may affect local wildlife and nature.
4. **Harmful Impact on Wildlife:** Renewable energy projects, like wind farms, can harm animals. Wind turbines can be dangerous for birds and bats, and hydropower projects can disrupt fish and other aquatic life. These effects need to be managed carefully to protect wildlife.
5. **Resources are Limited:** While renewable energy sources like the sun or wind are plentiful, the materials needed to make the technology can be limited. For example, special metals used in solar panels and batteries, called rare earth elements are not easy to find and can be hard to get. This can cause problems in making and using renewable energy technologies.

RENEWABLE ENERGY (CON): Specific Ideas

1. **Costing a Lot at First:** Setting up renewable energy like solar panels and wind turbines can be very expensive because the technology and installation are costly.
2. **Depending on Weather:** Renewable energy depends on the weather because solar power needs sunlight and wind power needs wind, which are not always available.
3. **Taking Up Space:** Renewable energy projects can take up a lot of space because solar farms and wind farms need large areas to work.
4. **Harming Wildlife:** Renewable energy can harm wildlife because wind turbines can be dangerous for birds and bats.
5. **Needing Expensive Materials:** Building renewable energy systems can be costly because the materials needed, like those for solar panels and batteries, are expensive.
6. **Making Noise:** Wind turbines can make noise because they create a loud sound when they spin.
7. **Changing the Landscape:** Some people do not like the look of renewable energy systems because large wind turbines and solar farms can change the way the land looks.
8. **Storing Energy:** Renewable energy needs good energy storage systems because we need to store energy for times when the sun isn't shining or the wind isn't blowing.
9. **Mining for Materials:** Mining for materials needed for renewable energy can harm the environment because it involves digging and extraction processes.
10. **Using a Lot of Energy:** Making and installing renewable energy systems can use a lot of energy because the production of solar panels and wind turbines takes a lot of power.
11. **Recycling Problems:** Recycling renewable energy equipment can be hard because some parts, like solar panels, are difficult to recycle.
12. **Stopping and Starting:** Renewable energy can stop and start because it only makes power when the sun is shining or the wind is blowing.
13. **Changing the Power Grid:** Adding renewable energy to the power grid can be tricky because it needs changes to the existing system.

HMDC Elementary Debate Class (Summer 2024) - T-Chart

Topic: Switching to Renewable Energy would be desirable.

RENEWABLE ENERGY (CON): Specific Ideas (Continued...)

14. Working Less Efficiently: Some renewable energy systems do not work very efficiently because they do not turn all the sunlight or wind into usable energy.
15. Needing Maintenance: Renewable energy systems can need a lot of maintenance because they need regular care to keep working well.
16. Transporting Energy: Moving energy from remote renewable sites can be hard because solar and wind farms are often far from where the energy is needed.
17. Needing Good Batteries: Batteries used for storing renewable energy can have limits because they can only store a small amount of energy and can be expensive.
18. Changing with Seasons: Renewable energy can be affected by seasons because some places get less sunlight or wind at different times of the year.
19. Impacting Jobs in Fossil Fuels: Shifting to renewable energy can affect jobs in fossil fuel industries because fewer workers are needed for coal, oil, and gas.
20. Depending on Technology: Renewable energy depends on technology because it needs advanced systems to convert and store energy, which can be expensive and complex.