WebQuest

Introductory Level - Fossil Fools

prepared by UPIT

GRETA

Challenge-based Learning in Primary Schools for Climate Change Awareness

Co-funded by the Erasmus+ Programme of the European Union

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WEBQUEST TITLE:	Fossil Fools
WEBQUEST LEVEL	Introductory level

INTRODUCTION

Fossil fuels are rocks of an organic nature formed during geological eras as a result of Physico-chemical transformations undergone by the residues of plant and animal organisms. Depending on the state of aggregation, fossil fuels are divided into: coal (solid state), oil (liquid state) and natural gas (gaseous state).

Fossil fuels continue to rank first in the balance of global consumption of primary resources, despite the negative environmental influences associated with their use, as well as concerns about the limited nature of available reserves.

Many human activities require the burning of fossil fuels; this leads to an increase in the concentration of carbon dioxide (CO2) in the atmosphere, causing climate change, and also to an increase in global average temperatures. Energy demand is growing globally, consolidating the upward trend in CO2 emissions.

Most countries rely on fossil fuels (oil, gas and coal) to meet their energy demand. Combustion of these fuels releases heat that can be converted into energy. In the process, the carbon in the fuel reacts with oxygen, producing CO2, which is released into the atmosphere. It also releases air pollutants (sulphur dioxide, oxides and nitrogen particles), with an impact on air quality. However, due to technical measures and developments in power and thermal power plants, the level of these emissions has declined in recent decades.

The demand for us to reduce our dependence on fossil fuels is growing and it is time to look at other alternatives. Green energy is an alternative that would be used to generate electricity in many parts of the world. You will research this topic and discuss the pros and cons of using green energy. This debate will be made to decide whether or not green energy is good for the environment, for people and for our economy.

TASKS

To learn more about green energy, search the internet. I will provide websites that you will consult to find out the pros and cons of using green energy to get electricity. The class will then hold a debate on this topic and decide whether green energy is something that would benefit our country. We will analyse its environmental, economic and health benefits and disadvantages.

Remember that this is supposed to be an activity we can learn from, but at the same time, I want you to have fun doing it, so get creative!

PROCESS

Step 1: Search and inform

To learn more about green energy, you will be researching this topic on the internet. I will provide you with websites to search from, but you can access others if you wish. You can also look in our school library for current magazines or books that might talk about green energy.

- What are fossil fuels?https://www.scientia.ro/univers/40-terra/2619-combustibili-fosili-scurta-prezentare.html
- What are fossil fuelshttps://www.youtube.com/watch?v=BYpfOKwlYS8
- Fossil fuels: types and formationhttps://www.youtube.com/watch?v=iubWN1cnwIs
- Fossil fuels: advantages and disadvantageshttps://www.renovablesverdes.com/ro/combustibili-fosili/
- Alternative energy sources:**https://vreaulanova.ro/blog/top-5-surse-de-energie-verde-la-indemana-oricui**

The three things you need to know in your research. are listed below:
1. Types of green energy
2. Advantages and disadvantages
3. Negative effects on the environment, if any

Step 2: Prepare for the debate

Once you have gathered the information and studied it (take notes, it will help you with the final grade!), I will then divide the class into teams. These teams will discuss the pros and cons of these issues.
Each team will discuss one of the forms of green energy.
The debate will take place in pairs of teams called PRO and CONS.
As the name suggests, the teams will make compelling arguments for and against green energy and fossil fuels, respectively.

Keep in mind that the more you research, the more it will help you in this debate. Remember that a good argumentum knows his facts and also knows how to present them to a group.

May the best team win !!! Good luck to all.

Please read these sites before preparing your arguments:

Student Handbook 8.2: Rules for Debate - Living Democracy (living-democracy.com)

Write a paper of maximum 1 page in which to argue (for or against) on the green energy you have chosen!

Step 3: Debate

Now that everyone has completed their research and everyone knows all about the green energy they have chosen, you will be divided into the pairs of teams we talked about earlier.

You will debate this issue as best I can in front of me and I will choose which team has argued the best.

The details of this debate will be further explained on the day of the debate, so don't worry right now.

EVALUATION

You will be evaluated according to the following criteria:

	insufficient	sufficient	good	very well	puncture
He presented the arguments in a clear and organized manner	Description of identifiable performance characteristics that reflect an initial level of performance.	Description of identifiable performance characteristics that reflect the development and tendency to master performance.	Description of identifiable performance characteristics that reflect mastery of performance.	Description of identifiable performance characteristics that reflect the highest level of performance.	
He worked well as a team					
He remained involved in the debate.					
He wrote a 2-paragraph paper that showed his / her position on the subject of green energy with supporting facts that were researched and discussed.					

CONCLUSION

At the end of this task, I hope you have learned something you did not know before about green energy and its benefits and disadvantages.

Congratulations!

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