eDynamic Learning Activity

How Successful Are Renewable Energy Technologies?

The following activity is part of our 14-day #eDLProjectShare series. The activity is extracted and modified from our high school, Renewable Technologies: Introduction course, Unit 1: Introduction to Renewable Energy Technologies.

Directions:

1. Complete the following activity. Use the rubric located below the activity to assess how you are completing each of the required components.
2. (Optional): Feel free to share your project progress or the final project with a short video or picture on Twitter or Facebook using the hashtag #eDLProjectShare @eDynamicLearning. *If you are under 18, you must have your teacher or parent or guardian's permission to post.
3. (Optional): For teachers and parents looking to use as a graded activity, a rubric worth 15 points is located at the bottom of the activity.

Activity: How Successful Are Renewable Energy Technologies

The United States and other countries are working hard to make renewable energy a reality. But it can be a trial-and-error process. Some are successful, whereas others struggle. Do some research to find one renewable energy project where its overall success (financially, socially, or ability to create sustained energy) is still in question. For example: The Ivanpah Solar Electric Generating System is the largest solar energy plant in the world. It has had several problems since going operational in 2014. It has not been generating enough electricity, and it uses natural gas as a power source when it can't generate solar power. Plus migrating birds die when they come close to the solar mirrors.

Your task is to find a similar renewable energy project and list the troubles it has been experiencing. Then propose a solution to the issue. Create a PowerPoint-type presentation with no more than 10 slides in which you provide information about the project, its successes and failures, and a proposed solution.

Your presentation should cover the following points:

- ❑ Describe the renewable energy project. Include:
  - A short history of the project
  - Where it is located
  - How much energy it is capable of generating
  - How much the power plant cost to build
  - How the renewable energy technology works

- ❑ Describe three successes the project has accomplished. Be sure to quantify these successes where applicable. For example: The solar plant has reduced the average electricity bill by 20 percent for the average customer.

- ❑ Describe five problems the project has faced or still faces. Again, quantify where applicable.

- ❑ Propose a solution for each problem. You can find examples of other projects that have successfully resolved the problem, or you can think of your own.

- ❑ Conclude.
  - Summarize the successes and problems.
  - State which you believe outweighs the other (solutions or problems). Be sure to defend this conclusion.

- ❑ List of websites that you used. Be sure that the information you gather is from reputable sources. Use government, educational, and credible not-for-profit sites. These will have extensions of .gov, .edu or .org. You can also use the websites from the company you are basing your presentation on. You can use news websites to gather information.

- ❑ Submit your finished presentation.

Rubric: How Successful Are Renewable Energy Technologies?

TABLE Grading Rubric

	PowerPoint (80%)	Mechanics (20%)
Full Credit	• Relevant information is included. • Presentation thoroughly describes the project without unnecessary information. • Presentation presents each success point succinctly but thoroughly. • Presentation presents each problem succinctly but thoroughly. • Presentation has a sound solution for each problem with enough description to convince the reader of its practicality. • Slides have relevant, quantifiable information that supports the arguments. • Conclusion states the author's opinion with facts that back up the concluding statement. • Final slide includes list of appropriate websites.	• Slides are largely free of mechanical errors. • Slides are well organized and easy to read.
Partial Credit	• Most relevant information is included. • Presentation leaves out some details or includes some unnecessary information. • Presentation has solutions that are sound but insubstantial for each problem, or there is insufficient information to convince the reader of its practicality. • Slides have quantifiable information, but one or more of these quantifiable pieces may not be relevant or may not support the information. • Conclusion states the author's opinion but may not have enough factual information backing up the concluding statement. • Final slide includes list of websites. One may not be reputable or may be missing.	• Slides contain some mechanical errors. • Most slides are well organized and easy to read.
Little Credit	• Little relevant information is included. • Presentation leaves out substantial detail or includes too much unnecessary information. • Presentation has unsound solutions, or there is insufficient information to convince the reader of practicality. • Slides have little or no quantifiable information. • Conclusion does not state the author's opinion, or there is very little information to back up the concluding statement. • Final slide includes list of websites, but two or more are not reputable.	• Slides contain many mechanical errors. • Few slides are well organized and easy to read.