Power Surge Video Worksheet Name_____Per: ____

http://www.youtube.com/watch?v=m66BDGXZwRo

1. What is Sir Richard Branson's personal dilemma?

2. How much of the U.S.'s electricity is provided by coal? _____

3. Where did coal originate? _____

4. What is the wedge theory?

5. How many technologies are available today capable of solving 1/7 of the problem? _____

6. Name the 4 categories of technologies capable of solving the problem

a. b. c. d.

7. Name the Earth Challenge judge sitting next to Branson: _____

8. What is Lackner's idea?

9. What % of the demand for Energy do fossil fuels feed? _____

10. What is happening in In Salah, Algeria?

11. How many tons of carbon does the average family output per year in energy consumption?

12. Why don't we use more solar power?

13. What is Secretary Chu's goal by 2035?

14. What fraction of total Energy use is transportation? _____

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15. What makes biofuels such a viable option compared to others?

16. How much $ does the National Archives save each year in energy costs since their retrofit?

17. How many years will it take to recover the costs of the upgrades at the National Archives?

18. If we replaced all 30 mpg cars with_____mpg cars, that would be one wedge.

19. How many coal power plants would we have to replace with nuclear power plants to equal one wedge in the wedge game?

20. How many new nuclear power plants have been built in the U.S. since 1970?

21. How many new nuclear power plants are planned to be built in China over the next 30 years?

22. 1 Nuclear Power Plant =_____wind turbines =_____square miles of solar panels

23. Which "wedge(s)" and how many of each would you use?

Green: Efficiency Increases *Blue: Cleaning the combustion process of coal*
Red: Harnessing the Sun's energy (wind, solar, etc.) *Yellow: Nuclear Power*

24. Do you believe that technology can save us from climate change? Are things as bad as they seem? Or are we far gone from effectively reducing our carbon emissions?

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