Electricity Generation Mr. Stewart

Physical Science November, 2012

1. Most U.S. electricity is generated using fossil fuels. Name three types of fossil fuels.
	1.
	2.
2. What is electricity? How is it generated and sent to your home?
3. What is an electric current?
4. How is a turnpike toll booth like an electric current?
5. What is the formula for generating electricity?
6. Rotating a coil of wire through magnetic fields creates what?
7. If you have a magnetic field and copper wire, what must happen to generate electricity?
8. How do electricity generators work?
9. When electricity is generated, what is the most effective way to send it to your home?
10. What causes electric motors to spin?
11. Why are fossil fuels called fossil fuels?
12. How are fossil fuels converted into electricity?
13. What is released when fossil fuels are burned?
14. What causes a turbine to turn?
15. How long does it take to create fossil fuels?
16. How much electric power does a standard large power plant provide?
17. What was total world oil production in 2009?
18. After steam turns a turbine, what must the turbine turn to generate electricity?
19. How efficient is hydroelectric power at converting potential energy to electricity?
20. How much of the U.S. electricity is produced by hydroelectric power?
21. Name 5 problems with hydroelectric power in the U.S.
	1.
	2.
	3.
	4.
22. How is uranium used to generate electric power?
23. What happens in a nuclear power plant once uranium atoms have been split?
24. What percentage of U.S. electricity comes from nuclear power plants?
25. What are two purposes of using water in a nuclear power plant?
	1.
26. Name 4 potential hazards in using nuclear power.
	1.
	2.
	3.
27. Name three other types of renewable energy.
	1.
	2.
	3.
28. How does a photovoltaic cell work?
29. How does wind or moving water generate electricity?
30. How efficient can wind-generated electricity be?
31. What are 5 key issues with using wind generated electric power?
	1.
	2.
	3.
	4.
	5.
32. Name 5 more types of renewable energy.
	1.
	2.
	3.
	4.
	5.
33. How much of the world’s electricity was produced using fossil fuels in 1997?
34. What is the fundamental cause of electricity?
35. What are free electrons?
36. What creates an electric current?
37. What is the difference between conductors and insulators?
38. What is a semiconductor?
39. What is a complete electric circuit?
40. What is the difference between an open and a closed circuit?
41. What is a series circuit?
42. What is a parallel circuit?
43. What is static electricity?