P1 Topic 2 Generating Electricity

Fuels	
1. Name 3 fossil fuels	Coal, oil, gas
2. Name 3 biofuels	Wood, straw, nutshells, ethanol
3. Name 2 nuclear fuels	Uranium, plutonium
4. What do we do with fossil fuels to release heat?	Burn them
5. What do we do with biofuels to release heat?	Burn them
6. What do nuclear fuels do which releases heat?	Nuclear fission
Power stations and the National Grid	
7. Why is heat needed in a power station?	To turn water into steam
8. Which part of a power station turns?	Turbine (and generator)
9. Which part of a power station makes electricity?	Generator
10. How does electricity get from the power station to consumers	National Grid
11. What makes up the National Grid	Pylons, cables and transformers
12. What does a step up transformer do?	Increases voltage, decreases current
13. Where are step up transformers found?	Start of the National Grid
14. Where are step down transformers found?	End of the National grid
15. Why are step up transformers needed?	To decrease the current so less energy is lost in the National Grid
16. What does a step down transformer do?	Decreases voltage, increases current
Types of power station	
17. Name 3 ‘things’ which can turn a turbine	Steam, water, air

18. Name 3 types of power station which use water to turn the turbine	Waves, tidal, hydroelectric
19. Name the method which uses air to turn the turbine	Wind turbines
20. Name 4 types of power station which use steam to turn the turbine	Fossil fuel, nuclear, biofuel, geothermal
21. How can we use radiation from the Sun to generate electricity?	Solar panels/ solar cells
22. Which type of power station makes water flow down a mountain and then through a turbine?	Hydroelectric
23. Which type of power station pumps water into the ground so it is turned into steam to rise to the surface and turn a turbine?	Geothermal
24. Where are geothermal power stations located?	Volcanic areas
25. State 2 methods of generating electricity which can be useful in remote areas	Hydroelectric (if there are mountains) and solar (if it is very sunny)
Advantages and disadvantages of power stations	
26. Which power stations release carbon dioxide?	Coal, oil, gas
27. Which power stations release sulphur dioxide?	Coal, oil
28. Which power stations produce radioactive waste?	Nuclear
29. Which power stations are noisy	Wind, hydroelectric, tidal
30. Which power stations make visual pollution	Could say all, especially wind, hydroelectric
31. Which power stations destroy habitats?	Could say all, especially tidal, hydroelectric, wind,
Carbon capture	
32. What is it called when we collect and store carbon dioxide?	Carbon capture
33. Why do we want to collect carbon dioxide?	To stop it increasing in the atmosphere (causes global warming)
34. Where can we store carbon dioxide?	Old oil/ gas fields
35. Give an example of where old old/ gas fields are found	Under the North Sea