P1 – Energy Quiz

1. What is a renewable energy source?

2. Give examples of renewable energy sources.

3. How does the step-up transformer increase the efficiency of the National Grid?

4. Explain one effect burning fossil fuels has on the environment.

5. Pumped storage hydroelectric power stations have a short start-up time. Why is this important?

6. Give an advantage of a pimped storage hydroelectric power station.

7. Using mainly wind turbines to supply electricity might cause fluctuations in the electricity supply. Why?

8. Between 2002 and 2008 the amount of electricity used in the UK decreased. Suggest why.

9. Although gas boilers are very efficient, some energy is wasted. What happens to this waste energy?

10. Give a disadvantage of a large scale hydroelectric power station.

11. What is the National Grid?

12. Why is transferring electricity directly to local homes more efficient than using the National Grid?

13. A solar cell can be used to recharge a mobile phone. Suggest and explain one factor that would affect the charging time.

14. What are the advantages of using solar cells instead of fossil fuel power stations to generate electricity?

15. Fitting a new hot water boiler costs £1800 but saves £200 per year. What is the payback time?

16. Explain why using an energy efficient light bulb rather than an ordinary light bulb reduces carbon dioxide emissions.

17. Give two advantages of burning wood instead of coal.

18. Why do wood burning stoves have a large surface area?

19. Do you agree with the statement that 'replacing old freezers with more energy efficient freezers' benefits the environment?

20. How do you reduce energy loss from the loft/ roof?

21. How do you reduce energy loss from the walls?

22. How do you reduce energy loss from windows?

23. How do you reduce energy loss from doors?

24. Why are electricity companies selling electricity at night at a lower rate?

25. Leaving a 1kW radiator switched on for the same length of time as a 40W lamp is worse for the environment. Why?

26. What is meant by the word efficient?

27. Give examples of stored energy.

28. Why must the total energy input equal the total energy output?

29. Name the useful and wasted energy output from a hair dryer.

30. Name the useful and wasted energy output from a TV.

31. What does it mean to decommission a nuclear power station?

32. How could companies reduce CO_2 emissions?

33. Give the advantages of using nuclear power.

34. Give advantages and disadvantages of tidal power generating systems.

35. Give advantages and disadvantages of wind power.