Chemical energy

Reactions 3.6.3 | Part 2, usually Year 8 | 20 quick questions

KS3 science quick questions

Answer online, marked instantly

Activate 1: Reactions; Activate 3: Chemical changes | Exploring Science 8E

Name: _____ **Date:** _____ **Score:** _____ **/ 20**

1 What word describes a reaction that gives out heat energy to the surroundings?

2 What word describes a reaction that takes in heat energy from the surroundings?

3 Logs burning on a campfire warm up the people sitting around it. Is burning exothermic or endothermic?

4 During an exothermic reaction in a beaker, does the temperature of the liquid increase or decrease?

5 A sports injury cold pack is squeezed and it quickly feels cold. Is the change inside exothermic or endothermic?

6 Plants take in energy from sunlight to make glucose. Is this reaction exothermic or endothermic?

7 What is the name for a substance that speeds up a reaction without being used up?

8 At the end of a reaction, is a catalyst used up? Answer yes or no.

9 Your body speeds up digestion using special proteins that act as catalysts. What are these called?

10 When bonds between atoms are broken, is energy taken in or given out?

11 When new bonds between atoms are made, is energy taken in or given out?

12 Which piece of equipment would you use to measure the temperature change during a reaction?

13 A reaction starts at 20 °C and ends at 28 °C. By how many degrees has the temperature changed?

14 A reaction starts at 21 °C and ends at 15 °C. Is the reaction exothermic or endothermic?

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15 Melting ice takes in energy but no new substance is made. Is it a chemical reaction or a physical change?

Year 9 stretch

16 In an exothermic reaction, do the products have more or less stored chemical energy than the reactants?

17 In a reaction, breaking bonds takes in 500 kJ and making new bonds gives out 700 kJ. How much energy is given out overall, in kJ?

18 In another reaction, breaking bonds takes in 900 kJ and making bonds gives out 600 kJ. Is this reaction exothermic or endothermic?

19 A match will not light until you strike it. What is the name for the smallest amount of energy needed to start a reaction?

20 Explain why factories that make chemicals often use catalysts.

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