Energy costs

Answers

KS3 science quick questions

This topic online

Activate 2: Energy | Exploring Science 7I

Q	Answer	Remember
1	joule	All energy, from food to fuel, can be measured in joules.
2	kJ	kJ means kilojoules - thousands of joules.
3	1000	Kilo always means a thousand, as in kilogram and kilometre.
4	transferred	A powerful appliance transfers lots of energy every second.
5	watts	One watt means one joule transferred every second.
6	1000 W	A 2000 W kettle can also be written as 2 kW.
7	kWh	One kWh is the energy used by a 1 kW appliance in 1 hour.
8	energy = power × time	Use kW and hours to get the answer in kWh.
9	6 kWh	2 kW × 3 h = 6 kWh.
10	180p	Cost = energy × price per kWh: 6 × 30 = 180p.
11	0.1 kWh	Short bursts of a powerful appliance do not use much energy.
12	60 W lamp	Higher power means more energy every second, so a bigger bill.
13	fossil fuels	They took millions of years to form underground.
14	non-renewable	Non-renewable: once it is used up, it is gone for good.
15	solar	Renewables are topped up naturally, so they will not run out.
16	0.5 kWh	Change to kW and hours first: 2 kW × 0.25 h = 0.5 kWh.
17	168p	Two steps: 3 × 2 = 6 kWh, then 6 × 28 = 168p.
18	30p	100 W is 0.1 kW, and 0.1 × 10 = 1 kWh, which costs 30p.
19	10	9000 ÷ 900 = 10 - which shows why a balanced diet matters.
20	They take millions of years to form, so we are using them up far faster than they are made and they will run out.	Non-renewable does not mean useless - it means limited.

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