



## Lesson 4

Today you will using percentages to explore the financial implications of investing in renewable energy.

What are renewable energy source? What are they better for the environment?

What is a percentage? Can percentage be recorded as a fraction? If so please write down an example.

$35\% \times 120$  and  $35\%$  of  $120$

Discuss the difference.

Where would 35% go?



*Hint: think about where 50% and 25% would go.*

What is 35% of 120?

According to Energy UK, renewable energy uses natural energy to make electricity. Examples include wind, wave, hydro, biomass and solar.

By installing solar panels in an average home, some homeowners could save 25% on their energy bills. If an average household spends £1300 per year on electricity, how much would they save by installing solar panels?

A farmer has invested in 5 wind turbines to go on his fields. Each wind turbine saves the farmer 8% on his energy bills. If the farmer currently pays £1550 for his energy, how much will he save once the wind turbines have been installed?

By installing solar panels, Fin is likely to save an average of 13% on his annual bill of £650. His friend Sam has also installed solar panels and is likely to save an average of 27% on his annual bill of £850. After the deductions, who will be paying the least for their energy?

Reducing a £450 energy bill by 16% results in a lower cost than reducing a £500 energy bill by 20%. True or false?

Two rival companies using wave energy are competing to secure a deal with the Coastguard. Currently, the Coastguard pays £3600 per year for their energy. Company A is promising a 30% reduction in the cost of energy whereas Company B is promising a saving of £900 per year. Which company is offering the cheapest deal?

A farmer has noticed that her energy bill last year was £4000 but since installing wind turbines on her farm, her energy bill is now £3000. How could this reduction be recorded as a percentage?

### Extra Questions

List the major renewable source of energy we can use on UK? *Think about what you have seen when travelling on the bus or when at the beach.*

Previously you may be worked out have many your household energy usage was. How many money could you save if you installed solar panel which saved 15% on you electricity bill?

How could you save energy around your school? What type of renewable energy could you install?