

Activity: School energy audit

In this activity, pupils conduct an energy audit and identify places where energy savings could be made.

The purpose is not to do a comprehensive audit, it is investigate use in the school and identify inefficiencies, patterns and trends.

What to do

Identify fuel sources

1. Introduce the topic of fossil fuels using this [BBC Bitesize video](#). As a class, compile a list of the energy sources named in the video.
2. Identify the fossil fuels on the list and confirm that pupils understand that burning fossil fuels releases carbon dioxide, a greenhouse gas that contributes to ocean warming and acidification.

Most of the world's energy is created by burning fossil fuels. In the UK, we've been improving the amount of energy generated from renewables, but about 43% of energy is still generated from fossil fuels. Reducing energy use will reduce the amount of carbon dioxide emitted into the atmosphere.

Carry out an energy audit

1. Using the [school energy audit template](#) as a guide, create an audit for your school. The aim is to identify areas for improvement.

Your school's business manager is usually responsible for energy bills in the school and may be able to support this activity. The premises manager will know about thermostats for heating and water, types of light bulbs and how to take meter readings.



Energy supply was responsible for 24% of the UK's carbon dioxide emissions in 2020

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What to do (continued)

2. Divide pupils into groups and allocate a different area of the school to each group.
3. Audit everywhere – classrooms, staffroom, the hall, offices, corridors, playground. Ask catering staff to help audit the kitchen.

Analyse the results

It's important to emphasise that this is not an exact science!

1. Discuss what everyone observed on the audit. Were there any obvious trends and themes, such as lights and screens on in empty rooms, overheated rooms with windows open, cold rooms with radiators on? Were there areas of the school that were particularly wasteful?
2. Identify patterns in the overall meter readings. Was consumption higher on particular days of the week? How did weekend consumption compare with school days? Why is energy being used at a weekend?
3. Discuss barriers to reducing energy use. Most people know that switching off lights and computers benefits the environment. Why don't people do it?

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Preparing for Step 3

In Step 3 you will carry out an action project to fight climate change. You could choose to reduce the school's energy consumption. Pupils would work together to persuade school management, staff and pupils to save energy.

If you choose to do this, prepare by looking back at the survey results. Create a table and note the main ways the school is wasting energy in the left column. As a class, think of ways the school could prevent this waste. Note these in the right column.

The aim of your action project will be to stop energy waste in school. Pupils will work in small groups and focus on one area of waste. All groups could focus on the same area, or each group could tackle a different area of waste.

You can carry out the project in the way that best suits your school's circumstances. Our pupil [workbook for reducing school energy use](#) provides one possible approach.

Energy waste	What we could do to save energy

School Energy Detectives

Remember to be observant. Look everywhere for energy use – above your head, on the floor, behind you. Energy is being used everywhere!

Where are you in school?

What time are you carrying out your survey?

Which of the following can you see? Are they on or off, and is any energy being wasted?

Item	How many?	On?	Off?	Power save?	Is any obvious energy wastage taking place?
Ceiling light bulbs					
Ceiling strip light/panels					
Desk lamps					
Desktop computer and screen					
Laptop					
Printer					
Interactive whiteboard screen					
Interactive whiteboard projector					
Radiator					
Fan heater					
Fan					
Fridge					
Photocopier					
Other:					
Other:					

Can you see any of the following energy saving devices?

Item	Yes?	No?
Room thermostat		
Radiator thermostat		
Heat reflectors behind radiators		
Double or triple glazing		
Draft excluders around doors or windows		
Insulation around pipes		
Motion sensors for lights		

Please make notes here:

Meter readings

Try to log at the same times each day. For the weekend, take the reading at the end of the day on Friday and on Monday morning.

Which meter?

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Day	Start of day reading	End of day reading	Amount consumed
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Weekend			