Energy Sparks

Helping schools fight climate change

Online, school-specific energy management tool and energy education programme

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Energy Sparks is a registered charity in England and Wales, registration 1189273.

Cost effective ways to manage and reduce energy consumption

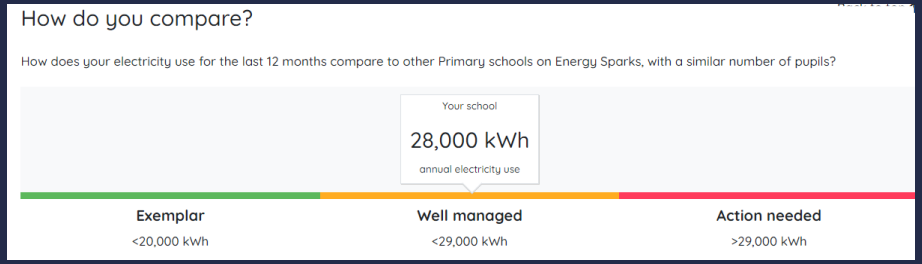
- Information – knowledge is power
- Energy hierarchy
- Electricity
- Heating
- Teamwork & Pupil Pester Power

Information – knowledge is power

- Understand your energy consumption
  - Data supplier energy package
- How do your schools compare?
  - To each other
  - To national standards

- Know how to prioritise
  - Easy wins
  - Energy hierarchy
  - Strategic importance

https://energysparks.uk/compare



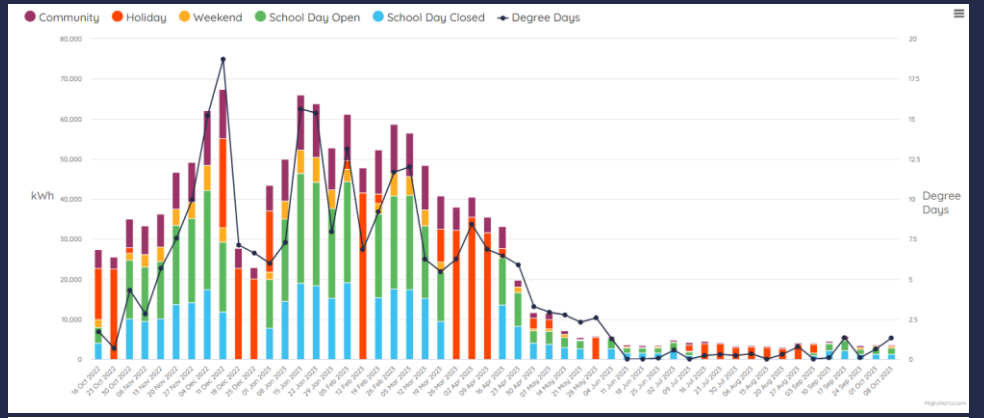
Change units: ○ % Change ◉ Use (kWh) ○ Cost (£) ○ CO2 (kg)

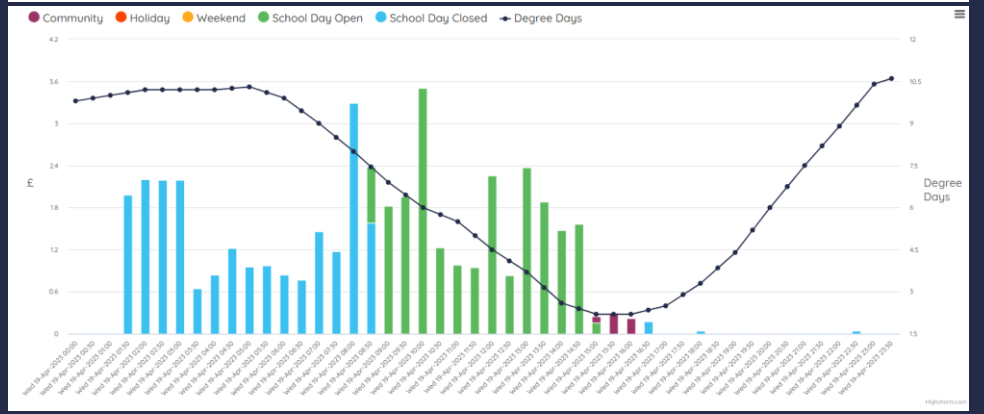
	Electricity		Gas	
School	Last week	Last year	Last week	Last year
Pembroke Dock Community School	4,490	211,000	6,670	580,000
Portfield Special School	2,940	147,000	7,420	503,000
Prendergast Primary School	2,980	129,000	2,890	215,000

Information – knowledge is power

More than 60% of school energy use is outside of school hours

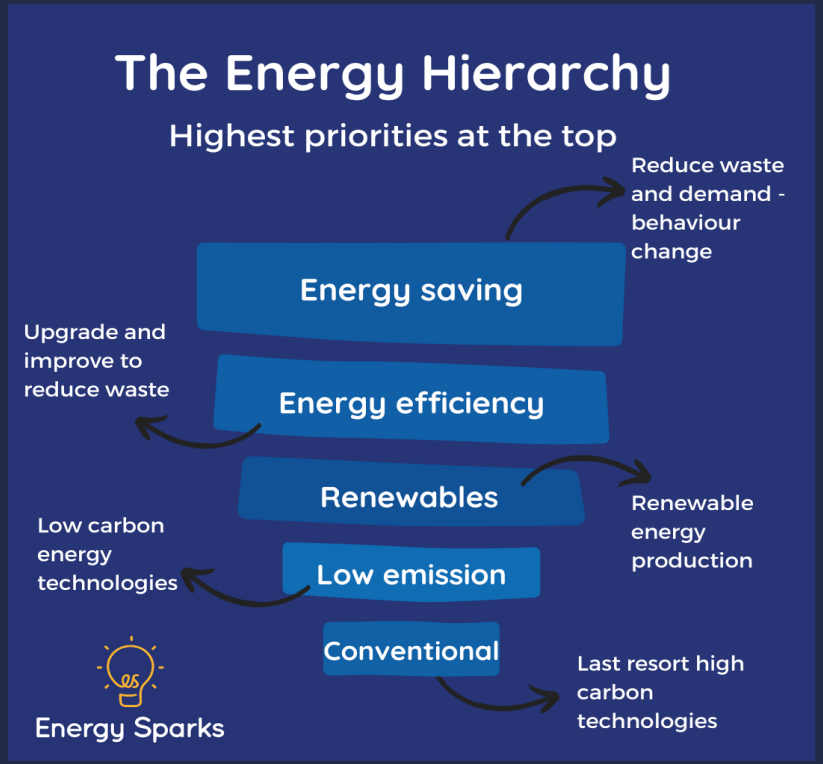
- When is it used?
  - Daytime / night time
  - Term time / holidays
  - Weekdays / weekends
- Is your energy consumption what you would expect?
  - Does your boiler come on when you think?
  - Is your overnight electricity consumption higher than expected?





Energy Hierarchy

1. Reduce waste first
2. Improve energy efficiency of buildings and equipment
3. Install renewable energy production
4. Install low emission technologies
5. Install conventional technologies



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Free: saves money immediately

Spend to save: sometimes payback can be very fast

Energy efficiency priorities

Electricity

- More expensive = bigger savings
- Lower carbon emissions = smaller impact on carbon footprint
- Used all over the school
- Used by lots of people
- Often more complex to reduce

Gas

- Cheaper = smaller savings
- Higher carbon emissions = bigger impact on carbon footprint
- Mainly only used for hot water and heating
- Controlled by small number of people
- Often simple to reduce

Electricity

Reduce consumption outside of school hours

- Find your big electricity users
  - Fridges / freezers / servers / heating / air conditioning / kitchen equipment
- Learn what can and can't be switched off and why
  - Security lighting / ICT equipment / Ventilation / Electric heating
  - Fridges / freezers can be consolidated
- Find the best way to make sure things are switched off
  - Check lists / Job descriptions / Pupil energy monitors
  - Automation
- Consider energy consumption when purchasing new equipment

Heating / hot water

- Understand your heating system
  - How is it controlled?
    - What / when / how / who
  - Is training required?
  - Is it doing what you think it's doing?
- What happens when the school is closed?
  - Holiday mode
  - Frost control
  - Hot water
- Reducing the temperature by 1°C will reduce heating bills by up to 10%

Guidance temps

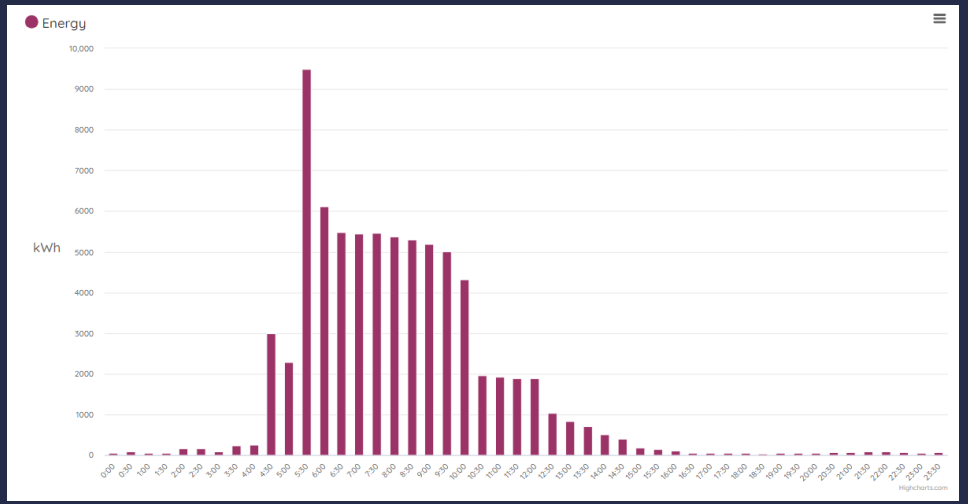
- Normal classrooms: 18°C
- Corridors: 15°C
- Areas with high levels of activity (e.g. sports halls): 15°C
- Areas with low levels of activity: 21°C
- Special needs schools or areas with very young children: 21°C

https://www.gov.uk/government/publications/energy-efficiency-guidance-for-the-school-and-fe-college-estate/energy-efficiency-guidance-for-the-school-and-further-education-college-estate

Heating

Reduce consumption outside of school hours

- Switch on ~1 hour before school opening. Switch off ~½ hour before closing.
  - Experiment to find the sweet spot
  - Use optimum start time if you have it - test to make sure it works.
- Thermostats
  - Where are they?
  - Who can change them? Lock them?
  - Are they regularly monitored?
- Get a policies in place
  - Temperatures
  - Additional heaters
  - Keeping windows and doors closed
  - Stand firm



Teamwork and Pupil Pester Power

- Not one person's job
- Communication
- Policies
- Job roles
- Check lists
- Competitions

- Pupils are a powerful tool
  - Checking
  - Monitoring temperatures
  - Reminding staff
- Pupils learn valuable life skills
- Pupils learn they can affect change
- Reduce eco anxiety

Find the thing that works for your school

Thank you

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https://energysparks.uk/enrol

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Helping schools save energy