Energy Sparks

Helping schools fight climate change

Running an energy saving project with your pupils and students
Teacher guidance

Energy Sparks is an energy management programme for schools. We provide an online energy management tool designed to use insights from school energy data to empower pupils and school staff to take action to reduce energy bills and carbon emissions, while educating pupils and the whole school community about energy and climate change.

To support pupils and students to take action to reduce the energy used by their schools we have created a range of activities that they can carry out independently or with support/collaboration from school staff.

Pupils and students have the opportunity to build skills in:

- Analysing data, making sense of graphs, spotting patterns and anomalies in data
- Monitoring, reporting and asking questions
- Taking action, designing campaigns, being creative and problem solving
- Building relationships, forming teams, communicating with a range of audiences

In this teacher's guide you will find information about:

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Thank you for your engagement with Energy Sparks.
We hope you and your pupils enjoy being part of it.

Project brief

The purpose of this project pack is to support groups of students and staff to engage more deeply with energy efficiency work in your school.

Pupils/students are supported to take action on two energy issues in the school by working their way through two short programmes of activities described as “challenges”.. The first programme focuses on general electricity consumption in their school and promotes turn-it-off behaviour. For the second programme, pupils/students have a choice of gas heating or electricity use programmes to work on. This will either continue to develop turn-it-off behaviour or will involve pupils/students working with staff members to encourage operational changes.

Before choosing their second programme, they will have the chance to develop or improve the skills needed to create lasting change in their school.

Project Duration

The project is designed to last two terms - one term for the Get Energised programme and one term for the second programme. Each programme contains several activities; these do not need to be carried out one per session. You can complete several activities in one session whereas others may need to be completed over a number of days.

This project will introduce your pupils/students to all aspects of working with Energy Sparks.

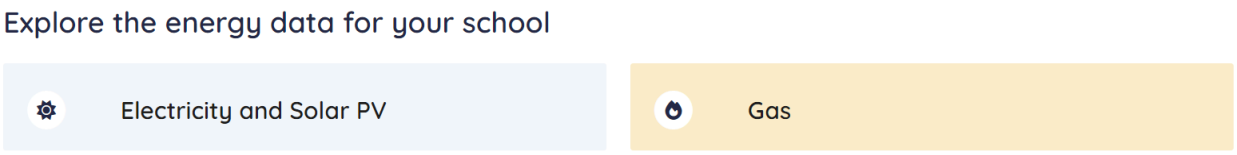
Although the electricity based programmes can be conducted all year round, the heating based programmes are best conducted from terms 2 to 4 when school heating is generally on.

Familiarising yourself with Energy Sparks

Don’t worry if you’ve never used Energy Sparks before. Energy Sparks is an easy-to-use tool that aims to tell you clearly where your school is wasting energy and how you can fix this.

Book onto a free online training session, visit our help pages or watch one of our short how to videos. Our staff are also available for support and advice and can be reached at support@energysparks.uk.

A good place to start is by exploring the charts linked from the pupil dashboard.



You can do this on your own at first or with your pupils/students. Why not set them some simple tasks to help them to familiarise themselves?:

- Find out how much money your school spent on electricity on Christmas Day
- Find out how much Carbon Dioxide is produced by the gas burnt during weekends in your school, and what percentage of all gas use is that?
- Look at energy use over the last seven days and see if there is anything that surprises you. For example, are there any unusual peaks? Does the morning increase in energy use happen when you would expect it to? What might be causing these things?

While completing the programmes, make sure you record your activities on the Energy Sparks website. This creates a useful reminder of the actions that you've taken that can be invaluable for sustainability accreditations such as Eco Schools or as evidence for your school's climate action plan. You will also score points that might win you prizes at the end of the academic year. Watch this video to find out more.

Project roadmap

- Key messages
- Pupil/student resources
- Challenge 1
- Challenge 2
- Sharing your work with a wider audience
- What's next?

Key messages

- Anyone can create meaningful change
- Simple activities can have a big energy saving impact
- We can work together to make a huge difference to our school and our planet

Pupil/student resources

Here are a few useful links:

- Video introducing Energy Sparks
- Video on using the pupil dashboard
- All programmes
- Useful supporting videos
- Other activities

This project is just a starting point and all activities are suggestions rather than directives. Your pupils/students are invited to develop their own responses and ideas for taking action on these issues in their school.

Challenge 1 - Get Energised campaign



This programme looks at establishing an Energy Team, learning how to analyse Energy Sparks energy consumption data from their school and taking action. It will also show your pupils/students how to use the Energy Sparks platform.

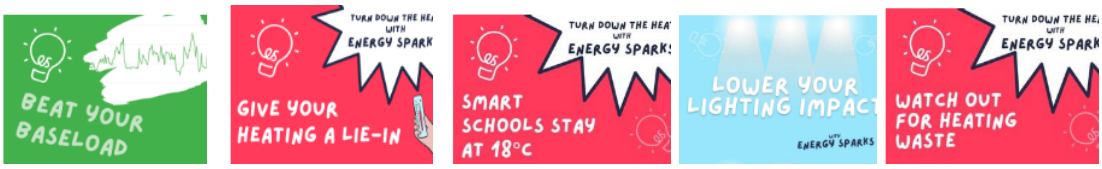
Activities are:

1. Recruit your energy team
2. Analyse school energy use
3. Set a target for electricity reduction
4. Investigate where the school is wasting electricity
5. Make a change in the turn-it-off habits of staff and pupils
6. Communicate the importance of energy efficiency and share your actions with a wider audience
7. Recruit more pupils/staff to help with energy efficiency
8. Review the data to see if you've made an impact and reflect on your work so far

As well as these, we would recommend that pupils/students also Find their Energy Allies, school staff who are well placed to make the operational, behavioural or leadership changes that effective and lasting energy saving change will require.

Challenge 2

The second challenge is one that your pupils/students will choose for themselves. Our suggested challenges focus on electricity (lighting/baseload) or gas (heating) reduction.



Beat your baseload

This programme involves analysing your school baseload (the electricity that is needed to power items that keep running at all times) and investigating the energy consumption of various appliances in the school.

This would be a great project to identify faulty or costly appliances, especially if your school has many older appliances. Due to the need to access appliances, parts of this programme will need adult supervision.

This involves:

1. Understand your schools baseload
2. Complete a baseload audit
3. Use appliance monitors to understand the energy use of individual appliances (*you will need to purchase an appliance monitor for this. These are available for approximately £10-£15 from online retailers.*)
4. Create a holiday switch off list
5. Appoint pupil monitors
6. Carry out a spotcheck to see if lights and electrical items are left on after school
7. Review and reflect

Heating waste programmes

There are three programmes that look at cutting heating waste in schools: Give your heating a lie-in; Smart schools stay at 18 degrees; and Watch out for heating waste.

The average school uses between 60% to 70% of their gas outside of school hours. Tackling heating waste in your school is usually a very quick and simple process that will have an immediate impact on your carbon emissions and energy costs. **These programmes are best carried out between October and Easter when your school heating is operational.**

All programmes involve working with the School Caretaker or Site Manager. If you don't have an onsite caretaker you may want to talk to the Estates Team or Energy Manager at

your Local Authority or Multi Academy Trust. (If you do not know who this is, contact your school Business Manager. Energy Sparks may also have their details.)

These programmes involve:

Give your heating a lie in

- Investigate the school's thermostats
- Review heating timings
- Talk to the school caretaker about improving heating controls
- Work with the caretaker to change the morning start times
- Measure classroom temperatures
- Review and reflect

Smart schools stay at 18 degrees

- Put thermometers in each classroom
- Measure classroom temperatures
- Turn the school heating down by 1 degree
- Review and Reflect

Watch out for heating waste

- Investigate the school thermostats
- Review heating timings
- Talk to the caretaker about turning heating off during the school holidays
- Review and reflect

The Smart Schools and Heating Waste programmes are quick and simple but address common problems in schools. Tackling these can make a huge difference to your school's energy consumption.

Lower your lighting impact

This programme can be used both by schools which have had their lighting updated to LEDs and by schools that still have old lighting as it looks at behaviour as well as auditing facilities.

As lighting is only one aspect of electricity consumption, the impact of your work might not be as visible in the data as other programmes. However, this programme can have a definite effect on energy behaviour and can influence the wider school community through improved lighting use habits at school.

This programme involves:

- Conduct a lighting audit
- Monitor light levels
- Label lights and appliances to show which should be left on or turned off
- Plan and run a campaign to switch off lights and use natural light on sunny days
- Talk to the school business or estate manager about improving the efficiency of school lighting

Sharing your work with a wider audience

Our Challenge 2 programmes don't explicitly include an activity on communicating the action your pupils/students are taking but this remains an important element of pupil/student energy work.

Please do get into the habit of including energy news and sustainability issues in your school newsletters, social media, staff meetings and assemblies so that everyone in the school community can be inspired and encouraged by the work your pupils/students are doing. Your local newspaper or Trust marketing team may also be interested in hearing about the changes your pupils/students have been making.

What's next - think big!

Your Energy Team might want to plan a campaign or event to mark the completion of the two challenges. This might be:

- A switch off day
- A no energy hour
- A Layer Up Power Down Day

These are fantastic opportunities to involve the whole school community in saving energy across the school. You can find information and guidance on these on the Energy Sparks website.

Encourage your pupils/students to look at all the activities that Energy Sparks suggests for eco teams and classes. All of our activities have follow-on activities for your pupils/students to explore. The Energy Sparks Pupil Dashboard also suggests suitable activities based on our automatic analysis of your energy consumption.

Support

Through this project, pupils and students may be working with staff across the school estate, such as teaching staff, business managers, estates staff/caretakers and others. Before beginning the project you may find it helpful to hold a meeting with these staff or to point them towards the Energy Sparks user videos at Energy Sparks - YouTube.

You can also reach out to Energy Sparks staff for support throughout this project and beyond. Email support@Energysparks.uk for any questions or support requests.

Optional additional support

Many schools find that parent/carer/community volunteers can offer fantastic support to pupil Energy Teams. These volunteers might also bring a valuable perspective to your pupils in problem solving, project management or energy efficiency work.

Energy Sparks workshops

Many schools are eligible for funded Energy Sparks workshops. Education workshops can include:

- Assemblies
- Eco-team and class workshops
- In-person training on using Energy Sparks for eco-team leads, estate staff and business managers.

We will work with your school to deliver a workshop that meets your school's needs and interests. Sessions can include:

- Energy warriors: Introduce your pupils/students to the energy we use in our homes and schools
- Our school, our climate: Learn about how the small changes we make in our school can affect the climate
- Energy detectives: Learn how to conduct an energy audit and identify energy guzzlers around the school
- Spot what's hot: Learn how to analyse heating charts and explore temperature and heating in your school using a thermal imaging camera

Book a workshop by completing the form at https://energysparks.uk/education-workshops