



2018/2019 School Year

Newsletter 2 – 24th October 2018

We need to act now to keep global warming below 1.5°C!

Earlier in October the Intergovernmental Panel on Climate Change published their latest report on the state of the planet. Their study describes the impacts and possible methods of keeping temperatures from warming by more than 1.5°C above pre-industrial times. The report points out the differences between allowing temperatures to rise towards 2°C above pre-industrial times, or keeping them nearer to 1.5°C.

A half a degree doesn't sound like much but whether it is coral reefs, crops, floods or the survival of species, everyone and everything is far better off in a world that keeps below 1.5°C. By 2100, global mean sea level rise will be around 10cm lower for warming of 1.5°C compared with 2°C. This could mean up to 10 million fewer people exposed to the risks of rising seas.

The report emphasises that we can all help to reduce climate change. Cutting energy demand by using less of it is a highly effective step. Further information and short video clips on the report, climate change and its impacts can be found at:

<https://www.bbc.co.uk/news/topics/cmj34zmwm1zt/climate-change>

Kick start a new year with Energy Sparks by discussing the report and what it means for us all with your pupils. You can record your work on this activity on the Energy Sparks website against activity:

Pupils learn where energy comes from and its impact on the environment

https://www.energysparks.uk/activity_types/1

Freshford Energy Sparks team visit 10, Downing Street



Last week, Energy Sparks Project Manager, Claudia Towner and members of the Freshford School Energy Sparks team attended a Green Great Britain Week Reception at 10, Downing Street to learn more about climate change and how they can help protect our environment. Energy Minister The Rt Hon Claire Perry MP opened the reception and then the pupils took part in an interactive session with Operation Earth, a national programme delivered by the Natural Environment Research Council, to engage, inspire and involve school-age children with world-leading environmental science research. The Freshford children, joined pupils from two other schools to

become trainee environmental scientists to help investigate environmental problems with the Earth's land, air and oceans.

After a short break to enjoy refreshments in the opulent surroundings of the Downing Street reception rooms, the pupils learnt about Pavegen pavements which capture the energy of footsteps to power lightbulbs. Inventor, Laurence Kemball-Cook inspired pupils to think how they could be the inventors of the future designing products and technology that help the planet.



Finally pupils had the chance to try out some environmental experiments related to the Operation Earth show.



Pupils review energy usage charts

https://www.energysparks.uk/activity_types/58

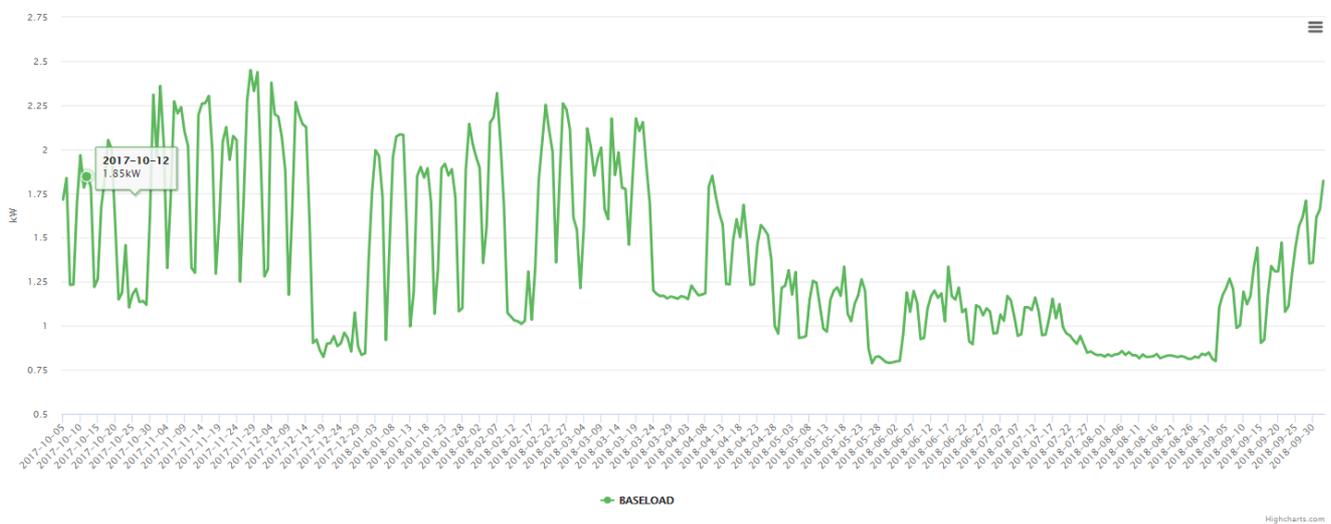
With your Eco/Energy Team or class review the energy usage charts displayed on the Energy Sparks website to identify your energy saving challenges for the new school year. Here are some questions you could consider?

Electricity

1. Can you work out what electricity was used during the summer holidays? Can you compare it with the amount of electricity used last year over the summer break? Is there a change?
2. What electrical appliances were left on over the summer break? Consider fridges and freezers in the school kitchen, security lighting, servers and electric water heaters. You can borrow some appliance monitors from Energy Sparks to investigate how much individual appliances are using. Reducing the number of appliances running all the time is an easy way to cut your energy costs. For each 1kW reduction in the electricity needed to provide power to appliances that keep running at all times, the school will save £1,050 per year, and reduce its carbon footprint by 2,400 kg. You can also consider upgrading old appliances that are not energy efficient. A modern energy efficient freezer only consumes about £40 a year, but older appliances can use £100s a year.
3. You could look at the new Baseload chart found under the Electricity Detail tab in the new Analysis tools, which shows how the amount of electricity used to power appliances running all the time has changed over the last year. In the example below, the school saw a gradual reduction in baseload over the course of last school year, but there has been a steady increase since the start of term. Is that because more appliances are being switched on and left on?

Baseload kW - last year

Electricity baseload is the electricity needed to provide power to appliances that keep running at all times. It can be measured by looking at your school's out of hours electricity consumption. The graph below shows how your school's electricity 'baseload' has varied over time:

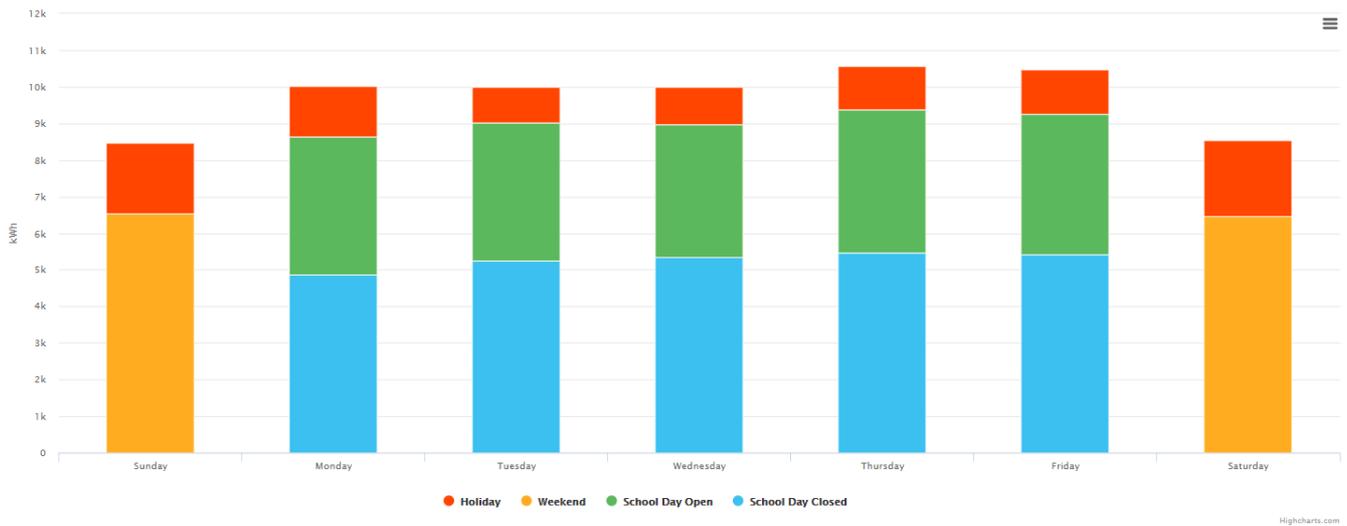


Gas

1. How much gas is used at weekends? For most schools there should be no gas usage at weekends. The only reason gas might be used is for frost protection in very cold weather, and averaged across the whole year this should be a very small proportion of weekly usage.
2. Is there any variation in gas usage across different week days? For some schools there is more gas consumption on a Monday and Tuesday than Wednesday, Thursday and Friday, as additional energy is required to heat a school up after the heating is left off at weekends. This energy is being absorbed into the masonry walls.
3. You could look at the new Gas Use by Day of the Week chart found under the Gas Detail tab in the Analysis section of the website.

Gas Use By Day of the Week (this year) 68,072 kWh

The graph below shows your gas use broken down by day of the week over the last year:



If the graph shows high weekend gas consumption (like the example above), ask your caretaker or building manager to check your heating system controls. You may have:

- incorrect or faulty frost protection
- lack a 7 day timer so it is not possible to turn the heating off at weekends
- incorrect boiler settings

After you have finished looking at some of the charts and agreeing some priorities with your energy team, don't forget to record some of your observations and next steps on the Energy Sparks website and earn Energy Sparks points for your school.

School Support during the 2018/2019 school year

We are continuing to offer free school support visits this school year. If you would like to arrange a visit to relaunch the Energy Sparks programme with a new Energy or Eco team or to learn more about the new functionality and what it can tell you about your school's energy consumption, please contact us on hello@energysparks.uk

Contact: Claudia Towner, Energy Sparks Project Manager and Schools Liaison
hello@energysparks.uk <http://www.energysparks.uk>

