CALDERDALE
Climate Challenge

Heather Morgan, our Climate Change Schools Advisor, writes:

"I made my first Calderdale Climate Challenge school presentation last week (Wednesday 8th Nov) to Salterlee School. The pupils and staff gave me a very enthusiastic welcome and I thoroughly enjoyed myself. I think the children did too.

The school is relatively small with just 105 pupils ranging in age from four to 11. It has an enviable rural location, sitting high up on the side of Shibden Dale with fantastic views from the classroom windows, enough to distract even the keenest of pupils.

It is a lovely friendly school, with charming pupils and motivated staff. I was particularly pleased to meet one teacher, Emma Kay, who seems perfect for the role of Eco-Champion within the school. Emma sets an excellent example to staff and pupils of how to act in an environmentally conscious manner, whilst still enjoying life and learning. She is active in reducing waste, tries to keep energy demands down and is constantly incorporating these messages into her teaching. Well done, Emma – or should I say Miss Kay!

During my presentation, I tried to explain what we mean by climate change –how and why it happens, the potential consequences and how we might think about slowing it down. First, I explained the difference between weather and climate and then gave them the unequivocal fact that our climate is changing. I then went on to explain why – even though we live in windy, rainy West Yorkshire – climate change is not a good thing and it will not necessarily mean we will experience warmer more summery weather. In fact, it could be exactly the opposite.

Using a globe, we examined the different extremes of climate on the planet. I gave them examples of the hottest and coldest temperatures – 58 degrees centigrade in the Sahara Desert and -89 degrees in Vostok, Antarctica – and the children tried to guess where these temperatures were recorded. We talked about who and what can live where on the globe. Using puppets of a polar bear and a penguin, I illustrated that although some animals and humans can live in the coldest parts of the world, their existence is tough and they are very, very vulnerable to any changes in climate.

I talked about how the Innuit cannot manage to grow food, and how they would die very quickly without gloves, hats and specialist clothing. The children then came back with questions, including "As climate change happens, will igloos melt?" The answer, by the way, is "yes", although very few people actually live in igloos these days.

Children are usually amazed by the fact that it is possible to take a submarine underneath the ice at the North Pole. After that revelation, the thinning of sea ice and the concept of melting ice caps is sometimes easier for them to grasp.

I also talked about life in other extreme environments: people living in very hot places are under the constant threat of crop failure due to drought, for example, and people living in low-lying lands are vulnerable to sea level rises.

I used these examples to show that, although there are people and animals able to take advantage of almost all the extremes of climate and conditions on the planet, for successful and continued life, we depend on quite a limited band of temperature range and rainfall, (tropical and temperate climes), altitude and food sources.

I suggested to the children the similarity between themselves and the planet. They are able to survive extremes of temperature – they might drink very hot chocolate or eat freezing ice lollies – but that if their core temperature changes much above or below 37 degrees, then their parents will be giving them Calpol or hot water bottles and calling for the doctor!

Then we carried on with the climate change story. Yes, the world is warming up and I illustrated this by wrapping a roll of fluffy cotton wool around the globe. I asked them to imagine that the cotton wool was the atmosphere. I explained that the concentration of certain gases in the atmosphere was increasing and that, as these were trapping more and more heat from the sun, in effect the blanket was thickening.

I told them that there were a number of gases that contribute to this effect and I asked if anyone was able to name one. Carbon-dioxide was the first suggestion from a Year 5 girl.

To illustrate the ubiquity of CO2, I blew into a brown paper bag and asked if anyone knew the name of one of the gases inside it? Same girl, same answer: CO2. Most of the children were surprised. Next I opened a bottle of fizzy water and asked them to listen to the shhhh fizz – could anyone name the gas? This time, a few more confident pupils put their hands up and I got the answer – CO2.

Then I held up a piece of wood and asked what would happen if I threw it onto a bonfire and it burned. More children with their hands up and the answers: heat, flames and CO2. I asked what we might do with a piece of coal and a jar of oil, and the children were happily answering with lots of suggestions like powering engines, cars, trains and planes. I added that we could fire up power stations and thus generate electricity, and we then went through the whole gamut of electrical equipment from sandwich toasters to Play Station 3.

I said that, when it is held as a solid in the form of coal or oil or even wood, carbon has no effect upon our climate, but when it is released into the atmosphere in the form of the gas CO2 it starts to have an effect. It acts as a blanket and warming takes place.

What should be do? Put less CO2 into the atmosphere. How? Burn less fossil fuel. Suggestions from the children included using the car less, turning off lights, using energy efficient light bulbs, walking more and cycling.

I talked about the use of renewable energy sources, energy efficiency, using public rather than private transport, switching off electrical items at the source of power rather than using stand-by, turning the thermostat down on central heating, insulating buildings, closing doors and windows, using fewer resources and recycling.

I then asked for a show of hands from everyone who thought they wanted to try to use less energy – and checked that they would be asking everyone at home to help too! All the children put their hands up. And, on that encouraging note, the assembly ended.

Afterwards, I spent 10 minutes with Emma Kay working through the Calderdale Council Energy pack, giving her some web addresses (all on the back of the pack).

My suggestions included:

- Setting up an eco forum or club
- Having a competition to come up with a Climate Clever logo and having this image put onto laminated cards placed at every light switch and power socket
- Incorporating energy efficiency into numeracy lessons, measuring energy use over a period of weeks/months
- Getting the caretaker involved
- Having monitors to switch off unused lights, turn off taps, report leaking taps/loos, close external doors
- Discussions in citizenship classes.

I will look forward to talking to Miss Kay next term to find out if the energy saving tips and the Energy Efficiency Pack I left with her have helped in cutting fuel use within the school."