



Energetic News

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Project status

By Kirsten Dyhr-Mikkelsen, NEE

Our Active Learning project entered the implementation phase, during which children will carry out energy monitoring and try out other fun active learning activities at school.

So far 162 eager champion schools from 14 different countries have joined the project!

Having developed and compiled active learning education material for a web site for teachers www.teachers4al.eu, we are now signing agreements with schools interested in benefiting from the active learning teaching materials.

In all champion schools, pupils will monitor the energy consumption of their schools over a period of one school year, discuss the results, and experiment to find possibilities for improving school performance.

The articles of this newsletter illustrate some of the many exciting initiatives in the champion schools and partner countries.

In Brussels the Gouden Regen school the pupils have carried out a mini energy audit of the school and assigned Energy Watchers. In Norway, the AL

activity "The CO₂ footprint of the journey from home to school" was presented at a national Research Day event. In Gullvive School in Sweden, the champion teacher is confident that the AL approach can be used in a wide variety of contexts.

What is next?

Next step in our project will be to develop an idea for an international competition among the champion schools. The details of the competition will be finalised and published in January 2008 and the competition launched immediately after. We hope to be able to announce the winners before the summer vacation or right after the vacation period.

One of our ambitions is to share the experiences as successes of the champion schools with as many as possible and to promote permanent integration of education on energy efficiency and renewable energy in the national curricula. We also wish to ensure that the AL toolbox is used in the future – also after our project has been completed. To this end we plan to host an international workshop in 2008 that can highlight the benefits of an active learning approach to teaching energy efficiency and renewable energy including energy monitoring.

Start of Active Learning in Brussels

by Hans Valkhoff, ABEA

This spring the Brussels Energy Agency (ABEA) officially launched the Active Learning project in one of the Dutch-speaking schools in Brussels, Gouden Regen. Together with the teacher and our Flemish education partner from the Environmental Care at School (Milieuzorg op School - MOS), a governmental education body of the Flemish community, we prepared an Energy Tour for the 10-12 year old children of the fifth- and sixth-year.

It was a special day, because the tour was going to be filmed for a video/DVD on energy education in Europe. Although the children were of course very excited, they were very well behaved and patient with the film crew. They had spent an entire day preparing the Energy Tour with their teacher Anita van Stickel. They had made special T-shirts for the Energy Guardians, and had prepared posters

and short presentations about different energy-saving issues. They had also brought some electrical appliances from home, such as radios, hairdryers, toasters, etc., to test their energy consumption.



Energy Tour

We gave the children a questionnaire, a sort of mini energy audit. After the introduction in the classroom, and the demonstration of the Energy Toolkit with measuring instruments, such as digital thermometers, light meters and energy meters, we all went outside to meet the caretaker.

The whole class visited the shed in the schoolyard where the energy meters for gas and electricity are situated. They were allowed in small groups to have a close look at the heating installation and take the meter readings: in kilowatt hours (kWh) for electricity and cubic meters (m³) for gas.

Afterwards the children interviewed the caretaker about energy consumption at their school. They used our Energy Tour questionnaire and wrote the answers and figures on the form. The questions of this mini energy audit were divided into sections for heating, lighting and insulation. Together with the caretaker the children had a look at the state of the windows, lamps, radiators, thermostats, curtains, sun blinds, etc. in the school.



Back in the classroom, together with our colleague from MOS, we did a short exercise using the energy meters and the light meters. Using the digital thermometers the children compared the difference between the in- and outdoor temperature.

The children were very enthusiastic.

We found that the whole Energy Tour, including exercises and questionnaire, did not take more than 50 minutes – the time of one lesson (providing the class is well prepared)!

Research Campaign '07

by Laila Kjeldsen, NEE

The Directorate for Education and Training invited Norwegian schools to participate in the Research Campaign 2007. The campaign, for which the Norwegian Research Council, the Ministry of the Environment, the Norwegian Institute for Air Research, the Directorate for Education and Training (NILU) and NRK joined forces, focused on climate and CO₂ emissions.

The AL toolbox activity "The CO₂ footprint of the journey from home to school" was there too!

"The CO₂ footprint of the journey from home to school" was well represented at a large-scale event to mark the Research Days in Oslo during week 39. Representatives for the project took part on NILU's stand in the Polar tent at the University Square. NILU's polar research activity is widespread, with monitoring observatories in both Arctis and Antarctis. The representative on the stand received numerous visitors and had "CO₂ footprint of the journey from home to school" as one of three important activities.

The activity forms an important element part of the Active Learning toolbox used by many teachers and pupils at elementary schools in Norway.

Cooperation with national TV-channel

The campaign was carried out during week 39 (24.09 to 30.09), in cooperation with NRK's extreme weather week and a number of schools participated actively that week.

The aim of the activity "The



CO₂ footprint of the journey from home to school" is to bring the students round to finding out how much CO₂ is emitted during transportation to and from school, and how they can contribute to changing this.

The campaign focuses on what individuals can do, and what local decision makers plan on doing to facilitate reducing CO₂ emissions in their municipality. One goal here is for school kids to get acquainted with local decision making processes and learn how these can be affected, says project facilitator for "CO₂ footprint of the journey from home to school", Bjørn Andreas Mosskull.



Royal glory

Mosskull tells us about an inspiring day for all at the University Square in Oslo.

The Minister of Education Øystein Djupedal and HRH Crown Prince Haakon Magnus opened the event at Forskningstorget. This cheered up both visitors and people on the stands. HRH Crown Prince Haakon Magnus took the time to visit the various stands, and spent quite some time at NILU's stand, Mosskull says.

However, the most important memory is the excitement on the face of a young child who openly expressed that "Wow, Science is fun!" – because that's when you feel like you've accomplished something.

Students to fight global warming

International research shows that emissions of CO₂ and other climate gasses cause a global increase in temperature.

Storms have become both more violent and more frequent. More and more countries experience unusually heavy floods or draughts. This has devastating effects on the poorer countries. It results in a loss of biological diversity, a reduction in economic profits and a decrease in social stability all over the world. That's why it's extremely important that all efforts are directed towards reducing emissions of climate gas.

The first step towards a reduction in climate gas emissions is that we ourselves become aware of how much we actually contribute to these emissions. This campaign follows up on the topic by encouraging school children to find out how much CO₂ is emitted on the way to school and helping them to see the greater picture, he adds.

The results which the groups enter on www.miljolare.no are available to other schools, and on the results pages it will be possible to do all kinds of comparisons between the schools, such as CO₂ emissions, distance travelled to school, and mode of transportation. Everyone will also have access to the pupils' suggestions on how to reduce CO₂ emissions.

An English version is available at <http://sustain.no>.

It is our duty to teach on energy topics

by Peter Dallman, Gislaved Municipality

One of the three schools in the Swedish commune Gislaved taking part in the Active Learning project is the Gullvive School. Here teacher Ms. Pia Rosberg is responsible for the Active Learning project.

What is your thought about the project?

My spontaneous reaction is: "How wonderful with a project concerning children and th environment". It is a difficult but very important topic. We must give the school children hope for the future and a sensation of being able to influence all the negative.

How do you intend your school to work with the project?

I teach two classes in natural science. One of these will do the energy monitoring measurements and work with the material. The other class will be presented the measurement data and work with the material. Then I intend to give

The **Active Learning** project is an exciting 3-year European project based on the idea that children aged 6-12 years play an important role in sustainable development, and that pupils learn more and the knowledge is retained longer if they experience things first hand. Our Active Learning toolbox contains exciting activities that can be used to teach energy efficiency and renewable energy topics.

The Active Learning toolbox materials can be downloaded free of charge at

www.teachers4energy.eu

Why not try it out now?

the children assignments which have as aim to influence other groups and staff at the school.

We also need to have an end goal so that we can see a good result and the children can feel that they have done well – an encouragement of some kind!

One other teacher has so far expressed an interest in the project and I expect more will probably join to work with the activities.

In which subjects can the activities be used?

Many, and I even think that the children will come with suggestions for additional topics that can be included once we get started. In my classes, the emphasis will be on natural science topics. However, it is my opinion that the activities can also be used in for example math lessons for exercises in calculations, tables, diagrams, etc. Even language lessons will be able to benefit from the activities due to the fact that the activity sheets are available in multiple languages. These are only a few examples.

I believe that energy is the most important question for the future and that it is our duty to educate our pupils on this topic so that they gain knowledge and can make the right decisions!

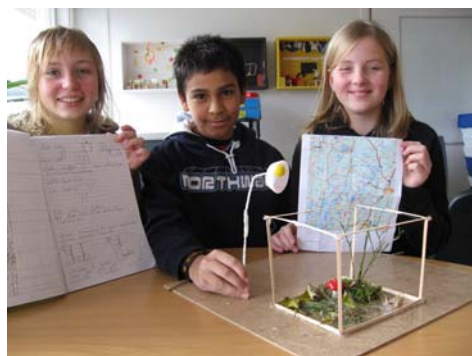


Photo: Pia Rosberg

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