

Name of the tool

Educational guide to the tool Heliomobile



Introduction

This reference material is proposed to teachers of basic education, as a support to learning activities in primary schools. It will help teachers to give sense to any activity they would lead on renewable energy, rational use of energy and transports.

This reference material has been proposed to teachers of basic education, as a support to our HELIOMOBILE presentations, which have been conducted in schools throughout Wallonia since 2001, funded by the Walloon Region.

Through a combined approach covering energy, the environment and society, to raise awareness of young people to the issues of energy and climate changes, we have attempted in writing this material to be faithful to the interdisciplinary nature of energy. Various points of view are proposed in it to consider energy and its various aspects transversally.

Four general questions are developed in this publication:

- What is energy?
- What are the sources most often used today?
- What are the problems related to energy consumption?
- What possible solutions exist to the problems related to energy use?

By offering answers to these questions, we hope to contribute to the education of the youngest people in choices open to the public, so that changes in behaviour to take root with regard to energy use and consumption.

The authors: Nicolas Prignot, graduate in Physical Sciences and Philosophy of Sciences and Kim Vanguers, architect with a special degree in Environmental Management, are part of the team of presenters from APERE who conduct the HELIOMOBILE presentations.

Experience with the activity

This reference material is proposed to teachers of basic education, as a support to our HELIOMOBILE presentations, which have been conducted in schools throughout Wallonia since 2001, funded by the Walloon Region.

By taking a technological approach to the subject of energy (solar water heater) during the presentation, we are able to explain the basic scientific principles of the technology. Through the questions & answers and debates initiated in the classroom, we are able to discuss various aspects of energy - historic, geographic, socio-economic, scientific, technological, philosophical and ethical -based on all of these subjects which are taught in both primary and secondary education.

This presentation material will be useful to prepare for our visit to the class, or to look in more detail at certain concepts introduced during the presentation.

Summary of the tool (Concept, Goal, Needed material, Procedure, Conclusions)

Four general questions are developed in this publication:

- What is energy?
- What are the sources most often used today?
- What are the problems related to energy consumption?
- What possible solutions exist to the problems related to energy use?

Face with the problem of energy, the exhaustion of fossil fuel resources and climate change, no one can remain unmoved. But the important thing is to be able to act and react! We have looked for possible solutions together, which can be applied straight away, starting with what each one of us can do at home without costing anything, except by changing a few bad habits, to save energy.

The ongoing effort to prevent waste is the first, most intelligent and most valuable action that we can all do.

Then if we bear in mind that certain machines use up more energy than others, when we use them or when we are confronted with a new purchase - from a light bulb to a car, not to mention games or domestic appliances, we can act and choose in full knowledge of the facts.

Technologies which use renewable energies are not science fiction. They hold no secrets. People have been using them for thousands of years. As we have seen in detail with the solar water heaters, the basic principles for using them are simple. Renewable energies

are therefore available today, with their old and new technologies, with their advantages and limitations, with a whole series of possible combinations, to offer a response to current energy issues.

To reduce our greenhouse gas emissions and pressure on fossil fuels, it is therefore imperative to reduce our demand for energy, to attempt to consume less energy and alongside this, to make an even greater place for renewable energies.

We hope that this presentation material will enable its readers, teacher and through them their pupils, to gain an awareness of the numerous dimensions of the issues involved in energy in order to realise that ultimately, we are all responsible and can all contribute to change.

By offering answers to these questions, we hope to contribute to the education of the youngest people in choices open to the public, so that changes in behaviour to take root with regard to energy use and consumption.

Guidelines for teachers

Teachers can use it before or after a visit, presentation, reading an article in a newspaper or watching a video about a renewable energy technology (RET) site - wind turbine, solar house, solar hot water system, PV plants, biomass... - or a news.

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This presentation material will be useful to prepare for the visit, presentation or video, or to look in more detail at certain concepts introduced by these tools.

It will also help the teachers who want to prepare a presentation or an exhibition on the subject with their pupils thanks to a better awareness of the numerous dimensions of the issues involved in energy

How you judge the tool

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www.apere.org: see many references and documents available on our web page ENERGY EDUCATION within « nos activités »

Further info in the Tool Technical Fiche in .pdf format

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