



Energy to do, energy to think

It has already been established that it is the need to have huge quantities of energy available that has given rise to the main phenomena which damage the environment.

Nowadays energy is essentially produced by burning combustible fossils such as petrol, coal and methane gas, although over the last few years there has been an increase in the use of sources of renewable energy.

Therefore this educational programme aimed at schools seeks to offer students and teachers suggestions and tools which are necessary in developing an educational journey of discovery relevant to the themes of energy and pollution.

The most important objective is to spread the knowledge about energy resources with the prospect of sustainable development which will be sensitive to the equilibrium of the environment.

Educational objectives

- Make the students understand what energy means and give them new skills.
- Spread the knowledge about the problems of energy with the prospect of sustainable development and the reduction of greenhouse gases.
- Provide correct and accurate information regarding the forms, sources and uses of energy and focus on the importance and role of energy in current society.
- Develop sensitivity to problems arising from the relationship between human activities and the planet's vital cycles.
- Identify existing interactions

The educational package lasts for half a day or a whole day and is aimed at primary and junior schools. The duration may vary depending on the number of workshops chosen

Sites visited: Inside the Natural State Reserve of the Furlo Gorges (le Gole del Furlo) along the river Candigliano and its park

Energy Workshops

The following workshops can be done completely or partially depending on the teachers' objectives regarding the theme of energy. There will be visits to the dam and the ENEL hydroelectric power plant in the Furlo Gorge.

Workshop 1 – Related Theme THE SUN'S RAYS

- Group game "Let's catch the sun's rays"
- Group game "Let's create the white light"
- Group game "Some colours "produce more warmth" than others"
- Experiments – How a solar boiler built from recycled material can work

Workshop 2 – Related Theme THE GREENHOUSE EFFECT

- Group game "The Big Dome"
- Experiments – The Greenhouse Effect and its features
- Experiments – This is CO₂
- Experiments – Cars and CO₂

Dusts in the air

Dust produced by gas, petrol and methane powered cars

- Observations with a microscope of different kinds of filter

Workshop 3 – Related Theme GREENHOUSE AND METEOROLOGICAL EFFECT

- Experiments – Water cycles

People on bikes (kinds of energy)

- Interactive Panel The Hydroelectric Power Plant and energy management
- Experiment - The convention

Bicycle wheels (wind energy)

Workshop 4 – Related theme HOW TO SAVE

- Experiment – The Photovoltaic effect

The "Hydrogen" Vector

- Experiments to test the efficiency of electricity conservation

Insulation

Cost for half a day - guide + workshops: € 200,00 per class

Cost for whole day – guide + workshops € 250,00 per class

