



The Energy at My School

Research your own building/school. The objective of the exercise is to study the energy sources of your school/building, and calculate the consumption.

Furthermore, the students have to consider the options for alternate energy sources and do calculations on these. Lastly, the students will discuss what barriers there generally are/could be to switching out conventional energy with renewable energy.

Organisation:

The students can be divided into group that research one of the energy sources of the school/building. For example:

- Heating
- Toilets (water usage)
- Warm water
- Windows
- Lighting and other uses of electricity

The students study the actual conditions – and calculate the investment that would be necessary in order to switch out conventional energy with renewable energy, and what savings this could result in (financially, and in terms of CO₂/other emissions). If conventional energy has already been substituted by renewable energy at your school/in your building, calculate the savings this has produced.

The groups present for each other.

Collectively discuss the barriers to ending the use of fossil fuels – for the school, but also on a national and global level.

NB!

When initiatives is taken to reduce the CO₂ emissions, it should pay off for the school, meaning it has to benefit the school financially. As a rule of thumb, it should take less than 10 years before the investment has been regained when making an investment to increase resource- or energy-efficiency. In the calculation you have to include both the actual savings that come from a decrease in the consumption of resources or energy, and the school paying off the investment.



Questions: Heating

- How is the school heated?
- How much energy is used a year on heating?
- How much does heating cost a year?
- What alternative sources of energy are there?
- Which of these could be relevant for the school?
- How much would the consumption cost a year with the source of energy you have chosen?
- How much would the investment/transition cost?
- How many years would it take to regain the investment?
- What barriers to implementing the alternative can you see?



Questions: Toilets

- How many toilets are there at your school?
- How many liters of water are used for each flush?
- How many times are the toilets flushed a day (approximately)?
- How many liters of water are used a year on toilet flushes at your school?
- How much does this water consumption cost a year?
- What alternatives are there to the current situation? (e.g. newer toilets or using rain water)? Or how can you save on water usage with the current toilets?
- How much would the yearly water consumption with alternate solutions cost?
- How much would the investment/transition cost?
- How many years would it take to regain the investment?
- What barriers to implementing the alternative can you see?



Questions: Warm water

- How is the warm water at your school heated?
- How much energy is spent a year on heating the water?
- How much does this cost a year?
- What are some alternate ways to heat the water?
- How much would the yearly consumption of warm water cost a year with alternate solutions?
- How much would the investment/transition cost?
- How many years would it take to regain the investment?
- What barriers to implementing the alternative can you see?



Questions: Windows

- What types of windows are there at your school? How much heat is lost per window?
- How many windows are there at your school?
- What is the total heat loss from windows?
- How much does this heat loss cost a year?
- What alternate types of windows are there?
- How big would the yearly savings be if the school switched out the windows?
- How much would the investment/transition cost?
- How many years would it take to regain the investment?
- What barriers to implementing the alternative can you see?



Questions: Lighting and electricity

- What is the source of energy for lighting (and other types of electricity) at your school?
- How many kWh are used a year?
- How much does the yearly consumption cost?
- What alternate energy types are there?
- How big would the yearly savings be if the school moved to using an alternate source of energy?
- How much would the investment/transition cost?
- How many years would it take to regain the investment?
- What barriers to implementing the alternative can you see?