



SWITCHES MAPPING

Goal(s):

- The pupils know the location of all the switches and the lights they are connected to.
- The pupils are aware of the energy use related to particular switches.

General description of the activity:

Lights in corridors and common spaces are often on, even when nobody is there or when no light is needed. For effective 'electrical energy management' to take place, it is important that everybody knows where switches are located and what they are connected to. It is not solely the responsibility of the caretaker to switch the unnecessary light off.

Responsibility and awareness is sought brought about through the pupils mapping of the light switches of the entire school and making it available to everybody.

Required materials:

- Copies of plans of the school floors or blank poster paper for drawing floor plans on.

Required pupil skills:

Map-reading

How does this activity fit into the curriculum:

This activity is well suited for lessons in Technical drawing, Design Technology, Science and Literacy.

Safety issues:

None

Individual steps of the activity:	Required time:
<ol style="list-style-type: none"> The activity can be carried out by a single class or a group, depending upon the size of the school. If it has many floors, each class could be in charge of mapping one floor. Ideally, a large plan of the school interior should be available. Another option would be for the pupils themselves to draw a plan. However, it would need to be sufficiently precise for the success of this activity. 	Preparation – 1 lesson if the pupils have to draw plans of the floors
<ol style="list-style-type: none"> Once a light switch is matched with a lamp they are copied onto the plan, using colours or numbers to identify connections between switches and lamps. 	Experiment – 1-2 lessons
<ol style="list-style-type: none"> The plans are then used to design of the best lighting management by assigning responsibility to specific persons. The activity will encourage even the youngest pupils to understand the consequences of flicking a switch on or off. 	Discussion – 1 lesson



Suggestions for combination with other AL activities:

“Switch me off” – The pupils make energy stickers for placing near the light switches.

“Shine a light on savings” – What types of light bulbs exist on the market and how does their energy consumption differ from one another?

Variations:

Expanding the activity: Older pupils (11 years and up) may complete maps showing the wattage of each lamp (wattage= the amount of Watt that each light bulb or lamp uses when switched on). Usually you can find out just by looking at the light bulbs otherwise you may contact the person responsible for the school’s electrical system. A further step would be to write on each switch (with a permanent marker) the total wattage of all lamps connected to it.

Limiting the activity: If time is limited, the activity can be limited to a smaller area of the school.



Available aids:

None

Search words:

Energy end-use	General topic	Educational subject	Age level
Transport	General sustainable development	Technical drawing	6-8 years
Space heating & cooling	Renewable energy	Design technology	9-10 years
Hot & cold water	Energy efficiency (saving)	Science	11-12 years
Lighting	CO ₂ wise transport	Literacy	
Electric appliances			