

REDUCING OUR ENERGY CONSUMPTIONS

GREEN
SCHOOLS FOR
A GREEN LIFE

SCUOLA
COLLODI
CLASS 5 B

FRIDGE
GAS
SWITCHON
LIGHT
WASHINGMACHINE
DRYER
LAMP
HAIRDRYER
SWITCHOFF
APPLIANCE



Encontered problems in our school

LIGHTS ON WHEN NOT NEEDED

Imperfect condition of the electrical system

SOLUTIONS

- **Light's Guardians**
- **Guide lines for electric energy**
- **Request of technical and structural interventions**
-

Guide lines for electric energy

Targets:

- Reduce electricity consumption
- Reduce CO2 emissions

Expected result: create guide lines for the management of light and electrical equipment in order to avoid situations of waste.

Implementation : it consists in drawing up a series of rules which allow the sustainable management of electricity and a reduction of consumption. It must be kept in mind that the regulations are intended for

the entire school population and therefore students, teachers and non-

teaching staff. It is also important to underline that energy saving must not be seen as a sacrifice, but must respect everyone's well-being and visual comfort.

The main steps for the realization of the activity can be the following:



a) Organizational meeting: the referent teacher and the operating group

meet and discuss the main problems that emerged from the preliminary investigation, which must therefore be regulated.

b) Guide lines proposals:

possible rules to be followed are always proposed within the operational group can be drawn up for the various roles within the school: students, teachers and non-teaching staff



c) School assembly: it is important to share the proposals with the entire school population because in this way you have the opportunity to present to everyone the action you want to take and its purposes and you have the opportunity to discuss the rules and to accept any observations.

d) Approval of the Guide Lines: after hearing the opinions of the entire school community, the final regulations are drafted and approved.

e) Sharing of the guide lines: the documents must be presented to the entire school population.

Billboards or posters can be made to be posted inside the school, in clearly visible places, or the rules can be published on the institute's website.

f) Initiation of the action.





LIGHT'S GUARDIANS

Recipients : Students and school staff, families

Organizers: teachers.

Participants: students, teachers, school staff.

Objectives:

- to reduce electricity consumption
- to reduce CO2 emissions

Expected result: to form a control system for the use of electricity which **avoids useless waste.**

Implementation method: it is a question of creating a control system, through

Energy Guide's Lines

precisely by means of people who play the role of "guardians", which makes it possible to consumption.

The main steps to be followed are:

a) Organizational meeting: the operative group and the referent teacher discuss what emerged from the preliminary investigation to highlight the major criticalities.

b) Definition of regulations and protocols: the rules to be followed for the use of electricity are established, defining when it is possible to turn on the light or use the various electrical devices in the different areas of the school.



School assembly: it is important to present to the entire school the action, this will be an opportunity to present the guide lines on the use of electricity previously drawn up by the organizing group, what the tasks of the future "guardians" are and to show the current condition of energy consumption in the school. **It is important to spread the message so that everyone takes action to achieve the objectives set.**

An assembly is also an opportunity to collect adhesions for those who will have to play the role of "guardian".

d) Choice of guardians: the "guardians " are people who perform the role of supervisors of compliance with the regulation concerning energy consumption. **They have the task of supervising the switching on and off of light switches and other electrical equipment**

Each class or area of the school (corridor, gymnasium, laboratory, etc.) must have a light guardian; within the classrooms the role can be played by the students, possibly with the supervision of a teacher, while in other areas of the school the collaboration of the school staff can be requested.

e) Initiation of the action.





School Activities

Saving energy at home

Mandai November 28th

Let's calculate energy consumption

Build a typical week of use for some electrical appliances of your choice; enter the information and calculate the energy consumed, as in the example.

APPLIANCE	POWER	TIME USAGE IN UN WEEK	ENERGY consumed in 1 week
Hair dryer 	1500 W	hours 2	3000 Wh = kW
Fridge 	150 W	24x7 hours 168	25.200 Wh = kW 25,2
Lamp 	10 W	3h per day 21h w	21x10 210 W / 0,21 kW
Washing Machine 	2000 W	4h w	8.000 W = kW 8

Total energy consumed in 1 week

Wh 36.410 per week 36,41 kW

Calculate the energy consumed

(4 weeks). 145.640 W kW 145,64
Cost hour 0,551 kWh

ANSWER

Ex. Energy consumed in 1 month: Wh x 4 = Wh

TRANSFORM the energy into kWh, remembering that
1000 Wh = 1 kWh

Energy consumed in 1 month: kWh = kWh

Q: Calculate how much your family spends in a month

A: My family spends

145,64 x 0,551

€ 80,24764



11 ottobre 20 novembre

Risparmio energetico per la casa Francesca

- Mettere più vestiti in lavatrice.
- Accendere la luce solo di sera.
- Stare con le tende aperte finché c'è la luce.
- Ricordare di spegnere le luci prima di andare a dormire.
- Tenere il frigo aperto il meno possibile.

$$6h = \text{lavatrice} = 8000w \rightarrow 3h = 4000w$$

$$6h = \text{lampadine} = 4430w \rightarrow 2,1h = 1476,2w$$

$$168h = \text{frigo} = 25 \cdot 200 \rightarrow 84h = 12600w$$

$$\text{Risparmio totale settimanale} = 18'076,2w$$



