



BUILD A GREEN WORLD WITH US! CHECK HOW YOU CAN MAKE THE DIFFERENCE!




Do you know what is environmental sustainability? Every day our Earth offers us hospitality and resources. To live better, we have to love it, respect it and preserve it. We shouldn't waste the resources offered because they are limited and everyone should benefit, today and tomorrow.



PLAY WITH US!






To understand better what we are talking about, try to measure the environmental sustainability of your school and discover how good is to preserve the resources.

IT IS REALLY EASY!

1. Choose the building you know well (home, school, ...)
2. Answer to the questions in the next pages
3. Each answer has a score. Sum the different scores and write them down at the end of each page.
4. Sum all the total you have earned at each page for every area and then discover the result!

		YES	NO
	1. LAND – Sustainability of the site This area deals with reuse and recover buildings and / or sites which are not used, protect the natural habitat and reduce the car use		
	The building is new/rebuilt less than 2 years	7	0
	From the building you can reach on foot a bus stop/train station in less than 20 minutes	8	0
	Are there basement parks for cars in the building?	5	0
	Are there plants, gardens or vegetable gardens in the surroundings?	5	0
	Total points		
	2. WATER – management of the water This area is concerned with reducing water consumption and reuse water		
	The taps of the building have one of the following devices: photocells, pedal for water regulation, mixer tap	4	0
	The building has a rainwater collector system to irrigate the gardens/plants?	6	0
	The WC is provided with the double button (less/much water) or is there a water counter?	5	0
	Total points		
	3. ENERGY – energy and atmosphere This area is responsible for reducing energy consumption and to encourage the production and use of RES		
	Are there PV/solar systems?	7	0
	Windows are wide?	4	0
	The lights of the different rooms switch on when people enter in or are moving inside?	7	0
	Do you hear traffic while windows are closed?	5	0
	Total points		





	4. MATERIALS – materials and resources This area deals with using the materials with the lowest environmental impact and reduce and manage waste from construction		
	Are there can for diversified harvest to separate waste?	7	0
	Materials used are local or from abroad (ask for help)?	5	0
	In the bathroom is used recycled toilet paper?	6	0
	Total points		
	5. AIR – IAQ This area is responsible for ensuring the health of the environment and to eliminate, reduce and manage pollutants		
	Inside the building don't you smell paint odor?	6	0
	Do you see a thermostat which allows to modify temperature in each room?	5	0
	If you are sit down to your desk, do you see the panorama outside the windows?	4	0
	In winter time if you keep closed the windows do you smell foul?	4	0
	Total points		
RESULT	Sum the total score for each area and verify the sustainability of the building you have chosen		

	Over 80 points	TOP! Congratulations! The building you have chosen has obtained the maximum level. It is a perfect example to show!
	From 60 to 79 points	SUPER Very good! The building is next to the top of the environmental sustainability
	From 50 to 59 points	VERY GOOD! The building has some sustainable features, but with some advices could be better
	From 40 to 49 points	GOOD! The building has minimum features to be defined as a sustainable one
	From 0 to 39 points	The building cannot be considered sustainable. What a pity! Turn the page and try to do the next test to see if YOU are more sustainable and environmental friendly

DISCOVER HOW SUSTAINABLE YOU ARE!

	YES	NO
1. I take a shower rather than a bath	4	0
2. I close the tap while I brush my teeth	6	0
3. I use the double button on the WC	4	0
4. I always turn off the lights of the rooms that I do not use or that are not occupied	6	0
5. I drink tap water	3	0
6. I use the bicycle for going to school, library, park, ...	5	0

7. I do constantly recycling	5	0
8. I switch off and I never leave the TV or the PC on standby	7	0
RESULT		

	Over 33 points	SUPER! You are giving a good example to preserve the earth's resources
	From 20 to 32 points	CONGRATULATIONS! You are doing a lot. You miss just a little to get to the top but if you follow the advice, you can reach it
	From 10 to 19 points	GOOD BUT YOU CAN IMPROVE! Try to follow the advices to be more sustainable and you will soon arrive at the top
	From 0 to 9 points	Unfortunately you are not yet environmentally friendly. Try to follow all the advice that you have seen before and you will soon improve

HEREBY YOU CAN FIND SOME ADVICE FOR YOU TO BE MORE SUSTAINABLE AND ENVIRONMENTAL FRIENDLY

WASTE AND SCHOOL – Waste in nature don't exist!

In a natural ecosystem what is discarded by an organism is used by other (organic material expelled by animals, plants, dead animals) and is transformed into useful substances by microorganisms to produce other living material.

Man produces huge amounts of waste that cannot be used by other living organisms, or that can be easily destroyed.

Any building or place where people live or work produces a certain amount of waste.

In general, in the school most of the waste is constituted by food, paper, packaging, glass, metals, ...

→ Reduce waste saves costs (for example, before throwing the paper are we sure that it has been used by both sides?)

RECYCLING














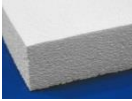
how much waste we produce in school?

E.G. Possible remedies to decrease the amount: build a poster to mark the data collected weekly. Every weekend two pupils interview school staff asking them:

- Number of bags of paper filled
- Number of plastic bags filled
- Number of general waste bags filled, so undifferentiated

→ this is made in order to understand how waste is produced inside a school and to promote different actions to minimize this production

To understand the question of time for the decomposition of waste are asked to answer some questions:

Time to decompose – YOUR IDEA	Waste		Time to decompose – IDEA OF THE GROUP	Time to decompose – SCIENTIFIC DATA
	Can			100 – 200 years
	Banana			3 – 4 weeks
	Cigarette butt			2 – 5 years
	Glass bottle			4000 years
	Paper bag			1 month
	Plastic bag			500 years
	Rubber sole			50 – 80 years
	Sock wool			1 year
	Nappy			450 years
	Vegetables			3 – 6 months
	Chewing gum			5 years
	Plastic bottle			100 – 1000 years
	Newspapers			3 – 12 months
	Polystyrene			1000 years +

There is a significant way to reduce waste to landfill and to recycle more by using the “4 R scheme”:

1. REDUCE: buy products with less packaging
2. REUSE: use more times the product before throwing it
3. RECYCLE: throw it in the right container for recycling
4. RECOVER: the possible energy recovery obtained from residual waste

A BRIEF FOCUS ON SOME TOPICS:

ENERGY

Through the observation of the characteristics of their school, teachers can take the opportunity to explain to the kids the reason why the buildings where we live or where we spend most of the time must be isolated.

In nature the heat moves from a warmer body or environment to a cooler body or environment.

We all want to live and study in a comfortable place and when this is cold we turn on the heating system and bring the internal temperature to 19-20 degrees. When the heating is on consumes energy.

Also the heat we produce in winter tends to come out through the walls, the windows, the roof, the drafts.

If the building retains as much as possible the heat, it means that the system will have to work less because the environment remains comfortable for a longer period. Vice versa, if the heat goes out, the system must work harder to give us back the heat going through the walls, the roof, ...

There are some materials that are opposed to the passage of heat more than others (which means that they have a higher thermal resistance) and are called INSULATORS that help us winning the challenge of the heat that wants to get out in the winter (the same in summer to fight the hot weather).

This is the importance to have INSULATED BUILDINGS.

SUSTAINABILITY

Its meaning is related to several sectors (recycling, climate, road conditions, ...) and it is applied to everything we do.

Our daily choices can promote sustainability. For example:

ACTION	ADVANTAGES	DIFFICULTY
daily control of the temperatures of the different school areas/rooms	young people have a faster metabolism; they are better and more careful at lower temperatures	EASY
It is recommended a temperature of 19 degrees under normal conditions in the classroom and 15 degrees in hallways	a degree less in temperature can decrease the cost of the thermal energy of 10%	EASY
turn off unnecessary lights and lights in empty rooms	maximizing natural light can reduce energy bills by increasing the productivity of teachers and pupils	EASY
turn off unused equipment (PCs, projectors) and off button on instruments which are in standby	The intensive use of equipment increases the electricity bill for the school and heats classrooms	EASY
Replace incandescent light bulbs with energy-efficient ones	Those with low consumption last much longer and consume 75% less energy	EASY
awareness campaign that promotes waste as a resource	change the mind of the students and teachers to the way of considering the refusal and the use made of it (eg. bottle	EASY

	caps)	
Encourage pupils / teachers to decrease waste in school (e.g. Not take packaged snacks, print and write on sheets in front and back)	the decrease in the amount of waste generated within the school has an effect on the decrease in expenses	EASY
Create monitoring actions to eliminate unnecessary losses of water (dripping faucets, leaking toilet flushes)	growing awareness that the school pupils are empowered to right use of water (e.g. a drop of water per second is equivalent to 7,000 liters of water wasted in a year)	EASY
Encourage pupils and teachers to fully close the taps unused and to make use of the same strictly necessary	It saves a lot on the use of drinking water and decreases the level of the expenses	EASY

BE SOCIABLE! IT MAY BE A GOOD INVESTMENT

Any issue that brings people together in a positive way, that involves cooperation and social action, brings about the social capital.

ENERGY can become this bonding issue, if based on community activities.

Actin together and talking together increases the likelihood of lasting behavioral changes.

We're all responsible for the energy we use in our homes. Whether you're a homeowner, private or social renter, student, or you live at home with your parents, there are many things you can do to reduce how much energy you use and how much is spent.

Take a look at our quick tips and see if you're saving as much energy as you could be.

LIGHTING	<p>Lighting is always almost needed. There are however different ways to use it:</p> <ul style="list-style-type: none"> → make sure that you switch off the lights when you leave the room and when you're not using them. If you switch a light off for just a few seconds, you will save more energy than it takes for the light to start up again, regardless of the type of light. → use low energy bulbs or LEDs: you can now get LED spotlights that are bright enough to replace halogens, as well as regular energy saving bulbs ('compact fluorescent lamps' or CFLs). They come in a variety of shapes, sizes and fittings.
WATER	<ul style="list-style-type: none"> → do a shower instead of taking a bath → turn off the water while brushing your teeth or doing the dishes → the right fittings can save a lot of water for you <p>Spending one minute less in the shower each day will save € 14 off your energy bills each year, per person. With a water meter this will save a further € 20 off annual water and sewerage bills. If everyone in a four person family did this it would lead to a total saving of € 140 a year.</p>
COOLING AND WASHING UP	<ul style="list-style-type: none"> → always cook food with the lid on → make use of the residual heat in the oven → do not use the kitchen fan for longer than necessary → rinse the dishes with cold water. Make sure that the dishwasher is filled before using it → if you wash by hand, use a bowl instead of running water
WASHING AND DRYING	<ul style="list-style-type: none"> → wash at low temperatures as far as possible → use high speeds to reduce drying time → if possible, let the laundry hang dry
ELECTRICAL EQUIPMENT	<ul style="list-style-type: none"> → turn off appliances when you are not using them → unplug unused chargers!

	<p>-> switch off standby: you can save around € 40 a year just by remembering to turn your appliances off standby mode.</p> <p>Almost all electrical and electronic appliances can be turned off at the plug without upsetting their programming. You may want to think about getting a standby saver which allows you to turn all your appliances off standby in one go (check the instructions for any appliances you aren't sure about!).</p>
HEATING AND COOLING	<p>-> adjust the indoor temperature</p> <p>-> use curtains or blinds to shut out sunshine</p> <p>-> do not put furniture in front of radiators</p>
VENTILATION AND AIRING	<p>-> be aware of the ventilation – it is important that it works correctly</p> <p>-> consider inlets/outlets and use the kitchen fan when cooking (important for a good indoor environment)</p> <p>-> when airing, do it quickly and efficiently</p>
Understand your bill (or be sure your parents can do it!)	The information on a typical energy bill can be confusing. But understanding it can go a long way to helping you get to grips with your energy use.
Careful in your kitchen	<p>You can save around £50 a year just by using your kitchen appliances more carefully:</p> <ul style="list-style-type: none"> - Use a bowl to wash up rather than a running tap and save € 40 a year in energy bills. - Only fill the kettle with the amount of water that you need and save around € 10 a year. - Cutback your washing machine use by just one cycle per week and save € 7 a year on energy, and a further € 11 a year on metered water bills.



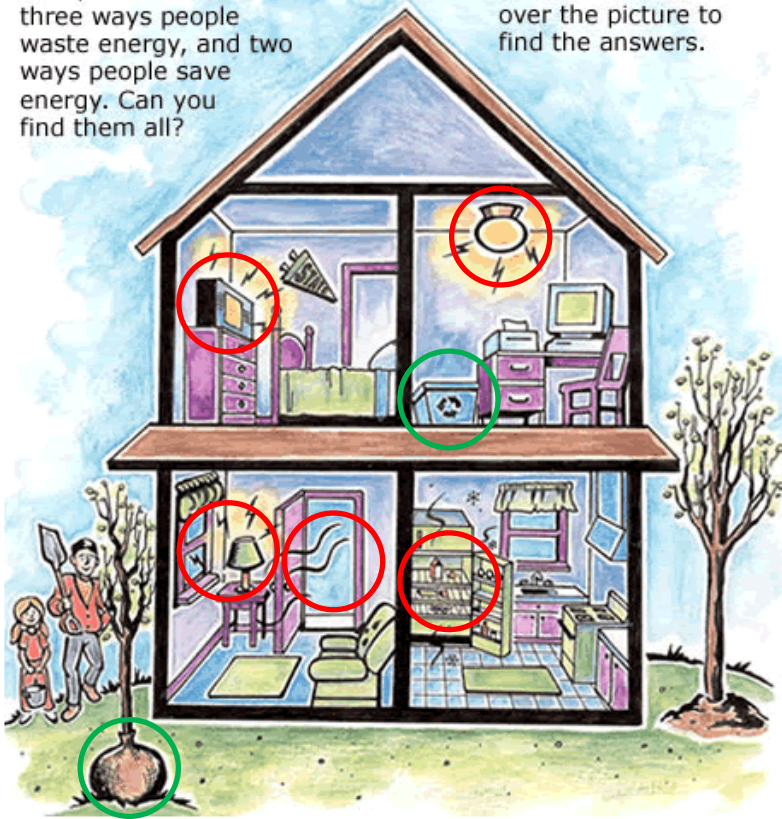
Do you know how much water you use for different activities at home? Below is a pie chart showing the percentage breakdown of water use for each activity in a typical household. - See more at: <http://www.pub.gov.sg/consERVE/Households/Pages/Watersavinghabits.aspx#sthash.fk4eXnlq.dpuf>

Source: <http://www.pub.gov.sg/consERVE/Households/PublishingImages/PUB-7water%20English.jpg>

Let's do a fun game together!

This picture shows three ways people waste energy, and two ways people save energy. Can you find them all?

Just move your mouse over the picture to find the answers.



If the lights and TV are on, but there's no one in the room, that's wasting energy.

Leaving the refrigerator door open wastes energy.

When you leave an outside door open while the air conditioner or heater is running, that's wasting energy.

Planting a tree will help shade your house from the hot sun, and it will make oxygen to help us breathe.

Recycling things like paper, plastic, and soda cans helps save energy. Factories use less energy to make products from recycled materials.

Source: <http://www.alliantenergykids.com>