

Date:19.06.2009



ENVIRONMENT & INNOVATION:

Theme 2007/2009

climate change:

let's save energy!

Final Project Report

Environment and Innovation

1. Delegation Identification

Country:	TURKEY
Organisation:	
Project Name:	Environment & Innovation - A project to promote schools' innovative environmental problem-solving By International Eco-Schools Programme (FEE) in partnership with Toyota Motor Europe
Activity Name:	
Date:	

2. School Identification

School Name / Group of Schools Name:	Private Fenerbahce Sport Club College
Address:	Uslu neighbourhood yunus street number:1 Kayisdagi ATASEHIR/İSTANBUL
Region:	ATASEHIR
Telephone:	0216 466 62 00
Fax:	0216 466 62 09
E-mail:	info@fbegitim.com
Website or Project website:	www.fenerbahce.k12.tr
Contact person for this project:	Sevgi Döndü Özgür Akçetin
- Position in school	Fizik Öğretmeni
- Direct email	sevgidonu@mynet.com ozgurakcetin@mynet.com
- Direct telephone	05378383293
Type of school (kindergarten, primary,	kindergarten, primary and high school

secondary, etc..) :	
Age of students involved in the project:	8 to 15
Number of students directly involved in the project:	450 (the whole school involved), 50 students are made decisions , prepared and practised the Project. (They are Eco-club and standby club members.)
Total of students in the School:	450
Number of staff/teachers directly involved in the Project:	58 students supported us directly or indirectly (about the motivation of students, the coherence of their lessons to their yearly plans and their presentation to the other students.
Total of staff/teachers in the School:	58
Other participants involved (individuals and/or organizations) and the number of them:	<p>Within the school-the public relations officer.</p> <p>Outside the school, we worked with TURMEPA and TURÇEK.</p> <p>We had the vast people get the Project by the help of Prof.Dr. Levent Sevgi, Prof.Dr. Barbaros Gönenci from İstanbul University and Betül Selcen Özer from TURMEPA.</p>
The other participants role:	<p>We were supported by our school's public relations department. So our Project was publicized periodically in Kadıköy Municipality newspaper, TURMEPA bulletin, on Fenerbahçe TV and magazine by the public relations unit. We described our Project as the lecturer at the national akasya conference, which was organised by Prof.Gönenci, after the professor Dr. Barbaros Gönenci had voted our Project.</p>
Rural / Urban setting:	<input type="checkbox"/> urban
Other relevant information: (maximum 100 words)	

3. Project Identification

Project Title	Wastage of electrical energy
Project keywords	Standby, efficient, waste
Project Summary1) (maximum 100 words)	<p>Project Summary The Project aimed to encourage children to think creatively about how do they use efficient of electric energy in their life .</p> <p>The Project has been planned in five phases.</p> <p>Phase 1; Definition of problems: Consumption of electric energy by stand by position of electronic devices.</p> <p>Phase 2 ; Choosing electronic devices generally on stand by position in our school Project machines are fastened so we cant turn off it by reaching .When we turn off it with remote control we suppose that it doesn't work but actually it pass stand by mode .</p> <p>Phase 3 ; Measuring the consumption of electric energy by pilot Project machine on stand by mode.</p> <p>Phase 4; Adding our simple device that includes extra key and command which is applied our pilot Project machine except turn off without stand by.</p> <p>Phase 5; Sharing the results of our Project to other children .</p> <p>The project has been a huge success , the local press Kadikoy Municipality's and Fenerbahce 's have reported on their newspaper and magazines. Also we have reached to people by FB TV.</p>

Introduction and outline of the challenge addressed by your schools or group of schools.2)

Before starting this project, our students don't have any idea about this project and standby mode. Causing waste of energy, redundant carbon dioxide free are the effects which we never realize before. With the development of the study, it was possible to measure of waste appeared without make a concession. Apart from; we answered that do electrical tools consume energy or money which we discussed first. If we don't get out houses' electrical tools in a stand by mode, we can see the result which is approximately %10 on our bills.

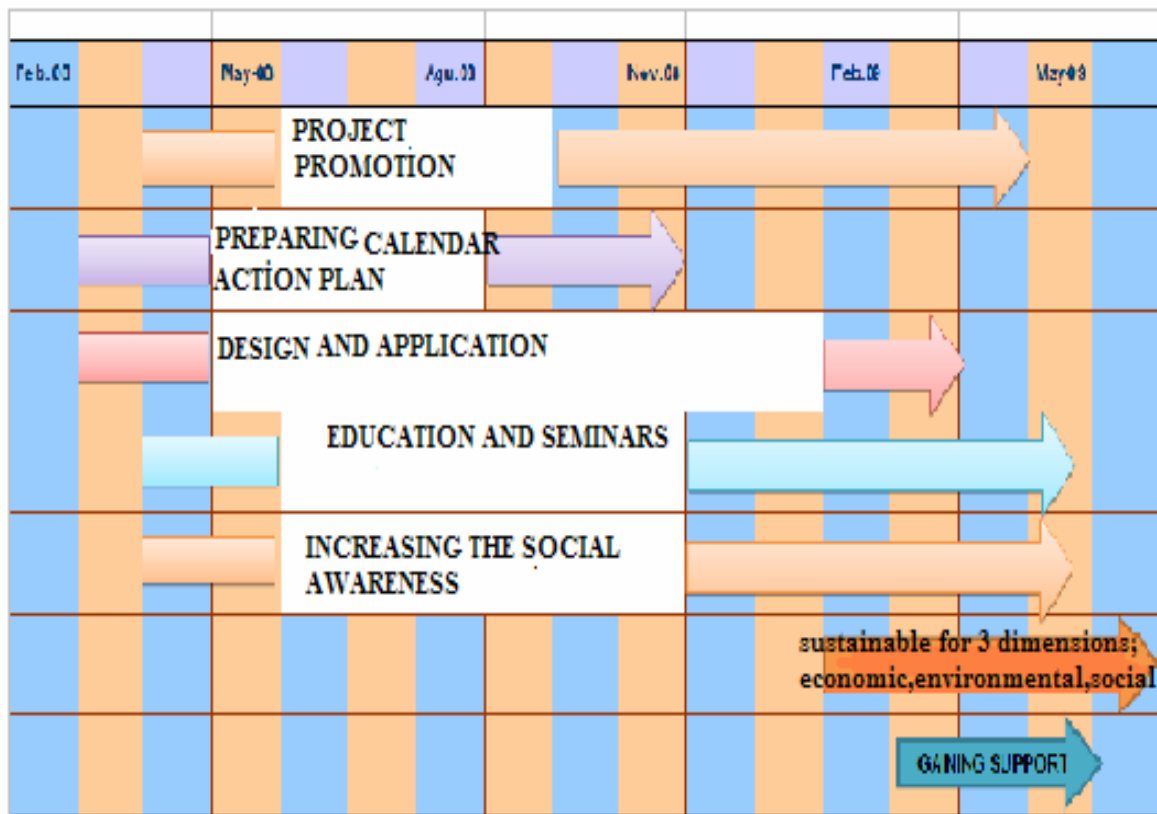
As a result, this value which seems to little, contains the electric consumption of %10.

AYEDAŞ				AYEDAŞ			
ELEKTRİK FATURASI				ELEKTRİK FATURASI			
İSTANBUL ANADOLU YAKASI ELEKTRİK DAĞITIM A.Ş. GENEL MÜDÜRLÜĞÜ				İSTANBUL ANADOLU YAKASI ELEKTRİK DAĞITIM A.Ş. GENEL MÜDÜRLÜĞÜ			
Bağlantı No: 34544 Maltepe / İST. KÜÇÜKYALI YD.481044801 Tel:0216 457 49 00 (20Hl)				Bağlantı No: 34544 Maltepe / İST. KÜÇÜKYALI YD.481044801 Tel:0216 457 49 00 (20Hl)			
Fatura Tarihi: 24.12.2008 Seri / Sıra No: Y 471068				Fatura Tarihi: 24.12.2008 Seri / Sıra No: AA 448192			
Tesisat No.: 1204420				Tesisat No.: 1204420			
Bölge / Kurul Güç (M)	Karme No.	Sıra No.	Fatura No.	Çarpan			
Abone Grubu	Tarihi Kodu		508111				
Adis Trafik Önerisi	Çarpan	İlk Okuma Tarihi	Son Okuma Tarihi				
01.00.00.00.00	1.00	23.11.2008	24.12.2008				
Ort. Güç (kW)	İlk Sonrakı Okuma Dönemi		Ort. Güç (kW)				
8.62	23.11.2008		24.12.2008				
Adı Soyadı: ZAHRE DONDU				Adı Soyadı: ZAHRE DONDU			
Adres: KAVAKLI SK EKŞİOĞLU ST B. BLK NO 17 D 35				Adres: KAVAKLI SK EKŞİOĞLU ST B. BLK NO 17 D 35			
Müşteri V.D. No:				Müşteri V.D. No:			
Pasivde Satış Bedeli	Aktif Saygı	Endüktif Reak. Saygı	Kapasitif Reak. Saygı	Pasivde Satış Bedeli	Aktif Saygı	Endüktif Reak. Saygı	Kapasitif Reak. Saygı
Saygı Marka / Tip	0631777	0,000	0,000	Saygı Marka / Tip	0631777	0,000	0,000
İlk Endeksi	2.108,000	0,000	0,000	İlk Endeksi	2.398,000	0,000	0,000
Son Endeksi	2.398,000	0,000	0,000	Son Endeksi	2.648,000	0,000	0,000
Tüketim Miktarı (kWh)	290,000			Tüketim Miktarı (kWh)	250,000		
İlave/Tenzil Tüketim				İlave/Tenzil Tüketim			
Birim Fiyat (YTL)	0,168488			Birim Fiyat (YTL)	0,168488		
Tüketim Bedeli (YTL) (1)	48,87			Tüketim Bedeli (YTL) (1)	42,11		
Zaman Dilimi	T1 (08:00-17:00)	T2 (17:00-22:00)	T3 (22:00-06:00)	Zaman Dilimi	T1 (08:00-17:00)	T2 (17:00-22:00)	T3 (22:00-06:00)
İlk Endeksi	0,000	0,000	0,000	İlk Endeksi	0,000	0,000	0,000
Son Endeksi	0,000	0,000	0,000	Son Endeksi	0,000	0,000	0,000
Tüketim Miktarı (kWh)				Tüketim Miktarı (kWh)			
İlave/Tenzil Tüketim				İlave/Tenzil Tüketim			
Birim Fiyat (YTL)				Birim Fiyat (YTL)			
Tüketim Bedeli (YTL) (1)				Tüketim Bedeli (YTL) (1)			
Birim Fiyat (YTL)	0,0010802	0,0042009	0,0214483	Birim Fiyat (YTL)	0,0018	0,0042	0,021441
Tutar (YTL)	0,46	1,92	6,22	Tutar (YTL)	0,40	1,65	5,26
Toplam (1+2+3+4)	58,77			Toplam (1+2+3+4)	48,92		
Enerji Fianu	0,45			Enerji Fianu	0,42		
Emtiazda Kapasite Sad.				Emtiazda Kapasite Sad.			
TRT Payı	0,98			TRT Payı	0,84		
Trafik Kaybı (kWh)				Trafik Kaybı (kWh)			
Top. Tüketim (kWh)	290,000		2,44	Top. Tüketim (kWh)	250,000		2,11
Güç Bedeli			10,32	Güç Bedeli			9,41
Güç Ayrım Bedeli				Güç Ayrım Bedeli			
Önceki Ayardan Devir			71,60	Önceki Ayardan Devir			61,70
Sıç. Ayar Bedeli				Sıç. Ayar Bedeli			
Son Ödeme Tarihi	03.12.2008	Ödenecek Tutar (YTL)	71,60	Son Ödeme Tarihi	08.01.2009	Ödenecek Tutar (YTL)	61,70
ÖDEMELERİNİZ İZİN YÜZDE BELİRTİLEN BANKA HESAPLARINA İZİN YERİNE YAPILABİLİR.				ÖDEMELERİNİZ İZİN YÜZDE BELİRTİLEN BANKA HESAPLARINA İZİN YERİNE YAPILABİLİR.			
KESİNLİKLE ELDEN ÖDEME YAPMAYINIZ.				KESİNLİKLE ELDEN ÖDEME YAPMAYINIZ.			
Mesaj:				Mesaj:			
Sıç. Abonemiz, önceki dönemlerden geçirelim.....FATURA..... YTL				Sıç. Abonemiz, önceki dönemlerden geçirelim.....FATURA..... YTL			
Borcunuz vardır. Ödemediğiniz takdirde enerjiniz kesilecektir.				Borcunuz vardır. Ödemediğiniz takdirde enerjiniz kesilecektir.			
AYEDAŞ-İSTANBUL ANADOLU YAKASI ELEKTRİK DAĞITIM A.Ş. KÜÇÜKYALI YD.481044801 Adres Tarihi: 19/03/2008-2009				AYEDAŞ-İSTANBUL ANADOLU YAKASI ELEKTRİK DAĞITIM A.Ş. KÜÇÜKYALI YD.481044801 Adres Tarihi: 19/03/2008-2009			

%10 efficient

4. Project Description

Project description 3)



Phase 1 Description and importance of electric energy: electric energy's production, divergent budget, production lines, non-renewable resource's consumption rates and fossil which is fountain of consumption are study on purchase of us and nature. How can we use more effective to electric energy and how can we put away stand by mode were our questions and we wanted to find the answers. December 2007

Phase 2;

First of all, we studied on 37 screen (Sony) which hasn't got feeler on it. We quantified electric energy consumption results while it was on stand by mode. This ratio was 1/3 and it was so important. We did this for only one T.V nevertheless there are 2.550.607 home and it has at least one TV which is on stand by mode and we agreed that it was quite extravagance! March 2008 We sent this to Sezil ÖZKOCA for participate to Enviroment and Innovative Onservation. After this,we deserved to get Toyota motor European's budget which is sponsor on this Project. We started to this project on our school's projection apparatus which are most on stand by mode. March-2009

Phase 3; Consumption of electrical energy of Projection machine on standby and online mode.

Price of consumption TL 0.165809

	time	consumption	kw/min	kw/h	kw/day	kw/month	Kw/year	TL/month	TL/year
Online	144.00	0.505	0.003507	0.210417	5.05	151.5	1818	25.12006	301.4408
Standby	100.00	0.011	0.00011	0.0066	0.1584	4.752	57.024	0.787924	9.455092

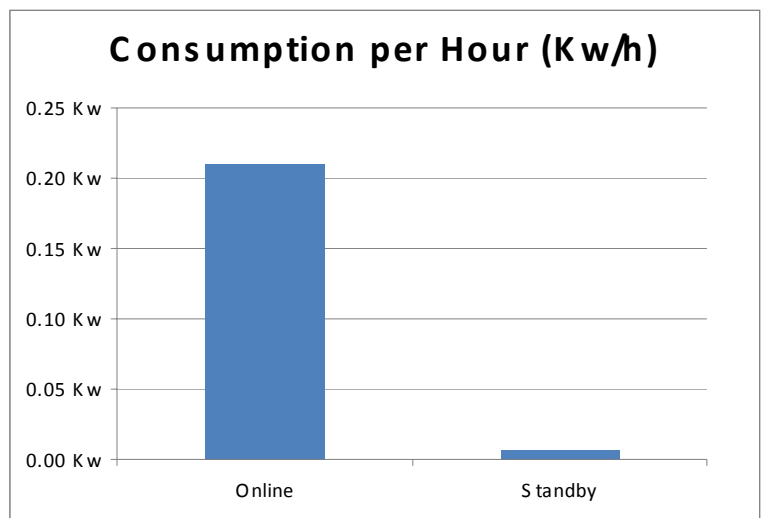
ONLINE

DATE	Hour	T0	T1	T2	T3	T4	P
15/4/2009	14:37	1.681	1.001	0.257	0.423	0.000	0.000
	15:26	1.840	1.160	0.257	0.423	0.000	0.220
	16:13	2.011	1.331	0.257	0.423	0.000	0.220
	17:01	2.186	1.501	0.262	0.423	0.000	0.220

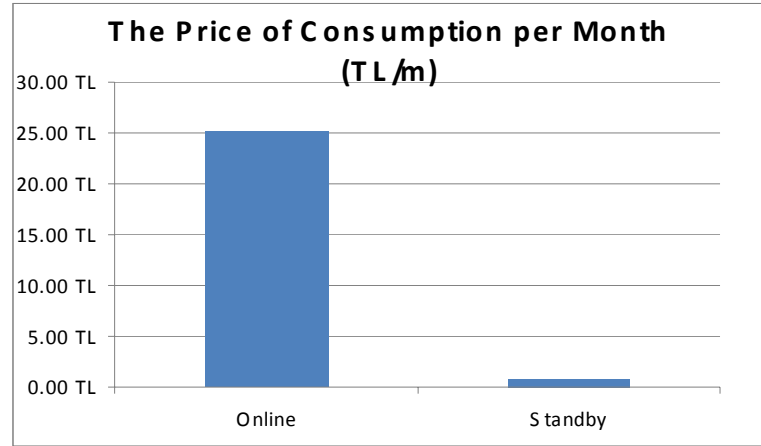
STANDBY

Date	Hour	T0	T1	T2	T3	T4	P
15/4/2009	11:49	1.670	0.990	0.257	0.423	0.000	0.000
	12:33	1.675	0.995	0.257	0.423	0.000	0.220
	12:51	1.677	0.997	0.257	0.423	0.000	0.220
	13:29	1.681	1.001	0.257	0.423	0.000	0.220

Consumption per hour (Kw/h)	
Online	0.210416667
Standby	0.0066



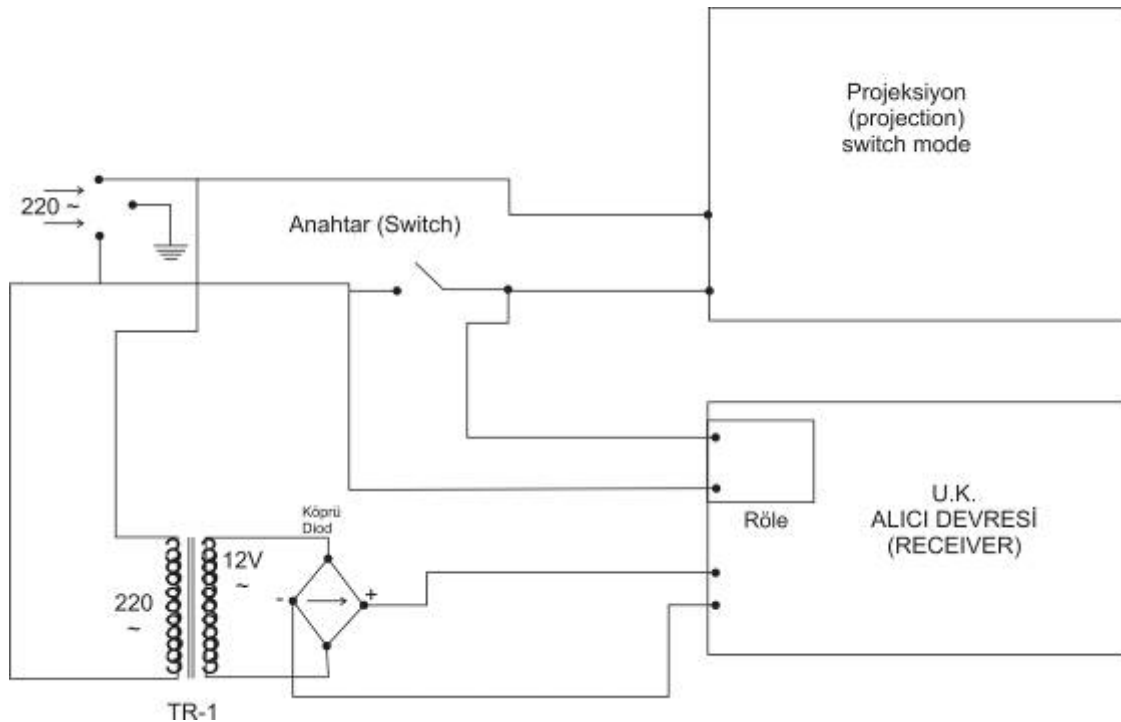
Consumption per Month (Kw/m)	
Online	151.5
Standby	4.752



Our School's Consumption of Projections (33 piece) per Month (Kw/month)	
Online	828.9620955 TL
Standby	26.00150414 TL Waste

Phase 4;

We achieved to switch the device off directly by remote control without using standby mode. We used current which is installed into the projection device and the current disconnected the connection directly. We also used RF receiver which controls the current. April 2009



Phase 5;

We shared our results to increase the social awareness on the subject.

1	<p>The presentations at school.</p> <p>We attended National Akasya Summit and we presented our Project. Akasya Conference is in cooperation with TURÇEK (Cooperation of Turkish environmental and woodlands protection society) and Sabancı University social sensitivity Project since 2002.</p>	<p>18/ 4/ 2008- 20/ 4/ 2008</p>	<p>300 students.</p> <p>Cooperation of Turkish Environmental and woodlands protection society (TURÇEK)and Sabancı University Social Sensitivity Projects.We created awareness about our subject on the academicians</p>
2	<p>We met TURMEPA and also we shared our project in the 6th of October 2008. We realized that we should share our project with the other school's students and we decided to start peer education. We gave seminars at 3 different schools to increase the social awareness about the subject.</p> <p>We attended Hayati Oktay's TV programme on FB TV. Our Project is published on the newspaper -which is prepared by Kadıköy Municipality-, Turmepa Bulletin and FB magazines.</p>	<p>21.11.2008</p> <p>22.12.2008</p> <p>25.03.2009</p> <p>21 5 2008</p>	<p>Notre Dame de Sion high school</p> <p>Robert College</p> <p>Istanbul Ted College</p> <p>170 children</p>

Our budget

Projection	
Technical service	880 € Toyota Motor
Poster	
Bulletin / Leaflet	
Presents given to the students	700 € Fenerbahçe sports club schools
Transportation	
Communication	

5. Project Implementation**Innovation: 4)**

How your project was innovative and unique in solving the problem or challenge mentioned?

Considering the point of view at the standby Project, it is the innovative part of this Project to control the unnecessary consuming of the electrical energy.

In our education system, In physics, Science and Technology, Social Science and Life Studies subjects, the topics of natural resources ,energy, electrical energy and the use of it have been given importance a lot.

However, in no books, the topics of using the energy efficiently and the damage given by the electronical devices at the "standby mode" are mentioned.

In our school, we give the utmost importance on this issue in our lessons comprehensively. We get our students practise this topic especially at home. Therefore, this is an innovative education attitude.

If person is hypersensitive, for environment, already they can turn the lights off when they go out the room. They can switch off the TV when they don't deal with TV. Because they know all of them are wastes when they don't use these electric devices. But standby mode is new meaning for people because they don't know the percentage of consumption of electrical energy on standby mode and affect of this mode on economical, ecological, and social.

Does standby power waste much money or energy?

Because of the continuous nature of standby power used by the many different household appliances can accumulate to become a significant part of your household energy consumption. In fact these small amounts can add up to10% of your household's electricity consumption

Implementation outcome-5)

Which were the results obtained?

What are the major differences between before and after implementation of your project?

Implementation outcome the most important difference: children do not love, claim and protect which they don't love. With this study we highlight the importance of energy resources by introducing the electrical energy. In the end of the study the most important difference is children learnt not to be waste the electricity and be a model of this.

Teamwork6)

-In this study our management supports us in all steps especially in planning. When our budget not to obviate, Fenerbahçe sports club schools give us extra allowance.

-Service buses (ikizler tur) support us for our transportation.

-Exchange of letters which are sent to public education written by school management during the peer education between the schools.

- During the eco club and Project, stand by club's all workout study was carry out with volunters.

-Our Project, published on Kadıköy news TURMEPA bulletin and Fenerbahçe TV. Our school's public relation supported us to be in Fenerbahçe magazine periodically.

-Prof. Dr. Barboros GÖNENÇGİL, who is the organizer of International Akasya conference, gave the appovel to our project and invited us as speaker to the conference.

-Prof. Dr. Levent SEVGİ helped to the Science Project of children.

-Betül Selcen ÖZER, who is the organizer of Turmepa, helped with "Peer Education between schools" for the awareness of the students.

-E-Mes helped fort he adaptation of electronic device to the projection equipment.

Effectiveness

The budget, by Toyota Motors Europe, was sufficient for our Project. On the other hand, communication and transportation expenses for the Project were paid by Özel Fenerbahçe Sports Club School (700 Euro). Our Project follwed the path of our plan.

Environmental and social impact

The children have encouraged their friends to think about how they use electrical energy efficiently. They have warned the young generation and their parents, neighbors to change their life styles. Moreover the most innovative in that we decided to advance guard to the electronic producers to take an action.

Our targets :

- **To change aspect of electronic devices on standby mode**
- **To prevent waste of electric energy**
- **To change our life style and consuming habits**
- **Effective application of sources for electricity production**

We share our survey and measurement results with the help of "standby club". This organization has done several studies in terms of distribution of news letters and awareness.

Other targets:

- **Improving children's health by emitting the electromagnetic waves which causes from standby mode computers, machines, phones, TV etc.**
- **Clear away 5gr of CO2 emission in 1 hour of TV's at standby position.**
- **Using of resources efficiently which are used for electric production.**
- **Clear away or minimize the emission of electricity production.**
- **To lengthen the life of the electrical equipment**
- **To reduce the electronic waste**
- **To claim our future**
- **To carry out "Peer Education" and environmental studies between schools.**

Social benefits

- **To gain the conscious of environmental protection.**
 - **Every child in the study is a member of a group and uses his/her own Project.**
- Therefore, the student becomes more conscious on the environment and protects the nature he/she knows and loves. He/she gets included in the team and learns how to work and conclude a topic sensibly.**

***That Project develops the ability of the students at preparing and doing presentations. So they manage to communicate better and to become more self-confident.**

We are supposed to be a good example to the society thoroughly in terms of the aims of our project.

How can this project be used by other Eco-Schools? Any advise to schools which would be interested in implementing a similar project?

- We gathered with Eco school students and brainstormed on the energy issue. Then, we discussed what consumers could do about the energy efficiency. We

selected the topic as "standby" and prepared a series of activity agenda on that issue.

- The topics called "energy efficiency and standby" were integrated to the lessons .Then; the activities were done in order to change the life attitudes of the students.
- All the researches throughout the working agenda managed to reach the broad communities by cooperating with the nongovernmental organisations. The whole procedure was also supported by the mass media.
- The volunteer members of "eco school and standby" clubs were awarded in the traditional summer feast by presents which were bought from our school project budget,

How sustainable is the solution found? How will it be maintained in the future?

Our project is sustainable because it is oriented on the reasonable consumption and the energy efficiency. More importantly, our project concerns all the humankind. The whole efficiency is essential on the production and consumption process of electrical energy. Additionally, our project will decrease gradually the world's problem of the electronically waste. Moreover, our Project will increase the expiration date of the electronical devices.

- By means of this work, children will be able to understand the reason why the sustainable future and caring about the environment are so important.
- Via this Project, the most important part of sustainability is changing life habits of the group members and the incline on their conscience.
- This Project also enables the students as consumers to answer the questions of what they have done today and what they are going to do in the future.
- Nowadays, almost everybody switches off the lights before they go out, turns off the TVs they don't watch or changes the lights with more economical ones. Therefore, they worry about the topics of energy saving which has already been known by every person. However, how can the ignorant people, about the damage electronical devices give when they are on the "standby mode" help saving? What if TV, satellite receiver and music set in our house are passed only to the "standby mode" with a remote control. Furthermore, what can we do when washing machine and dishwasher are automatically on the "standby mode" after they are finished? Thus, our Project that finds solutions to all these problems can be sustained in the scope economical, social and ecological.

6. Dissemination Strategy

Our Project is displayed on our school website. You can also find our Project on the following web addresses.

www.akasyaplatform.org/sunumlar_pdf/fb_koleji.pdf
[www.cevreciyiz.com/biz ve.../default.aspx?...](http://www.cevreciyiz.com/biz_ve.../default.aspx?...)

Date:19.06.2009



Traditional Welcome to Summer Party



The Private Gebze High School with the help of Cooperation of The high technology institute of Gebze, Kocaeli University and Tübitak Marmara Searching Center at 17 MAY 2008.
This prize will be encouraged us, and proved the scientific benefit of our project



National Akasya Conference



Equal education between the schools.

