

Date:



## ENVIRONMENT & INNOVATION:

Theme 2007/2009

climate change:

let's save energy!

## Final Project Report

### Environment and Innovation

#### 1. Delegation Identification

<b>Country:</b>	TURKEY
<b>Organisation:</b>	TURÇEV-ECO SCHOOLS PROGRAMME
<b>Project Name:</b>	Environment & Innovation - A project to promote schools' innovative environmental problem-solving By International Eco-Schools Programme (FEE) in partnership with Toyota Motor Europe
<b>Activity Name:</b>	WE SAVE HEAT,ELECTRICITY AND WATER; WE LEAVE NEXT GENERATIONS A BETTER FUTURE!
<b>Date:</b>	30.06.2009

#### 2. School Identification

<b>School Name / Group of Schools Name:</b>	İSTEK ÖZEL BELDE İLKÖĞRETİM OKULU
<b>Address:</b>	Burhaniye Mah. Gümüşyolu Cad.Rasimağa Sok No: 5 Nakkaştepe –Üsküdar/ İSTANBUL
<b>Region:</b>	ÜSKÜDAR-İSTANBUL
<b>Telephone:</b>	0216-495 96 23
<b>Fax:</b>	0216 341 72 71
<b>E-mail:</b>	beldeilk@istek.org.tr
<b>Website or Project website:</b>	www.istek.org.tr
<b>Contact person for this project:</b>	<b>Banu CENGİZ</b>
<b>- Position in school</b>	<b>Eco-School Coordinator Teacher-Head of Science and Technology Department</b>
<b>- Direct email</b>	<b>bcengiz@istek.org.tr</b>
<b>- Direct telephone</b>	<b>0216-496 96 23-24 dahili :1710</b>

<b>Type of school (kindergarten, primary, secondary, etc.) :</b>	<b>Primary School</b>
<b>Age of students involved in the project:</b>	All Primary School students were involved in the project. As a result, students at the ages between 7-14, are involved in our project.
<b>Number of students directly involved in the project:</b>	13 students who are the members of Science and Technology Club were directly involved in the project.
<b>Total of students in the School:</b>	281
<b>Number of staff/teachers directly involved in the Project:</b>	35 Primary School Teachers
<b>Total of staff/teachers in the School:</b>	35 Primary School Teachers
<b>Other participants involved (individuals and/or organizations) and the number of them:</b>	<p>Within the school :</p> <ul style="list-style-type: none"> <li>-Kemal ŞİRİN : Laboratory Teacher</li> <li>-Parent Teacher Association:9 people</li> <li>-Pinar TUNCAY : School's Dining Hall Manager</li> <li>-School's Dining Hall Staff: 8 people</li> </ul> <p>Outside the school :</p> <ul style="list-style-type: none"> <li>-Yeşilova Engineering</li> <li>-The Management of Catering Company Kayabeyoğlu</li> </ul>
<b>The other participants role:</b>	<p>-Kemal ŞİRİN: He assisted the students for the determination and calculation of water and electricity spent in the dining hall and tea corner.</p> <p>-Parent Teacher Association: were responsible from the correspondences and communications between the School and General Management of İSTEK Foundation for taking the necessary permissions for the usage of polycarbon trays and thermostatic valves within school.</p> <p>-School's Dining Hall Manager Pinar TUNCAY: was responsible from the control of the washing machines , the education of students and dining hall staff for obtaining the right habits for water and electrical energy conservation .</p> <p>-School's Dining Hall Staff: were responsible from filling in the observation charts under the control of relevant team members ,for obtaining the datas which will be used to obtain statistical results.</p> <p>-The Management of Catering Company Kayabeyoğlu : were responsible from the supply of polycarbon trays</p> <p>-Yeşilova Engineering : They supplied thermostatic radiator valves and the mounting of these.</p>
<b>Rural / Urban setting:</b>	Urban
<b>Other relevant information: (maximum 100 words)</b>	Our school is one of eight schools owned and administered by the same Foundation. We have a campus building including Kindergarten, Primary School , High School and Science School buildings. There are 562 students being educated in our school.

### 3. Project Identification

<b>Project Title</b>	<b>WE SAVE HEAT,ELECTRICITY AND WATER WE LEAVE NEXT GENERATIONS A BETTER FUTURE!</b>
<b>Project keywords</b>	Energy saving, global warming , electricity , water , heat, eco-schools , team work.
<b>Project Summary (maximum 100 words)</b>	<p>As İSTEK Belde Primary School teachers and students , we haven't considered this project as only an indoor project ,but as the continuity of our mission around Üsküdar area (where our school is located)since 4 years , we believed we will have a big role for the environmental education around our school too.</p> <p>Firstly,we determined the places where we could save energy in our school building. We provided thermostatic valves to the radiators in the school as the central heating system didn't provide the necessary control of the heat in the classes with different locations. We established a team –named after RED TEAM – for control of the valves and windows after the necessary classroom ventilations were established.</p> <p>In order to save water and electrical energy in the School's Dining Hall, we established a team named after GREEN TEAM .Green Team determined the quantities of water and energy spent during one cycle of the washing machines in our two separate Dining Halls.Then they prepared some charts to calculate our monthly consumptions and found some solutions to save water and electricity.</p> <p>Green team tried to reduce the amount of dishes by directing their friends to eat the same kind of food in the same plates. They were in cooperation with the dining hall staff , for preventing the usage of unnecessary spoons and knives by checking the daily menus.</p> <p>At the second stage of the project , the usage of polycarbon trays in the dining halls were started by the support of Parent Teacher Association and Catering Company,Kayabeyoğlu. As a result of this , the dishes occupying too much place in the washing machine were replaced by the trays occupying less place and so the usage of washing machines were reduced. The effects of this project on the conservation of water and electricity were determined by doing necessary observations and obtaining datas . The statistical results were announced to the school too.</p> <p>The target of White team was to establish a consciousness in the school, for turning off the unnecessary lights , by using the entertaining and educating stickers. As the stickers were more permanent than the slogans on the notice boards, their project was very effective.</p> <p>In order to provide the wide spread of our project ,our students took the stickers to their homes and warned their parents for the economical usage of water and electricity in their daily lives. They haven't only saved a lot of money for our school but they have also changed their parents' behavior permanently which will be beneficial for the public awareness in the long term.</p>

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

**(Please submit a description of the problems that your project addressed. How was the situation prior to the project? )**

**(maximum 1 page)**

We have a campus including Kindergarten, Primary School , High School and Science School buildings. In a building , where 562 students are being educated , there are huge amounts of energy losses and expenditures ,especially in lightning, heating and usage of water.It is obvious that it is not possible to provide a change with personal efforts in such a campus building. The only way to decrease these expenditures and losses is to establish a team soul within the school, providing each school member and student to feel and work as the most important part of this team and to establish a common consciousness within school.

The most important problems we have determined in our school are as given below:

-Using a central heating system which provides the same heating capacity to all classes and rooms of the school , although the heating necessities of each classroom is different than the others because of their different locations in the building.

-Leaving the lights on in the classrooms and teachers rooms all day long causes a huge energy loss.

and

-The energy and water losses caused by two industrial type washing machines which are being used in school's dining halls , approximately 140 times a week.

By bringing three different projects into life ,we aimed to provide a serious reduction on the usage of heat and electrical energies in our school, as well as reducing the water usage in the school's dining hall.The expected results of these projects were as given below:

-We will be closer to the mission we have gained by receiving a Green Flag from Eco-Schools 3 years ago.

-As the losses in fuel, electricity and water usages will be prevented ,a big materialistic profit will be obtained too,which will help us to realize our future projects within school.

-By spending less energy ,the contribution to our country's economy will be possible.

-As a result of less energy usage ,the factors effecting the Global Warming will be reduced.

-A general consciousness will be obtained through all students that the energy sources in our world are not endless and the problems that our world will face in the near future will be very serious unless any cautions are taken.

-It will be possible for each student to apply the habits they used to learn at school (such as controlling the valves on the radiators ,turning off the electrical switches in the classrooms that are not used and preventing usage of unnecessary forks , knives, spoons and glasses) to their daily lives , homes and environments. This will also cause a social consciousness which is the long term target of our project.

#### 4. Project Description

<p><b>Project description</b></p> <p><b>Please include also the following points:</b></p> <ul style="list-style-type: none"> <li>. Phases of the project;</li> <li>. Calendar/timing of the school project;</li> <li>. Financial information / budget needed.</li> </ul> <p><b>(maximum 2 pages)</b></p>	<p>Stages of the project:</p> <p>This project contains three sub projects .Firstly ,three different teams were obtained from the students in the school .</p> <p>The team working on saving electrical energy by controlling the electrical switches was named as "WHITE TEAM".</p> <p>The team working on saving heat energy by controlling the valves on the radiators , was named as "RED TEAM".</p> <p>The team working on saving water and electrical energy within school's dining hall , was named as "GREEN TEAM".</p> <p>In each team there were an eco-team teacher and an eco-team leader student and the teams worked under the control of these teachers and leaders. Also ,there was a cooperation between all teams and they supported each other. At the same time , the motivation of all teams were increased by providing a competitive spirit.</p> <p>The target of White team was to establish a consciousness in the school, for turning off the unnecessary lights , by using the entertaining and educating stickers. When compared to the slogans on the notice boards , these stickers placed on the electric push buttons were more permanent and more effective. In addition to this , by taking the support of Parent Teacher Association and the School Management ,they provided the usage of photocell lamps starting from some common areas (such as toilets, some classrooms,etc.) of the school.</p> <p>The target of Red Team was to reduce the energy loss caused by central heating system in our school. As a result of the architectural differences in our school building(location in the building , size ,etc.), in some classrooms and teachers rooms , even in cold winter days, windows were being opened because of high temperature. Within this connection , by using thermostatic valves on the radiators , we believed we could reduce this loss. The team leaders were responsible from the determination and persecution of appropriate temperature levels of each classroom and tuning of the radiators to these values. Also controlling and closing the windows which were opened during the breaks were under the responsibility of this team .They warned their friends for not leaving the windows open when the necessary ventilation was supplied.</p> <p>The Green Team was responsible from the conservation of water and energy in the dining halls. In the dining halls of our school , there are two industrial type washing machines and it was determined by the team students that before the project was started ,these machines were working approximately 140 times a week. <b>(Attachment-1 and Attachment-2 –"Washing Machine Usage Charts for October" are given as example)</b></p> <p>When we consider the effects of Global Warming on our World , the loss of electricity and water in our school's dining hall seemed as a serious problem to us. The target of Green team was to reduce the usage of water and electricity in the dining halls.In order to establish this ,Green Team aimed to reduce the amount of the dishes. At the first stage of the project ,they directed their friends to take the different kind of foods</p>
--	---

which can be eaten together ,in the same plates. They were also in cooperation with the dining hall staff , for preventing the usage of unnecessary spoons and knives by checking the daily menus. By taking the support of Pinar TUNCAY, School's Dining Hall Manager, they gave a seminar for the education of school's dining hall staff.

As a result of these studies, less usage of washing machines were obtained and this reduction provided a huge conservation in the usage of water and electricity. All through the project ,Green team collected datas belonging to the usage of washing machines and these datas showed us how much water and electricity were conserved by doing this project. These statistical results were announced to the students and teachers in the school and a common consciousness was provided.

At the second stage of the project , the usage of polycarbon trays in the dining halls started by the support of Parent Teacher Association and Catering Company,Kayabeyoğlu. As a result of this , the dishes occupying too much place in the washing machines were replaced by the trays occupying less place and so the usage of washing machines reduced. The effects of this project on the conservation of water and electricity were determined by doing necessary observations and by collecting datas.The statistical results were announced to the school again.**(Attachment 3 and Attachment 4-“Washing Machine Usage Charts for December” were given as example)**

In the end , the results of both stages were compared and shared with the General Management of İSTEK Foundation for the application of the same project to the other schools of İSTEK .

After the observations at the tea and coffee corner where tea and coffee are made and sold for school staff, we realized that the hand-washed glasses caused water waste in huge amount so we decided to measure the volume of daily water usage. After the observations, we concluded that a water saving dishwasher would reduce the use of water by 50%. Eventually, we bought a glass dishwasher to stop excessive water usage there. **(Attachment 5- Measurement and Calculation of water usage at the tea and coffee corner)**

Again ,“The Green Team” started another campaign, in which they aimed to collect old food frying-oil at the school canteen to convert it into biodiesel. All of our students involved in the project and they brought the used frying oil from their homes to the students of İstek Belde Science School, who were working on a project to transform old frying oil into biodiesel. The students who took part in this project created many slogans on used frying oil such as “save a drop of oil-save the environment!”, “Be aware- used frying oil is not waste”. These students shouted the slogans in the school corridors to get their friends' attention. They also succeeded in inviting an authorized person from “Ezici Biodiesel Group-An organisation working for the supply of a consciousness within the society for the transformation of Used Oil into Biodiesel” to our school to give a seminar presentation on the issue.



All the students and teachers in the school were responsible from all three projects. The efforts of students were supported by Parent Teacher Association, Dining Hall Manager & Staff and School Administration all through the projects. In the end of the project, a consciousness for conserving water, electrical and heat energy in our school was established. By sharing the statistical results of the project with the General Management of İSTEK Foundation, an opportunity for the application of the same project in other İSTEK Schools became a current issue.

The students who took part in this project haven't only saved a lot of money for our school but they have also changed their parents' behavior permanently which will be beneficial for the public awareness in the long term.

**P.S. Please, see the calendar and financial information in the attachment.**

**5. Project Implementation**

**Project Implementation:**

**Please include also the following points:**

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

**Implementation outcome-  
Which were the results obtained?  
What are the major differences between before and after implementation of your project?**

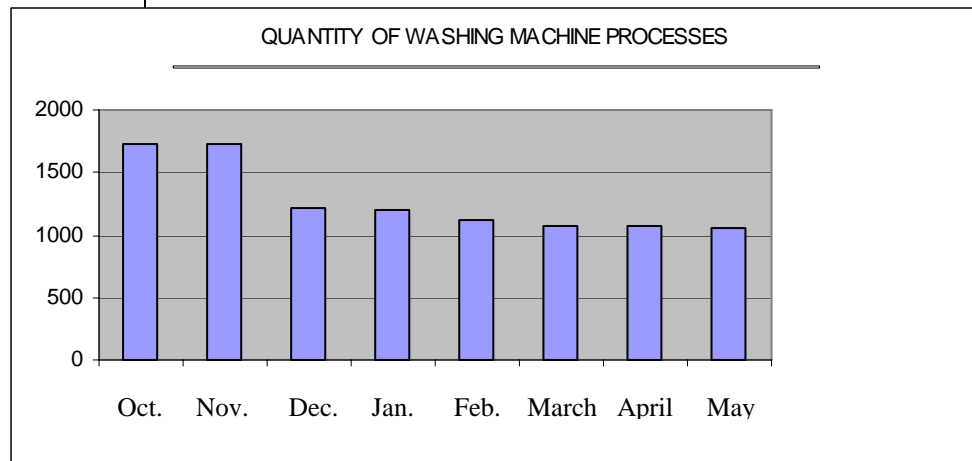
We believe our project was "innovative" in every step especially when the things we have done at the school dining hall are considered. Since the food is served separately at most of the companies and all-day schools, every individual grabs a tray, on which there are at least three dishes, a glass –in spite of the cans or bottles the drinks are already in, and knives, spoons and forks. However, with a little effort, by taking a few precautions; educating the people working in the kitchen and the people who eat there, changing the plastic/metal trays with polycarbonate ones, we have succeeded in saving water and electricity in great amounts. In addition to this, putting up a warning-"Turn it off when it is not necessary" underneath the electric push buttons has helped us a lot to decrease the electricity usage. Our students have been using those stickers at home, as well. Among the other schools of the İSTEK Foundation, Belde was the first school where thermostatic radiator valves were set up. When the administrators at the İSTEK Foundation will receive our gas bills next year ,they will have the opportunity to compare before and after values and they will be convinced for the supply of those valves to all of our schools in the upcoming academic year.

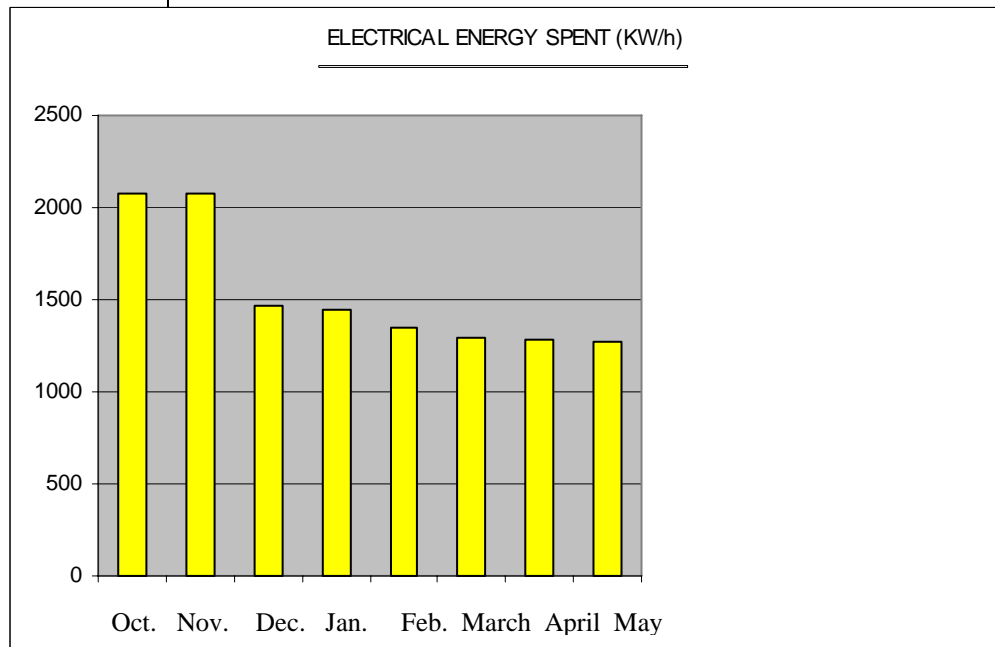
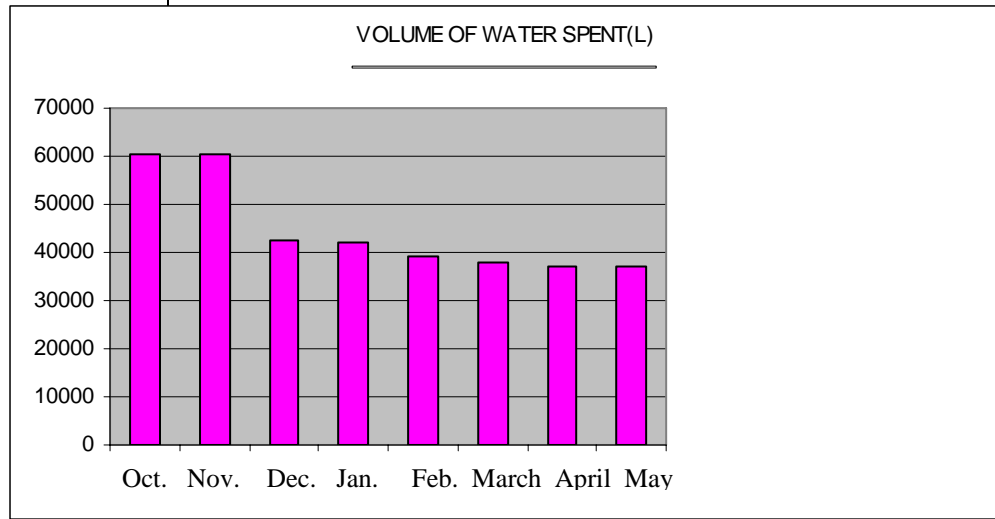
**WATER AND ELECRICTITY CONSERVATION AT THE SCHOOL DINING-HALL- RESULTS OF GREEN TEAM EFFORTS:**

Monthly water use charts for our two dining halls can be seen in attachments 1, 2 and 3 and 4. The reduction in water consumption is clear in the attachments. In October and in November the amount of water which was consumed at our school was a lot whereas in December, when we started our project it began to decrease. **(Attachment 6– October-May Charts)**

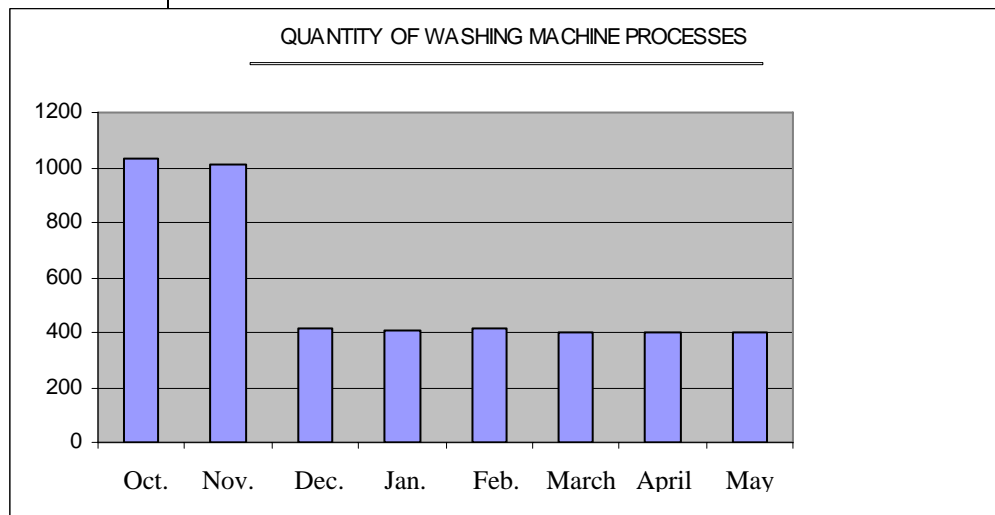
The graphics which were created and designed with the figures we measured throughout the year show the decrease very well.

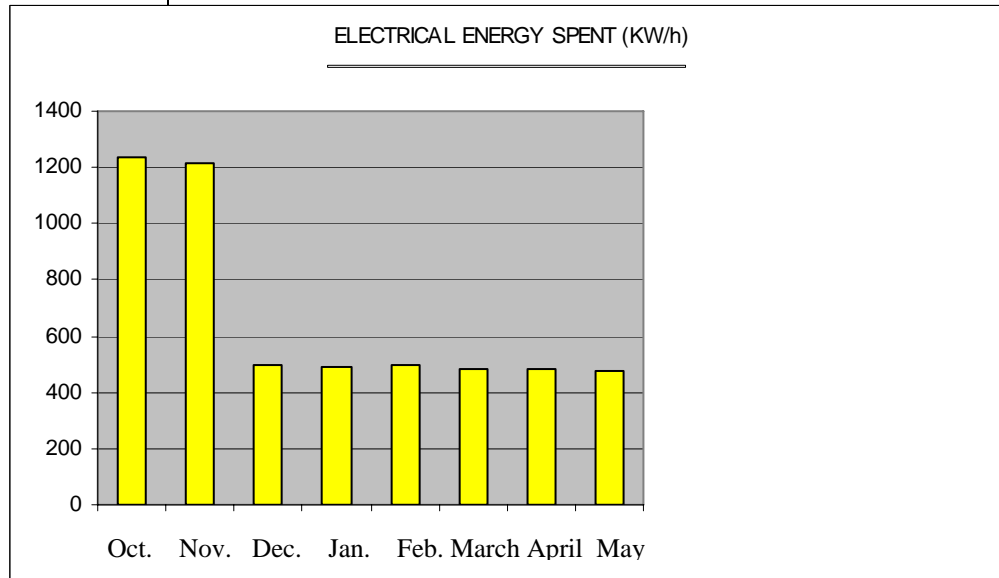
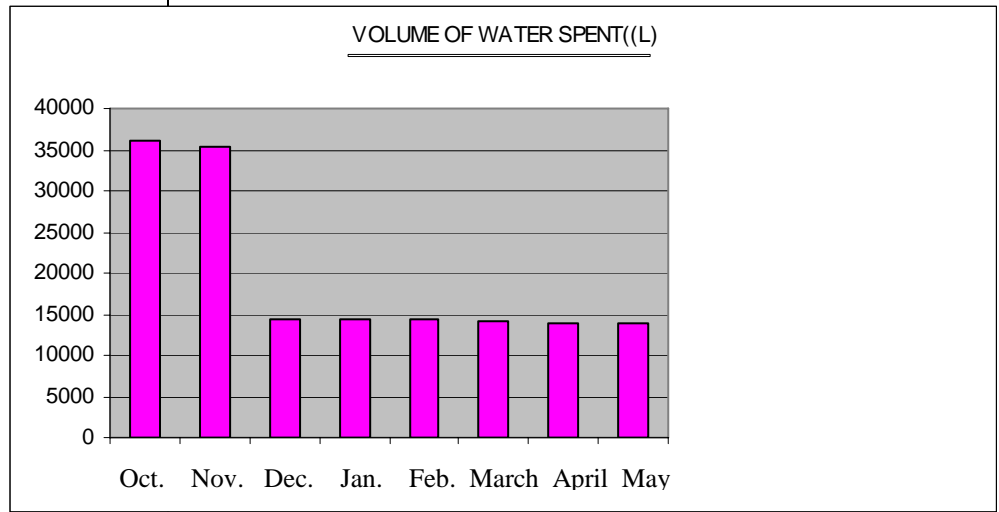
**2.GRADE DINING HALL RESULTS:**





**1.GRADE DINING HALL RESULTS:**





### **ENERGY CONSERVATION / ELECTRICITY SAVINGS- RESULTS OF WHITE TEAM EFFORTS:**

The members of "the white team" have also worked very effectively. When we compare the electricity bills before and after October, when the team started their project, energy conservation can easily be seen. Unfortunately, electricity bills do not show us some details - such as the amount of energy spent on lights, so we cannot tell the exact amount of energy by turning off the unnecessary lights in figures. Having observed students and teachers turning off the lights on sunny days; having noticed people warning each other to turn the lights off and having detected fewer people leaving the lights on when they were not in classrooms, we still believe our project was/is a great success.



**THE AMOUNT CHARGED  
IN OCTOBER-NOVEMBER-  
JANUARY**  
**OCTOBER: 8885,40 TL**  
**NOVEMBER: 7959,90 TL**  
**JANUARY: 7713,40 TL**

**(ATTACHMENT 7- ELECTRICITY BILLS)**

**HEAT CONSERVATION - RESULTS OF RED TEAM EFFORTS:**

The members of the Red Team planned to compare prices for natural gas before and after the thermostatic valves were set up in order to indicate the reduction. Because of the reasons which have already been explained above, we will be able to finalize the plans next year. Yet, having interviewed some people from the Yeşilova Engineering Company, the members of the Red Team have found out some statistical information about energy conservation that thermostatic valves guarantee; "1 degree increase in the radiator means 10 % in the heating consumption."

-Because of the fact that Thermostatic Radiator Valves are fitted to radiators to give a more responsive control of the radiator heat output according to the air temperature in the room, the classrooms which get daylight during the day will consume less energy.

-By fitting thermostatic valves to each radiator, we can vary the temperature according to the room-so we don't need to heat the whole building just to get the classrooms warm. So, by simply turning down or off the radiators in depots which are barely used, we will be able to save a lot of energy next year.



<p><b>Teamwork</b>  <b>Did your project involve a wide range of stakeholders? Who/what organisations were involved in what? Did your project create or improve teamwork? .</b></p> <p><b>Effectiveness –</b>  <b>How effectively was your project implemented? Was your project implemented within the planned budget? If not, how did you compensate? Please attach a financial report (expense</b></p>	<p><b><u>SPECIFICATIONS OF “ECA” THERMOSTATIC RADIATOR VALVES:</u></b></p> <p>A Thermostatic Radiator Valve, (TRV), is a self regulating valve fitted to hot water heating system radiators. The TRV controls the temperature of a room by regulating the flow of hot water to the radiator. TRVs consist of two parts, a valve that opens or closes to control the hot water flow, and an actuator that controls the opening of the valve. The actuator adjusts the valve opening based on the temperature in the room via a mechanical linkage or pin connected to the valve. The actuator is usually a plastic unit containing a wax plug, the wax plug expands or contracts as the temperature of the room rises or falls. The plastic unit is preset by a screw mechanism that positions the wax plug a set distance from the connecting pin. As the temperature of the room increases the wax expands, pushing the pin down and restricting the flow of hot water. As the room cools the plug contracts, the pin is let out a little and more heat is admitted into the room. This process, completely self contained and without complex electronic circuitry, keeps the room temperature at a desired constant level.</p> <p>Almost all of our students have involved in one of the projects throughout the year since we had set up three different teams, and each team tried really hard to get the most beneficial results with as little budget as possible. The competition was very challenging for every member of all teams. They helped each other a lot, too. For example, the members of the green team and the white team cooperated and collaborated very well and they planned almost everything together. While the members of the red team were counting the number of the wings of every radiator in our school, the members of the other teams gave a big support to their friends and the red team could finish counting them all in only 40 minutes. In addition to our students, the members of the Parents Association, the Yeşilova Engineering Company and Kayabeyoğlu Catering Company gave us great support. Heat /thermal insulation materials were chosen by the thermal insulation experts from the Yeşilova Engineering Company. The members of the Parents Association spoke to the people from Kayabeyoğlu Catering Company and they purchased the polycarbonate trays, which we paid later on. After the meetings at <u>TEİAŞ</u> and <u>EİEİM</u> (Electric Supply Companies in Turkey), the members of the white team have learnt a lot of information about our main project which aims converting solar energy into electricity to be used in our school yard.</p> <p>We managed to save a lot of energy in every step of our project. This can be seen in the statistical data we gathered during the period of time we ran the project. Yet, we received the money, which was donated, late in April when spring season started and the weather got warmer, we couldn't compare how much heating energy we consumed before and after the project. Instead, we calculated the amount of assumed energy savings using the information “ECA” gave us.</p>
--	--

<p><b>breakdown)</b>  <b>Was your project implemented according to the planned time schedule? If delayed, why?</b></p>	<p>We actually faced similar financial problems when we wanted to change the trays. Luckily, Parents Association got in touch with the people from the Headquarter and they supplied the polycarbonate trays with a condition that the cost of the trays would be paid when we got the money.</p> <p>Still, total supply of the money was enough for our project. It is mostly because we tried to find out the cheapest ways to solve the problems. We followed the project plan, but as it was mentioned above, the difference between the heating bills before and after the thermostatic radiator valves couldn't be reflected. We will be able to compare the bills from last year to the next year's. We will send the reports both to you and the administrators at the İSTEK Foundation, and this will enable the other İSTEK schools to be involved in the project.</p>
<p><b>Environmental and societal impact -</b>  <b>Which were the benefits to the environment, or the local community?</b></p>	<p>Above , how much energy has been consumed in our school can be seen in details. Actually , our projects have spread a lot because our students talked to their parents, friends and relatives about them. They took similar precautions at their homes to save energy. In addition to all of these things, İSTEK Belde Primary School, which has been an Eco-school for four years, has given out those stickers and brochures to the economically disadvantaged schools so that they could be informed about how to save electricity and water. We are going to share everything we have achieved with Lions Primary School (Our sister Eco-School), which we work together within the regulations of Eco-schools. We couldn't share what we did this year with them because of two reasons ,one of which was that the students both in our school and in the other school were concentrated on the "SBS"-the high school entrance examination that every 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> graders should take to study at a prestigious high school in Turkey-, and the other reason was –as it was mentioned above- the missing information about heating energy savings. We, however, have made the plans for them to run the same project in their school next year. We will carry out this project as a social work job which we –the members of the eco team- plan and do every year. The financial support will be given by us.</p>
<p><b>How can this project be used by other Eco-Schools? Any advise to schools which would be interested in implementing a similar project?</b></p>	<p>We believe this project can be used by other Eco-Schools too because :</p> <ul style="list-style-type: none"> <li>-Every part of this project is student made;</li> <li>-Each school can apply a part of this project easily</li> <li>-The applications in the school, can easily be adapted to the daily lives of the students.</li> </ul> <p>Other Eco-schools can make this project real by considering their own conditions. Especially organising "an energy conservation slogan competition" , preparing stickers from these slogans ,providing the education of Dining Hall staff , preparing Dining Hall posters from caricaturized pictures of the students ,providing home controls of the students can easily be achieved by other schools too.</p>

<p><b>How sustainable is the solution found? How will it be maintained in the future?</b></p>	<p>As the supply of Thermosatic valves and polycarbon trays require quite an expensive budget , we recommend the schools which don't have such economical opportunities, to arrange different festivals in the school –by providing the support of some companies as sponsor if possible- and sell student made projects , second hand goods ,toys ,student made cakes , etc. to collect the necessary budget.</p> <p>For example this year ,our school prepared a similar Garden Festival on 05.06.2009 –World Environment Day – by taking the support of Parent Teacher Association and approximately 5000 TL (2500 EURO) collected from the sales of the stalls in the garden was donated to “Father,Send Me To School” Campaign in Turkey. Similar activities can be organised by taking the supports of Parent Teacher Associations at schools.</p> <p>We saw that all the solutions we found to the problems in our school, gave us successful results for saving energy and money which will also be necessary for us to make our main project real .</p> <p>Actually the main project we wanted to realise was to convert Solar energy into electrical energy by using the panel and cell systems and provide the energy necessary for the lightning of our school garden by this way. After some calculations we had done ,we reached to the below given results:</p> <p>The area of our school garden is 5473 m<sup>2</sup> approximately. The bulbs which are used for the lightning of the garden are :</p> <ul style="list-style-type: none"> <li>-5 units 400 W</li> <li>-1 unit 1000 W</li> <li>-2 units 150 W</li> </ul> <p>So the total electrical energy spent by these bulbs are 3500 W'dir.</p> <p>In order to supply 1Kw energy , an investment of 5000€ is necessary.So we need 17.500€ totally.</p> <p>In the garden 3,5 kW energy is spent in 1 hour.If the lightning of the garden takes 10 hours per night (apprximately) ,it means that 35 kW energy is spent.</p> <p>This makes ;  <math>35 \times 365 = 12.775 \text{ kW , per year.}</math></p> <p>If we assume the avarage electricity cost as 2,50 YTL ;</p> <p>for lightning the garden we have an outcome of :  <math>12.775 \text{ kW} \times 2,50 \text{ YTL} = 31.937,50 \text{ YTL , per year.}</math></p> <p>Which makes ,</p> <p><math>31.937,50 \text{ YTL} / 1,99 = 16.048 \text{ € ,as per the current exchange rates.}</math></p>
---	---

<p><b>What were the main difficulties found during the implementation process?</b></p> <p><b>You may annex illustrations, maps, charts, etc..</b></p> <p><b>(maximum 4 pages)</b></p>	<p>If we assume that in İstanbul ,we can get benefit from the sun 300 days per year:</p> <p><math>35 \text{ kW} \times 300 = 10.500 \text{ W} \times 2,50 \text{ YTL} = 26\ 250 \text{ YTL}</math> (saving per year)</p> <p>NOTE :</p> <p>1-The cost of electrical energy - 2,50 YTL –is an approximate value.</p> <p>2-Sunny weather in İstanbul is taken as 300 days approximately.</p> <p>As the budget of this project was more than what we could afford , we decided to save money by doing the above mentioned energy conservations in our school building and collect the necessary financement within 5 years.We will try to bring our new ideas into life by overcoming the negative influences of the materialistic problems we face ,by financing them with other projects.</p> <p>While carrying out our project, we didn't face with any problem on the team work basis.Each team did their best to make the studies they planned real.But as the budget ,especially necessary for the purchase of thermostatic valves and polycarbon trays ,reached us only in April-because of some transfer procedure problems between the banks – we couldn't have a chance to show the statistical results of Red Team ,as it was not possible to use the heating system after April and no comparison could be done by looking at the bills.Red Team will do the same study next year, by comparing the natural gas bills of 2008 and 2009.</p> <p><b>ALL RELEVANT DOCUMENTS ARE AS GIVEN ENCLOSED.</b></p>
---	---

## 6. Dissemination Strategy

<p><b>Dissemination Strategy:</b></p> <p><b>Please include also the following points:</b></p> <ul style="list-style-type: none"> <li>. How was the project communicated to the wider community?</li> <li>. Which means of communication did you use?</li> <li>. What was the communication</li> </ul>	<p>We asked our students to put up some warning stickers underneath the electric push buttons in their homes. We gave out these stickers to the schools in their neighborhoods. Our students also went on doing the checks if the lights were off when electricity was not needed.</p> <p>We organized "an energy conservation slogan competition" among our students so that environmental awareness would increase. The winning slogans were printed as stickers. They put up those stickers on their kitchen walls, and they were able to get their parents' attention.</p> <p><b>(Attachment 8- Energy conservation slogans)</b></p> <p>The more our students took those stickers to the houses they visited and informed their friends and relatives about the projects which had</p>
---	--

**/disseminations plan?  
. Were there any training  
actions?**

**(maximum 1 page)**

been undertaken at our school, the more people have been aware of the projects and have involved in them.

The students who took part in this project haven't only saved a lot of money for our school but they have also changed their parents' behavior permanently which will be beneficial for the public awareness in the long term.

İSTEK Belde Primary School, which has been an Eco-school for four years, has given out those stickers and brochures to the economically disadvantaged schools so that they could be informed about how to save electricity and water. We gave out the brochures and the stickers warning people to save energy, as well. We are going to share everything we have achieved with Lions Primary School, which we work together within the regulations of Eco-schools(Our sister Eco-School). We couldn't share what we did this year with them because of two reasons one of which was that the students both in our school and in the other school concentrated on the "SBS"-the high school entrance examination that every 6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> grade student should take to study at a prestigious high school in Turkey-, and the other reason was –as it was mentioned above- the missing information about heating energy savings. We, however, have made the plans for them to run the same project in their school next year.

On the world Environment Day, June 5<sup>th</sup>, we hosted 34 contestants coming from 9 different schools and they presented their projects in the form of a report, display board, and models that they had created. They were also informed about every project we had done at our school. Thus, they were given some ideas to start similar projects in their own schools.





**Date:**

On the 5<sup>th</sup> of June, we invited some reporters from NTV (one of the TV channels in Turkey) to our school and we sent some news bulletins to the media.  
We also published the activities on our school's website.

**Signature/name of the project responsible: BANU CENGİZ**

**Place: İSTANBUL/TÜRKİYE**

**Date: 20.06.2009**