

## HECOTÉRMICA

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Escola: E.E.M.T.I Dr. João Almir de Freitas Brandão.

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### RESUMO

O sol responsável pelo desenvolvimento e manutenção da vida na Terra, pode ser visto, de acordo com a nossa escala de tempo e com os atuais níveis de consumo energético, como uma fonte de energia inesgotável. O aproveitamento da energia gerada por este astro, é, sem sombra de dúvidas, uma das alternativas energéticas mais promissoras para a humanidade. Adicionalmente, deve-se lembrar que esta estrela é responsável pela origem da maioria das fontes de energia existentes.

**Palavras-Chave:** Renovação, Preservação e Adaptação

### ABSTRACT

The sun responsible for the development and maintenance of life on Earth can be seen, according to our time scale and current levels of energy consumption, as an inexhaustible source of energy. The use of the energy generated by this star, is without a doubt, one of the most promising energy alternatives for humanity. Additionally, it should be remembered that this star is responsible for the origin of most existing energy sources.

**Keywords:** Renewal, Preservation and Adaptation

### INTRODUCTION

The environment is being harmed for the benefit of human beings and unconsciously. Ecothermal technology is based on using natural and recyclable resources to transform it into something to be used by the community, aiming to change people's thinking, showing that with few materials you can have great projects. Being aware that new technologies can change the world of future generations. We will use as raw material something that is in our midst, the Sun. It is about sustainably renewing something that is increasingly polluting our environment, energy has been needed in the world we live in, but we can obtain it in a more sustainable way.

### MAIN GOAL

- Offer cleaner and more sustainable energy in the community;
- Encourage the use of recycled materials in new technologies;
- Have a more pleasant space that does not harm the environment;

### **Specific objective**

Offer clean and renewable energy at a lower cost benefit

### **METHODOLOGY**

Using book research, analyzing the different types of waste that could be recycled, in conversation with group members and debating which consumer goods are, and observing how we could insert renewable energy in the community so that there is full benefit to the population. We took as an area of study the problem that happened at EEMTI Dr. João Almir de Freitas Brandão in which he suffered from a lack of electricity supply, knowing this, he had the idea of creating an alternative means of energy to remedy this lack of quality electricity, with this the Ecothermal was born.

### **RESULTS**

- The project started with a chemical reaction that was supposed to produce electrical energy from the sun's stimulus, a negative result;
- Using chemical materials, it would produce heat energy. So this objective was not positive.
- Attempts to use lenses contained in computer recorders, stereos and DVD players also yielded negative results;
- If you decided to search for something similar to photovoltaic cells, but that did not harm my environment like the same ones;
- After several studies we arrived at the acrylic LEDs contained in controls, motherboards, monitors, televisions and in all types of equipment whose role was to transmit information;
- At first we had negative results with the new raw material because we did not understand how it would work in the role of solar energy receivers;
- Studies conducted by the physics teachers of our teaching institution made us understand the new material;
- Understanding their role, we use LED's as energy receivers;

- The next step would be to develop a way to monitor the development of the equipment, so we created the Ecomonitor monitoring software;
- Errors in the source codes made us feel anxious about the project's completion, thus causing persistence in the team so that the project was successful;
- Corrected errors We were able to finalize the monitoring project;
- The next step was to find a component that was not flammable and did not run the risk of catching fire when placed with electricity because our old model used cardboard as structural raw material;
- We started using wood and acrylic for thermal and energy insulation for the current produced by the photovoltaic structure;
- That's where the thought started that something was needed to prove that our technology was working in a useful way;
- After several researches, the idea was to create a cell phone charger using photovoltaic energy and some circuits already known by the technological world;
- All charger components were taken from machines that were not being used at EEMTI, thus reaffirming the intention to create a sustainably recyclable project;
- The project aimed to go much further than it had already been, so it was applied to the aforementioned school problem;
- The network and technology were not compatible thus causing problems for the team to solve;
- After some calibration and a lot of persistence, the project reaches its peak, thus bringing clean and quality energy to the school community in question and being an example of safe and alternative energy to be applied.

## **SOCIAL RELEVANCE OF THE PROPOSALS**

The solar energy education process today is of utmost importance. As already mentioned, the use of energy by humanity is essential, so alternative ways are proposed to obtain this raw material in a more sustainable way to preserve the environment in which we live.

## **IMPACT ON THE DISSEMINATION OF KNOWLEDGE AT SCHOOL**

Ecothermal technology aims to show the public that it is necessary to preserve and adapt to the environment that surrounds us, thus seeking new ways of sustainable survival and with a better cost benefit, using materials that are wasted in our daily lives. day. Technology seeks to make our life on the planet more sustainable. At EEMTI Dr. João Almir de Freitas Brandão, the project's function was to encourage the creation of projects that were capable of changing visions of survival and adaptation. Students began to seek recycling to make projects in which they could make the school environment more harmonious, always starting from a problem such as the one that the ecotemia 1.0 project started. The technology was applied in the school with the aim of solving the problems with electric energy that until then still existed in the school. Through several attempts and calibrations, quality, clean and sustainable solar energy was applied to the school that today lives without any electricity problems.

## **FINAL CONSIDERATIONS**

In short, we want to renew, preserve and adapt what we already do today, but in a way that this benefit is common to rich and poor. It is not social classes that save the planet from the devastation caused by previous generations, but equality of common benefit.

## **REFERENCES**

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