

July

Month dedicated to the SEA - (Marine Day also known as "Ocean Day" or "Sea Day", is a Japanese national holiday celebrated on the third Monday in July). Honors the blessings of the oceans and economic prosperity. Are the oceans in danger?

"The protection of our coasts and marine waters faces complex and multi-faceted problems. Our marine and coastal environment is under severe pressure from both land-based and ocean-based pollution sources."

Source: <https://ec.europa.eu/environment/marine/eu-coast-and-marine-policy>

1. Endangered Sea Animals

Introduction

In the context of the thematic unit entitled “Endangered marine animals and the pollution of waters caused by oil spills”; but also in the context of interdisciplinary reading, through engaging children with this topic, two books were selected based on this theme. The effects *Patti Pelican and the Gulf Oil Spill* - by Lynda Wurster Deniger and *Oil Spill* - by Malvin Berger, are the books that we will be dealing with, analyze and give us stimuli for further in-depth research. Our involvement with this topic is due to global climate change and its effects on the natural environment, which are now scientifically unshakable. In addition, the sinking of a small tanker in 2017 in the Saronic Gulf had a huge impact on the coast of Attica and consequently on the marine species. This event created another opportunity to discuss the topic, as it was already familiar to the students.

Students' age: from 10 years old

Objectives:

Greece is surrounded by sea. Raising children's awareness on this issue is considered necessary due to the active role they will need to play as citizens.

Additionally

- To respect and protect every form of life.
- To become familiar with the procedures and criteria of scientific methodology. To develop a research attitude, critical and creative thinking on contemporary environmental problems.
- To be aware of and form empathy regarding the impact of human activities on the environment.
- To be realize the importance of water.
- To recognize the causes behind species extinction.



1. Endangered Sea Animals

We will need

Books, computer, videos, access to the library and available copies for all the children

Activity

Initially, children are presented with videos and PowerPoint presentations to stimulate discussion. Then, after introducing their involvement with the books, we will start reading them in class. At the end of each chapter there will be an analysis of what they have read, so that additional stimuli are given. When the reading of the books is completed, it is considered necessary to visit our library and in this way the students will be able to research and find further information. Using the internet will help children with their research. Finally, it is considered necessary to visit the affected areas or to go on an educational trip to a nearby beach so that students have the opportunity to explore and come into contact with the natural environment, in the context of experiential learning.



Extension ideas

A visit to an environmental training center

A visit to the aquarium

August

Month dedicated to the SUN - What is the sun? Why and how is it considered the primary source of energy? What are the applications of solar energy? How can we take advantage of them?

“The sun is a star, a hot ball of glowing gases at the heart of our solar system. Its influence extends far beyond the orbits of distant Neptune and Pluto. Without the sun's intense energy and heat, there would be no life on Earth. And though it is special to us, there are billions of stars like our sun scattered across the Milky Way galaxy. If the sun were as tall as a typical front door, the Earth would be the size of a U.S. nickel.”

Source: <https://www.nasa.gov/sun>

1. The Sun

Introduction

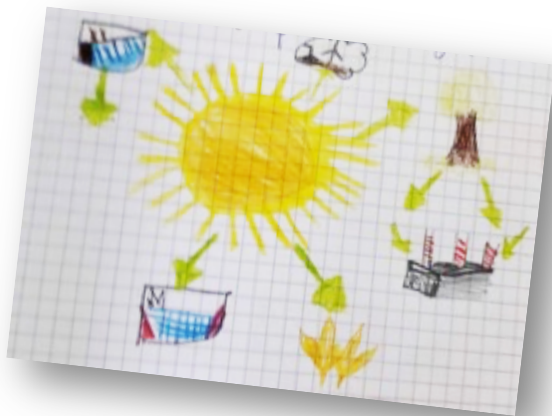
The Sun plays a fundamental role in the existence of the living and non-living organisms of our planet: it is a unique source of life, without which the animal and plant would not survive in any way.

The Sun is extremely important for the Earth because it helps to heat it and keep the average global temperature in the limits: our planet is at an optimal distance from our star so as not to be too cold nor excessively hot.

Moreover, the Sun provides the natural light that we manage to obtain and exploit, a completely free light and thanks to which we are able to survive.

The Sun comes into play in chlorophyll photosynthesis. The carbohydrates produced are used by plants to perform their vital functions, while oxygen accumulates in the atmosphere making itself available for breathing.

Students' age: from 8 years old



Objectives:

- To reflect on the importance of the sun;
- To reflect on the connection between the sun and the life of plants;
- To reflect how the chlorophyll photosynthesis benefits human life too;
- To raise awareness about the global warming;
- To understand the importance of renewable energies.
- To understand that the sun is the primary source of energy.

You will need

little mirrors, plants, mini lab for experimenting, solar kit

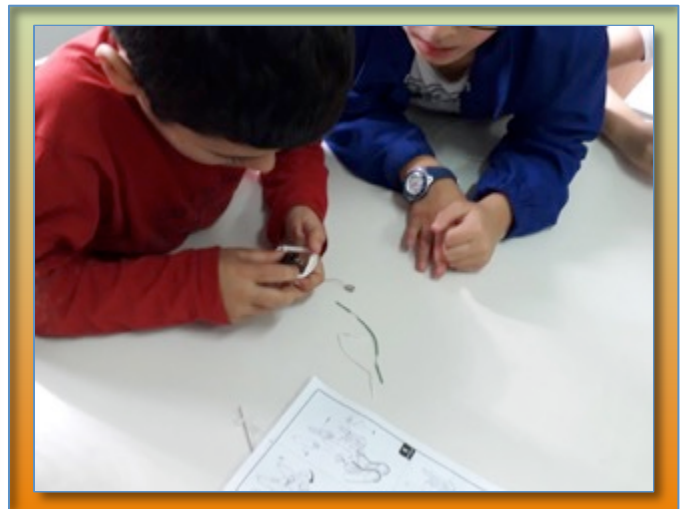
1. The Sun

Activity

All the activities come from some questions: Why the sun is so important for the life on the earth? What benefits does the sun give to us? What is the importance of sun for human, animals and plants? How does the sun provide energy for the life?

Pupils reflect about the importance of the sun: to provide heat, to provide light, to help plants to grow and produce oxygen. They draw a map of the sun and its importance. They watch a video about the chlorophyll photosynthesis and they understood how plants provide us the oxygen. They make experiments with little mirrors and aluminum sheets to try to capture sun light, they discuss about solar panels.

Pupils discuss in class about the different source of energies they know; they reflected which are renewable and which one do not. They see a presentation about the sun as the main source of energy for earth, they discuss and make a map about the source of energies that there wouldn't exist without the sun.



Extension ideas

Pupils used a mini solar kit to build different working models in order to understand how solar power is used to drive a small motor.