

RENEWABLE ENERGY

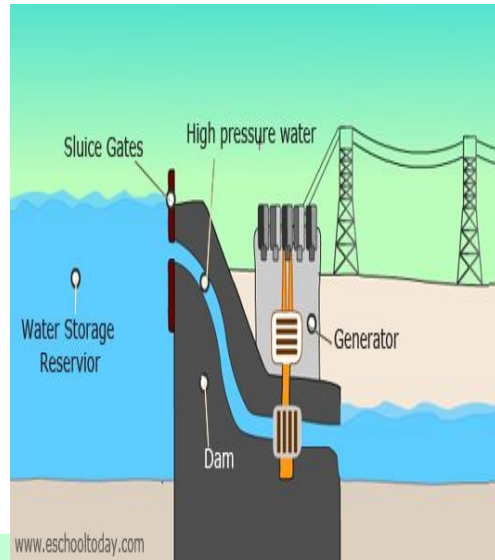
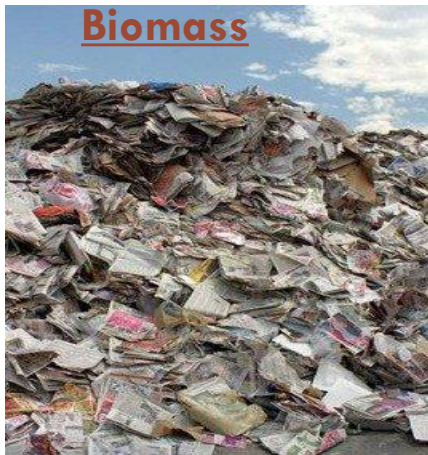
LICEO G.B. VICO NAPOLI – ITALIA

De BLASI VINCENZO	IIIF	a.s. 2017/2018
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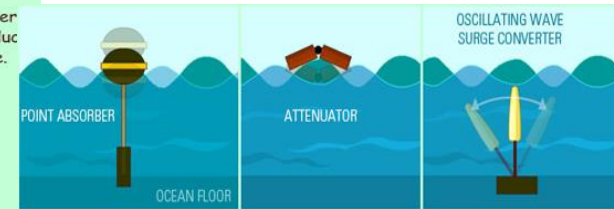
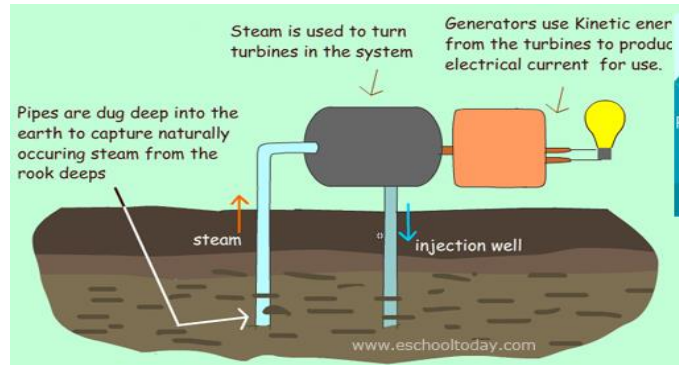


RENEWABLE ENERGY INCLUDES BIOMASS, WIND, HYDRO-POWER, GEOTHERMAL AND SOLAR SOURCES.

RENEWABLE ENERGY CAN BE CONVERTED INTO ELECTRICITY, WHICH IS STORED AND TRANSPORTED TO OUR HABITATIONS.



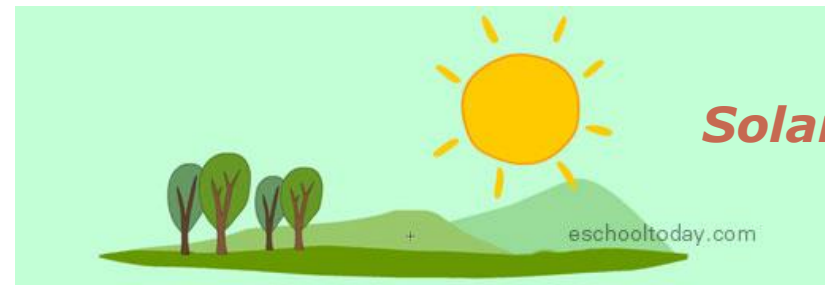
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Geothermal



Wind



Solar power

WHAT IS BIOMASS? HOW IS BIOMASS CONVERTED INTO ENERGY?

Burning

Burning stuff like wood, waste and other plant matter releases stored chemical energy in the form of heat, which can be used to turn shafts to produce electricity.

Decomposition

Things that can rot, like garbage, human and animal waste, dead animals and so on can be left to rot, releasing a gas called biogas (also known as methane gas or landfill gas). Methane can be captured by a machine called Microturbine and converted into electricity.

Fermentation

Ethanol can be produced from crops with lots of sugars, like corn and sugarcane. The process used to produce ethanol is called gasification.

WHAT IS WIND POWER?

The moving air (wind) has huge amounts of kinetic energy, and this can be transferred into electrical energy using wind turbines.

The wind turns the blades, which spin a shaft and, connecting to a generator, makes electricity.

Electricity is sent through transmission and distribution lines to a substation, then on to habitations, business and schools.

Wind turbines are usually located on high hills and mountain ridges to take advantage of the prevailing winds.

WHAT IS GEOTHERMAL ENERGY?

Deep down in the earth's crust, there is molten rock (magma).

Geothermal technology takes advantage of the hot close-to-earth-surface temperatures to generate power.

Wave Energy: How does it work?

Wave energy (WE) harnesses the kinetic energy in the up-and-down movement (waves) of water in the ocean.

WHAT IS SOLAR POWER ?

Solar power is energy from the sun.

"Solar" is the Latin word for "sun" and it is a powerful source of energy.

Without it, there will be no life.

Solar energy has been considered as a serious source of energy for many years because of the vast amounts of energy that is made freely available, if harnessed by modern technology.



Solar cells

Solar cells are devices that convert light energy directly into electrical energy. In these cells, there are semiconductors (silicon alloys and other materials). We have small solar cells on calculators or some mobile phones. Larger arrays of solar cells are used to power road signs, and even larger arrays are used to power satellites in orbit around Earth. Solar cells are also called photovoltaic cells or PV devices.



Solar panels

Solar panels are different from solar cells. Solar panels do not generate electricity directly. Instead they heat up water directly. A pump pushes cold water from a storage tank through pipes in the solar panel. The water is heated by heat energy from the Sun and returns to the tank. They are often located on the roofs of buildings where they can receive the most sunlight.

BY NAPLES -ITALY



Thank you for your
kind attention

Progetto a cura delle professoresse Cervo
Matilde e De Vico Eva