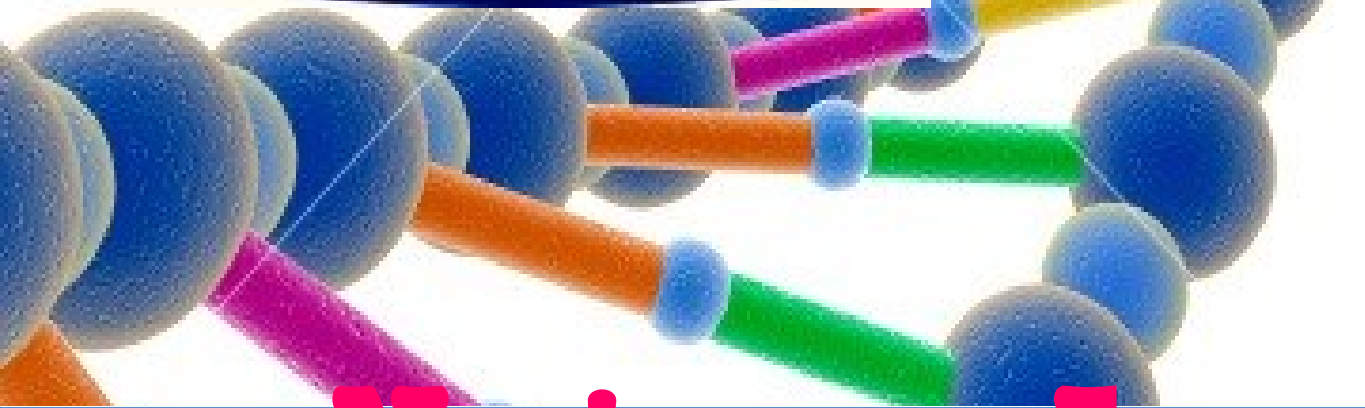
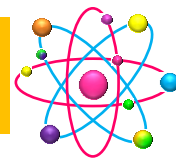




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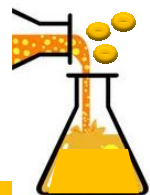


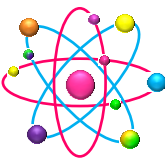
Natural Sciences



Content

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Know the contents

The Gimnasio Virtual San Francisco Javier, presented through textbooks for primary education program and sequence of science content, enriched with several videos and additional topics.

With this text handling you acquire attitudes, skills, abilities and ideas that allow you to expand your worldview.

Your content are grouped into four sessions containing topics and subtopics of several pages. Each topic begins with a title, a series of questions, whose purpose is to arouse your interest in the contents, you can use the questions at the end of a topic to find your learning.

Find images related to the concepts and themes, videos, diagrams, concept maps with didactic sense.

The virtualitos will help you travel through this adventure of knowledge.

Let us search...

When you find this you will know that there are many unanswered questions, which you can use at the end of a topic to find what you have learned.

When you find this you will have to perform the activities for each topic or subtopic.



Art is part of your activities, giving a personal touch when you go to color.
Now you are the artist!

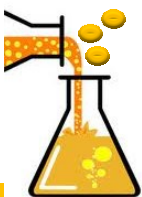
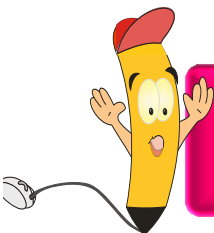


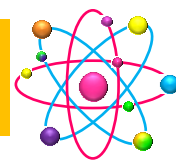
Virtualito invites you to learn more about the topic, research new things. It is interesting to know!



You know?

Find fun facts that invite you to learn about other related topics.





Moving energy

Science technology, society and environment

The energy is seen as the ability of a body to do work. This capacity is manifested in the form of movement, position, heat, electricity and electromagnetic radiation, among others. <http://www.youtube.com/watch?v=ANeJxvFFdY0>

According to the process in which it intervenes, energy can be:

Thermal:

is generated by the movement of particles of matter that builds the atoms. Body means that a low temperature has less thermal energy to another body that this higher temperature.

Radiant:

possess electromagnetic waves including visible light, radio waves, ultraviolet rays (UV) and infrared rays (IR). This type of energy can propagate in vacuum, ie without a material medium. Examples are energy provided by the sun and come to the land of light and heat.

Chemical:

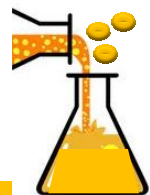
Occurs in chemical reactions. A battery or a battery has this kind of energy. An example of this is seen in the coal to burn.

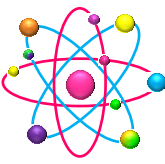
Electric:

Is caused by the movement of electric charges inside the conductive materials. This energy generates three effects: light, thermal and magnetic. An example is the electrical current to light a bulb manifests.

Nuclear :

Is the energy stored in the nucleus of atoms and which is released in nuclear reactions fission and fusion. For example, the energy generated in a controlled manner in nuclear plants.

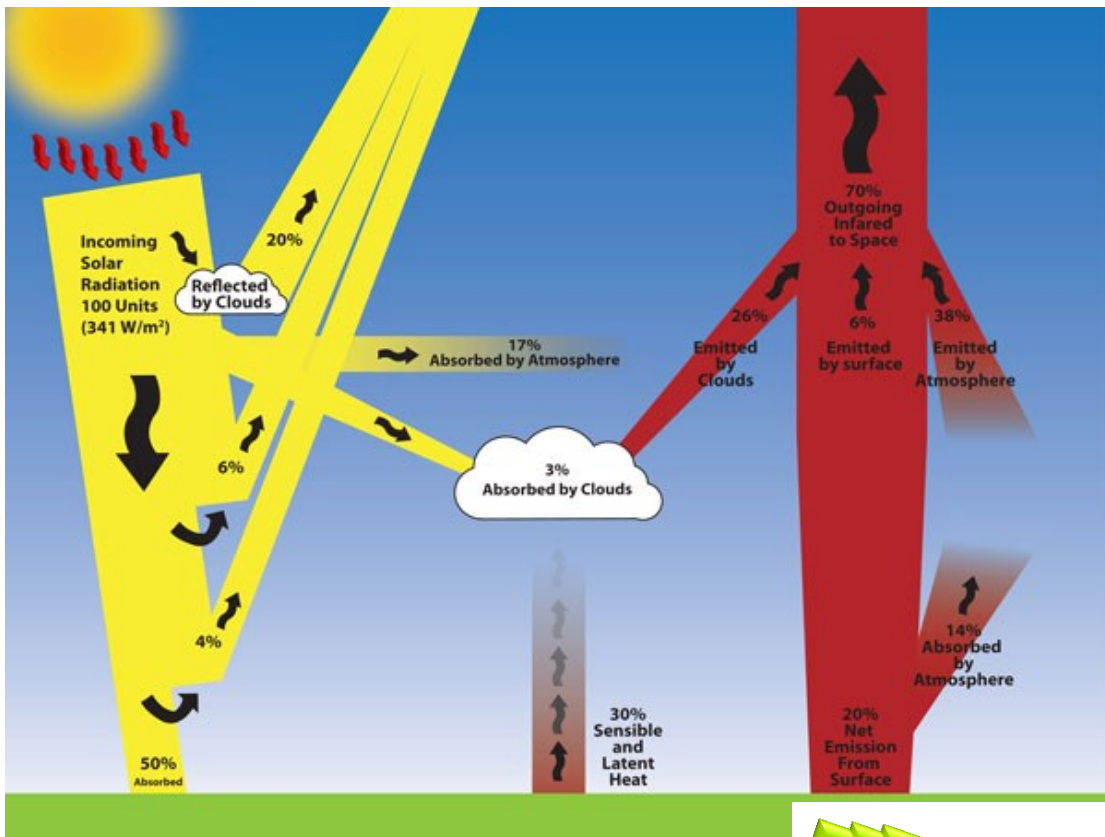




A characteristic of energy is that it is constantly changing from one form to another, it is said that energy is not created only transformed. This is evidenced by actions as simple as plugging the iron, the electricity that powers the device is transformed into thermal energy that allows ironing.

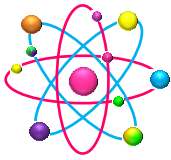
It has increased the interest in research on fuels and alternative energy technologies such as fuel cell, hydrogen, methanol, biofuel, solar energy, energy from tides and wind power, produced by winds.

To date, only hydroelectricity and nuclear power have been significant alternatives to replace oil: a fossil fuel.



- Wind energy produced by the wind.
- Geothermal energy generated from the Earth's internal heat.
- Solar energy generated from the sun
- Wave energy generated by waves of seas and oceans.
- Hydropower generated in rivers and freshwater streams in nops that occur in them.
- Tidal energy, produced by the tides of oceans and seas.
- Blue Energy, which is produced by the drainage of freshwater rivers salt water bodies.

Energy Classes



Light is a manifestation of energy

Light is a form of energy that can observe all around us.

There are bodies that emit light and are called light. In turn, the luminous bodies are natural as the sun and artificial as the bulbs.

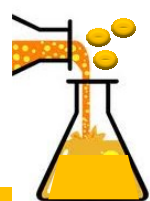
There are also non-luminous bodies, so called because they do not emit light but reflect it. These bodies are of three kinds:

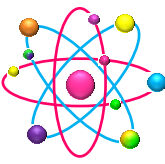
How fast does light travel?

- ✿ **Transparent:** To move all light, so it is possible to see objects clearly through them. Example, glass.
- ✿ **Translucent:** To move some of the light, that comes for it are blurred objects through them. Example, plastic.
- ✿ **Opaque:** do not allow the light side, so it is impossible not observe objects through them. Example, wood.

Light travels in a straight line if the source that produces the projects forward, as the lights of a car. Also propagate in all directions if the luminous body emits light around, like a light bulb or candle.

Light travels 300,000 miles in a second. For this reason when there is a lightning storm occurs, the first thing you see is a flash of lightning and then hear thunder.





Light properties

Within the properties of light are reflection and refraction. Let us see what each.

http://www.youtube.com/watch?v=qt_AjZnVGu8

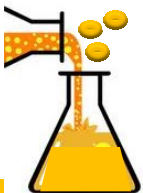


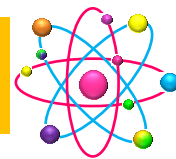
Refraction: Is the change in direction of light as it passes from one material to another. Therefore, if we put a pencil in a glass of water, it is broken, the light changes direction when it passes from air into water and distorts the image.

Reflection: Is the change in direction of light when it hits a body. This phenomenon can be seen in the mirrors.



Light has properties that explain certain phenomena that we are experiencing in daily life.





Movement

Why move the bodies?

The world is full of moving objects: cars, trains and living things move from one place to another. The movement is changing position of an object with respect to a point. The body moving mobile called which is still called benchmark.

If you push a table it is set in motion. If you open a book, is also moving. As we can stop or move. These objects need a force to move, ie an action to change its state of rest in motion.

In animals and in people chemical energy from food is transformed into kinetic energy that activates the musculoskeletal and nervous system to get them moving.
http://www.youtube.com/watch?v=yISjSyqt9_k



Plants move their stems and leaves directly for sunlight, while the roots are moved to the ground by gravity.

The path traveled by a mobile during their movement is called trajectory. According to the path are two types of movements: rectilinear and curvilinear.

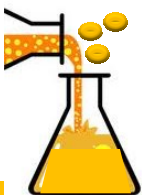
Rectilíneo:

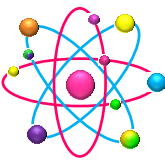
They occur when the mobile trajectory is a straight line. For example, the movement of a car on a highway line.

Curvilíneo:

It happens when the mobile trajectory is a curve or a circle. Example, the move represents a cyclist in an oval of competence, or the translational motion of the earth around the sun.

The bodies travel the same distance at different times, some are faster than others. To find the speed of a moving distance is divided between time spent. The distance is expressed in meters or kilometers and time in minutes, seconds and hours.





The Sun: source of energy in the solar system

Some animals such as reptiles do not have the ability to regulate their body temperature, so they require constant sun baths.

The sun is the closest star to Earth and with the planets and other celestial bodies shaped solar system.

It is estimated that its size is a million times greater than on Earth and yet, there are other larger stars. This star is our main source of energy, which is manifested in the form of light and heat. The light and heat from the sun have a great influence on living beings on the air, on land and on water.

Plants require sunlight to manufacture their own food through the process of photosynthesis.

As plants, animals require light and solar heat. By feeding on the plants incorporated into your body of the energy that they become nutrients:



Effects of the sun

On air

It warms the air and causes it to move causing the winds.

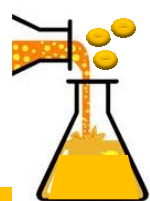
The winds keep the heat and humidity on the planet.

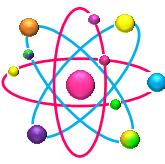
On the soil

Involved in the processes of soil formation. Along with the wind and water to pulverize rock fragments.

On water

Evaporates water from the rivers, seas and lakes. This vapor rises to be part of the clouds and then falls as rain.

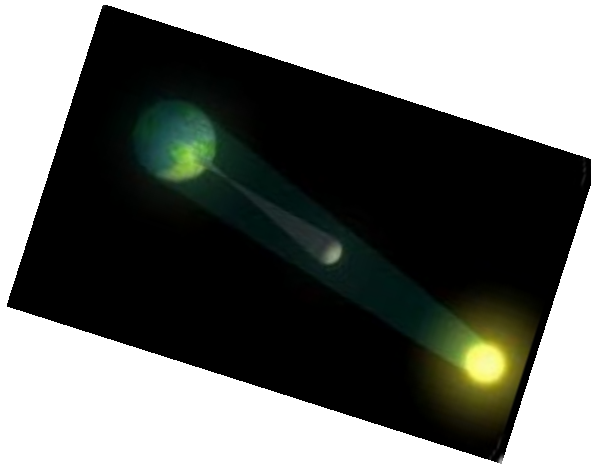




Eclipses

Eclipses are astronomical phenomena that occur when light from a celestial body is blocked by another.

There are two known types of eclipse: The moon and the sun

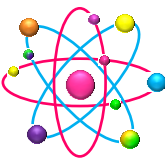


Solar Eclipse

It occurs when the Moon is between the Sun and Earth.

When the moon eclipses the sun completely this phenomenon is known as total solar eclipse, and when it is partial, it is called partial solar eclipse





Lunar Eclipse

It occurs when the Earth is between the Sun and the Moon. Since the Earth is bigger than the Moon's shadow that occurs entirely hidden, what is known as a total lunar eclipse.

As the moon moves while in and out of the area of shadow cast by the Earth, you can only see part of it, which is known as partial lunar eclipse.

Eclipses are astronomical phenomena caused by the alignment of the Earth, Moon and Sun

To observe the eclipses is necessary to use special glasses to prevent eye damage.

