

Name:

Date:



unit 2: Energy and matter

WORKSHEET 2 Light Energy

THEORY - BASIC INFORMATION

- The energy associated to **LIGHT**.
- **Transported by LIGHT WAVES**.
- It allows us to **SEE the OBJECTS** as these reflect light in our eyes.
- **Plants need** light energy to grow up, so without it **LIFE** on Earth would not be possible.

A) TRANSFORMATIONS

- **LIGHT ENERGY → CHEMICAL ENERGY** (to grow up)
- **LIGHT ENERGY → ELECTRICAL ENERGY**
- **LIGHT ENERGY → THERMAL ENERGY** (Solar panels)

B) PROPAGATION OF LIGHT

- The manner in which electromagnetic waves transfer its energy from one point to another.
- 3 characteristics:
 - In **STRAIGHT LINE**. Object → Shadow.
 - In **ALL DIRECTIONS**.
 - Very very **FAST!**

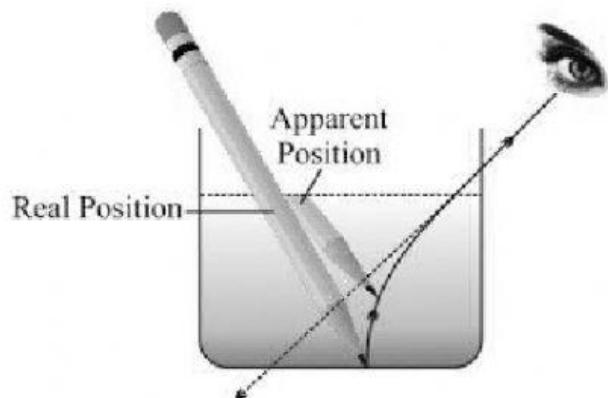
C) REFLECTION OF LIGHT

- When **light crashes** into an **opaque surface**, it **BOUNCES** (*rebota*).
- Example: The moon



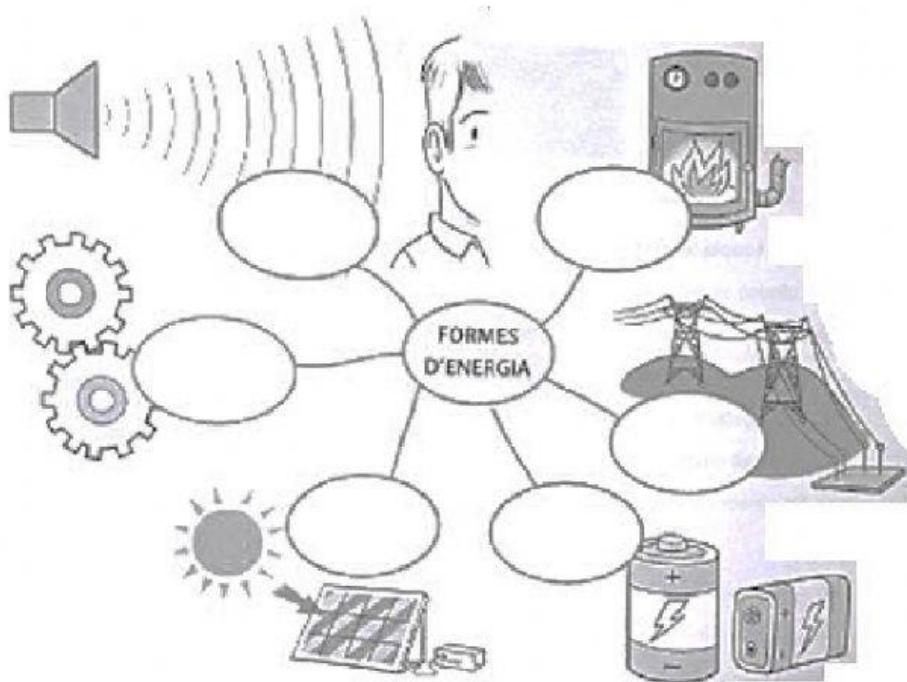
D) REFRACTION OF LIGHT

- The **BENDING** (*flexió*) of a wave when it enters into a **medium of different speed** (*velocitat*).
- **Example:** A pencil in a glass of water.
- Explanation of the example: Because light travels much faster in air than in water!



EXERCISES

1. Look and complete with the types of energy.



2. Look  and write  the type of energy in which is light transformed.

