

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**!

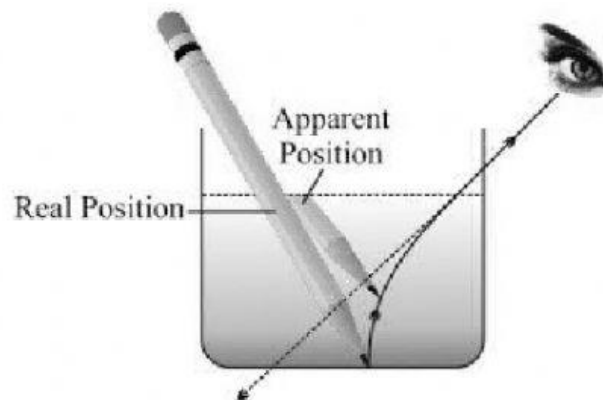
C) REFLECTION OF LIGHT

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



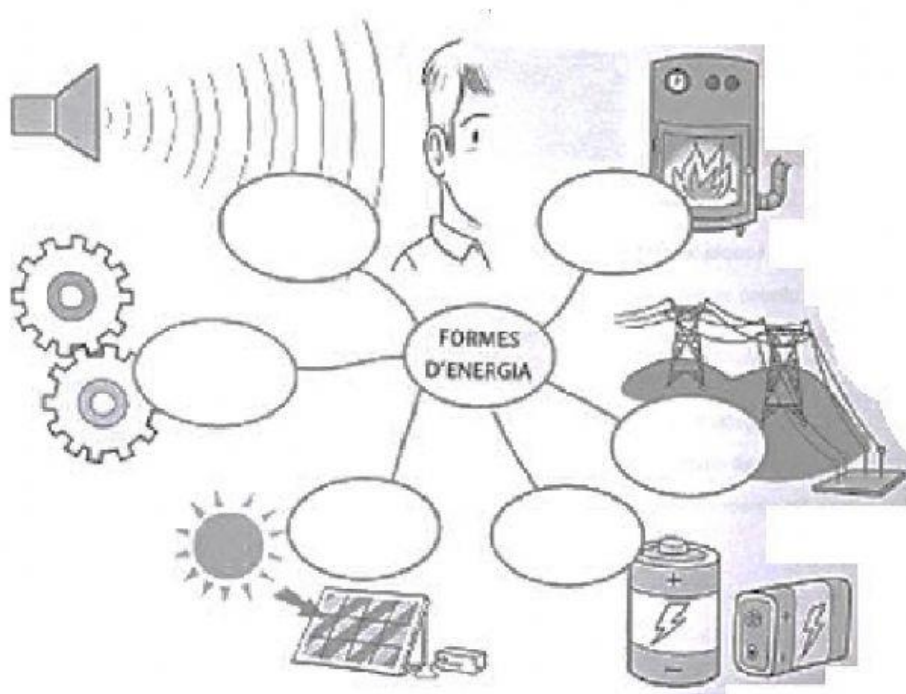
D) REFRACTION OF LIGHT

- 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.

