



1. Listen and complete the text with the following words. Be careful! Some words are missing.

Physical	Reached	Light energy	Carbohydrates	Lost	Producer	Remains	Released
Consumer	Trophic	Transferred	Chemical energy	Heat	Degraded	Goes back	Decomposers

The flow of matter and energy in an ecosystem

In an ecosystem, matter and energy circulate through the trophic relationships established between the organisms of the biocenosis.

a) The flow of matter

Matter circulates through the ecosystem in a **system**.

- **make organic matter**

The producers take matter (carbon dioxide, water and minerals) from the environment and they transform it into organic matter (carbohydrates), which they use to grow and damaged tissues.

- **Organic matter passes through the different trophic levels**

When a primary consumer feeds on a producer, the organic matter from the producer passes to the consumer and is incorporated into its body as it and repairs damaged cells. When a secondary..... feeds on a primary one, the organic matter passes to the secondary consumer, where, again, it is incorporated into its body. This continues until the last level of the consumers in the ecosystem is

- **Organic matter to the environment**

When organisms die, the feed on them and they transform the organic into inorganic matter. This matter goes back to the environment, where it can be used by the producers.

b) The flow of energy

The energy in an ecosystem is an **flow**, which means that a lot of it is each time it passes from one trophic level to another. The flow of energy through the trophic levels is simultaneous to the flow of matter and it follows these steps:

- **Producers capture some of the solar energy**

All of the energy that circulates in an ecosystem comes from the However, producers only use a small part of the solar energy they receive which is used to carry out In this process is converted into which is stored in the organic matter made by the producers.

- **Part of the energy is to the other trophic levels**

Part of the energy that has been in the organic matter made by the producers passes through the chain to the upper trophic levels: the consumers and the decomposers.

- **Part of the energy is used in the metabolism**

Most of the energy received by organisms in each trophic level is used in cell

- **Part of the energy is into the environment as heat**

When organisms carry out their vital functions, they transform part of the energy into, which is released into the environment. This energy cannot be used again, it is degraded energy.