**families of materials**

* The different families of materials:

Materials are all substances used to manufacture objects, buildings, machines etc.

There are 4 main families of materials:

- Organic materials: in this category, we can distinguish those

1. of animal origin like wool, leather...

2. of vegetable origin like cotton, wood...

- Ceramic, mineral and glass materials such as crystal, porcelain, rock...

- Metallic materials: copper, iron...

- Plastic materials: PVC, polyester...

To which, we can add a fifth family:

- Composite materials: they are composed of various materials such as concrete and fiberglass.

* Some characteristics of these families

ceramics, minerals and glass:

* Are not conductors of electricity or heat.
* Hard and rigid
* Easily recyclable because they are natural

organics:

* Easily recyclable because they are natural.
* Easy to process
* Easily recyclable because they are natural
* Biodegradable

Metallic materials:

* Electrically and thermally conductive
* Good resistance
* Easily recyclable

plastics:

* Easily recyclable
* Easy to shape
* Delicate recycling
* environmental impact

We must preserve our planet on a daily basis. So to limit the environmental impact, that is the consequences of materials on our environment, we can intervene at different levels:

- The origin of the materials: renewable or non-renewable.

- The type of energy used to manufacture the objects (limit polluting energies)

- The valorization of the used objects: possibility of offering a new life to the used objects.

* a solution: recycling!

recycling will allow:

to avoid waste

Ex: with 670 cans, we can make a bicycle frame.

- to preserve non-renewable resources.

- the abandonment of objects in the nature which is an important source of pollution.