

## Raw materials, processed materials and finished products



### Materials react in different ways:

Materials react in different ways when we apply ,  or .



## Properties of wood, metal and plastic

Properties	Materials		
	Wood	Metal	Plastic
Electrical conductivity			
Thermal conductivity			
Acoustic conductivity			
Thermal expansion			
Fusibility			
Malleability			
Ductility			
Mechanical resistance			
Toughness			
Fragility			
Permeability			
Oxidation			



# Recyclable and biodegradable materials



Biodegradable plastics and materials are better for the environment because they can be broken down by \_\_\_\_\_ or other \_\_\_\_\_ agents.

## Biodegradable materials

The term 'biodegradable' refers to material that \_\_\_\_\_ naturally without damaging nature. All the materials that we get from organic \_\_\_\_\_ materials are biodegradable.



Seawater is separated into salt and freshwater, from which the salt is packed into moulds, dried and used for construction.



The substance consists of bacteria which consumes the calcium lactate creating limestone. It has self healing properties.



A substance based on biological hydroxyapatite derived from animal bones.



Jack Munro from Great Britain proposes using freeze-dried blood (as a waste from meat production) which comes as a powder and then mixed with sand to form a paste.



Fungi form mycelium, a network of very thin fibers that, when mixed with chopped up corn husks, produce a building material which is super strong, as well as water, mold and fire resistant.



Straw is the by-product of cultivation of cereals, pulses, and oil plants. It has many uses, including fuel. Can be also used as a building material or insulator.



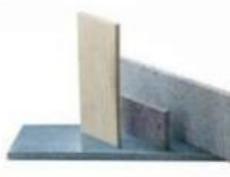
The fabric is crafted from green tea, sugar, bacteria and yeast. It takes about two weeks to grow. After that it can be dried, molded, cut and sewn.



Coffee ground is an organic waste material which can be used in product development.



Durable, easy to care for, soft fabric used as a home textile or in different types of garments. It has been proven to be warmer than wool. Soy fabric is made as a byproduct of soy food like tofu.



SCALITE is entirely made from fish scales, a by-product of the fishing industry. Produced in rigid sheets, SCALITE is 100% natural, it contains no chemical additives. It degrades rapidly in the environment.

Bio-cement

Blood bricks

Seawater Salt Blocks

Mushroom bricks

Soy silk

Coffee Ground

Scalite

Bone cement

Bio Leather

Straw Materials

# Renewable sources of energy



Energy that is produced from water vapour which is created through nuclear fission.

The natural source of wind high up in mountains can generate a lot of clean energy.

Includes fuel from the environment which is used to produce energy.

These panels collect the heat and radiation that comes from the sun to store energy for a short time.

## What does the term “**renewable energy**” mean?

- a) Energy from a source that runs out after some time.
- b) Energy from a source that is not depleted when used.
- c) Energy that is taken from electricity.
- d) Energy that is made synthetically by humans.