# **ECO MATERIALS**





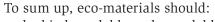
brick: mattone clay: argilla cork: sughero fixture: infisso glue: colla timber: legname wax: cera Building materials have the purpose of making the place where we live safe and comfortable. They satisfy our desire for beauty, respond to technical needs but also influence our health and the way we feel inside our homes.

These materials should be eco-friendly, sustainable and need to be chosen paying great attention to any negative effect on the environment, such as the production of toxic gases, water pollution and soil pollution.

They can be sorted into three groups:

- materials employed in the structure of the building (foundations, walls, attic, etc.)
- materials used to improve the performance of the building (insulations, protections, fixtures)
- finishing materials which complete the structure of the building and are the ones which come into contact with the people living in it (paints, glues, floors, etc.)

  In the process of building a house, each material used should interact with the others and contribute to the global performance of the building. While it may be quite simple to identify and select eco-friendly materials, it is often more complicated to understand how one may interact with others. Natural materials can be employed within an inadequate context and this can make them useless or even harmful.



- be biodegradable and recyclable
- minimize the effects of toxic and hazardous substances on health
- contribute to create a more sustainable environmental future.

### They can do this by:

- minimising their impact on the environment
- avoiding or reducing dependence on non-renewable energy sources
- increasing indoor air quality
- increasing the efficiency of resources
- avoiding or reducing problems connected to allergies.

Encouraging the use of such materials will therefore have several social and environmental benefits as well as provide quality buildings and products. Among the materials which can be used in bio-architecture, we can find timber, brick, stone, clay (for structures), cork, jute, cellulose fibre (used as insulating materials), natural paints and natural waxes (for finishing).





1	

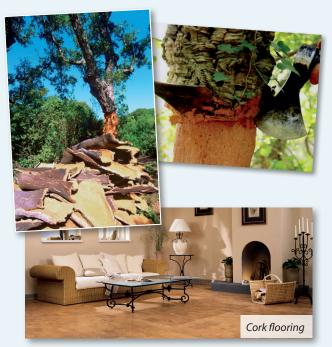
### Decide if the following statements are true or false and correct the false ones.

1.	Building materials have the main purpose of satisfying our desire for beauty.	
2.	Bio-architecture building materials have to respect the environment as much as possible,	
	from their production to their use.	
3.	As well as choosing natural materials, it is important to consider how each material	
	employed interacts with others.	
4.	There are either good or bad materials.	
5.	In bio-architecture, the possibility of recycling a material is an important fact in determining	
	its choice.	
6.	Cork is an example of an eco-friendly material used in building structures.	

## 2 Listen to a description of *cork* from a website and then complete its summary.

Cork has been traditionally used for bulletin
boards and bottle (1) and in
architecture has been mainly utilized under
(2) and as insulating material.
Unlike other trees used as construction
materials, cork renews constantly, because it
is the $(3)$ of the tree that grows
back once removed. Cork pieces are heated and
compressed into (4) or
without using adhesives or glues.
Owing to its (5) composition,
cork is not easily (6) This
makes it possible to (7) old
pieces.
All these characteristics make cork an
(8)friendly material.

7. Natural products should also be chosen for finishing.



## Complete these notes about eco-materials.

	a
Used for	b
	c. finishing
	a
They should	b
	C
They can contribute	a
to the protection of the environment because they	<b>b.</b> increase the efficiency of resources
	C