

# MATERIALS: CONSTRAINTS AND MECHANICAL PROPERTIES



PAGES 368 TO 373

Complete this concept  
review handout and  
keep it as a record of  
what you have learned.

## RAW MATERIAL, MATERIAL AND EQUIPMENT

Term	Description
Raw material	_____ _____
Material	_____ _____
Equipment	_____ _____

## DEFINITIONS

- A technical object is \_\_\_\_\_  
\_\_\_\_\_
- A mechanical constraint describes \_\_\_\_\_  
\_\_\_\_\_
- A mechanical property determines \_\_\_\_\_  
\_\_\_\_\_

## PRINCIPAL TYPES OF MECHANICAL CONSTRAINTS

Mechanical constraint	Description	Example
Compression	_____ _____	Opening a nut with a nutcracker.
_____	_____ _____	_____ _____
_____	_____ _____	_____ _____
_____	_____ _____	_____ _____
_____	_____ _____	_____ _____



**MATERIAL DEFORMATION**

Deformation	Description
_____	Temporary deformation: when the constraint is removed the material regains its shape.
_____	Permanent deformation: Even when the constraint is removed, the material remains deformed.
_____	Material ruptures or breaks.

**SOME PROPERTIES OF MATERIALS**

Mechanical property	Description	Example of an object that illustrates this property
Hardness	_____ _____ _____	Marble stair.
_____	_____ _____ _____	_____ _____
_____	_____ _____ _____	_____ _____
_____	_____ _____ _____	_____ _____
_____	_____ _____ _____	_____ _____
_____	_____ _____ _____	_____ _____