

Changes of material as stress is applied:

- 1. change in shape**
- 2. change in volume**
- 3. change in both shape and volume**

Behavior of material under stress:

1. elastic—changes shape under stress but returns to original shape when stress is removed. Think rubber band under tension (pulling apart). The time the material takes to regain its original shape is called hysteresis. For a rubber band this time is instantaneous. For other materials it might days, minutes, weeks, months or longer.

2. plastic---changes shape under stress and retains the new shape when the stress is removed. Think ‘Silly putty’. Important in forming folds.

3. brittle---breaks when stress is applied which usually relieves the stress for a period of time. Important in forming joints and faults.

Types of stress:

1. tension---pulling apart, joints, faults



2. compression---squeezing together, folds, faults



3. shear----sliding past each other, faults

