GRADE 10	TERM 2	SOCIAL SCIENCES (GEOGRAPHY) GEOMORPHOLOGY UNIT 3: FOLDING AND FAULTING

LEARNING OUTCOMES:

- Process of rock folding
- Landforms associated with folding
- The process of faulting
- Different types of faults
- Landforms associated with faulting

Certain forces act on the crust and the layers of rocks within the crust can be folded or faulted.

A fold occurs when rock strata (layers) are compressed and the rock layers are warped. This process usually occurs over an extremely long period of time.

Faulting occurs when forces act upon the Earth's crust and cause a break or fracture in the rock layers. This process usually occurs over a short period of time.

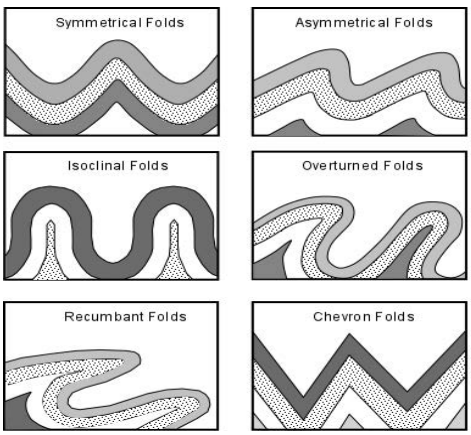
Complete the table below:

	Definition	Forces responsible	Example of landforms created
Folding	***Is a type of Earth movement resulting from the horizontal compression of rock layers by internal forces of the Earth along plate boundaries.***	***Compressional forces***	***Himalayas*** ***Cape Fold Mountains***
Faulting	***A crack in the Earth's crust resulting from the displacement of one side with respect to the other.***	***Compression*** ***Extension*** ***Transform***	***Fault escarpments*** ***Wineglass valleys (Wasatch Range)***

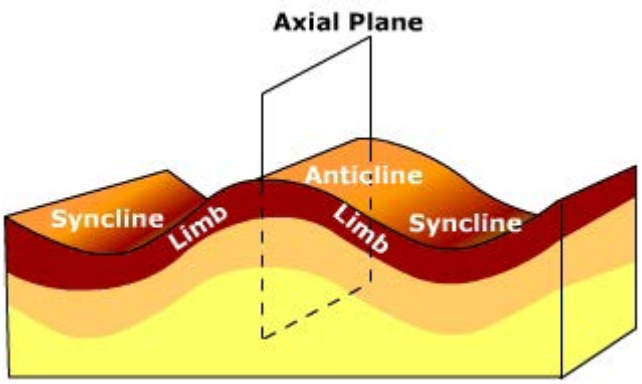
LANDFORMS ASSOCIATED WITH FOLDING

In each of the spaces below, draw a labelled diagram showing the type of fold required:

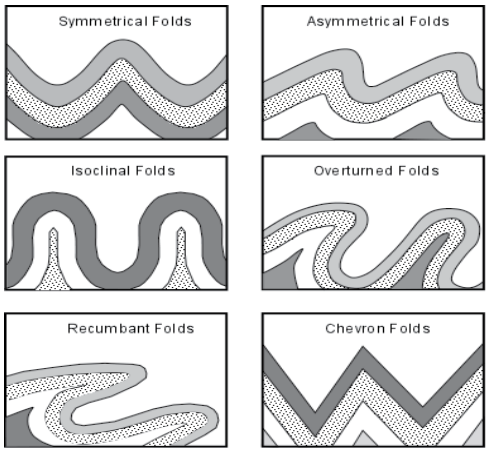
Isoclinal folds



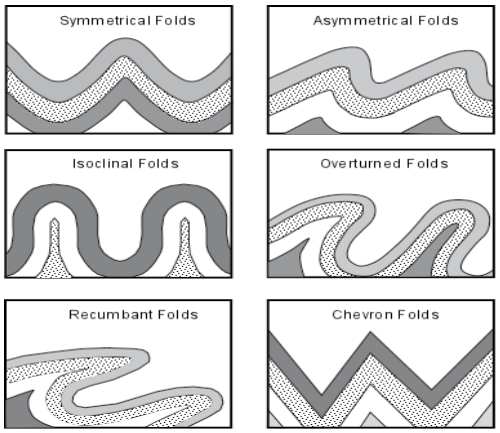
Open Folds



Overturned Folds



Overthrust Folds



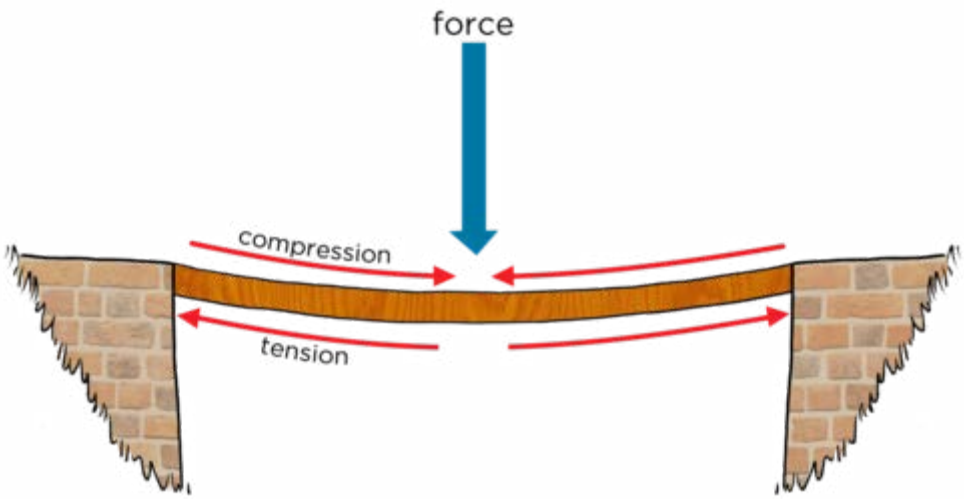
Landforms associated with FAULTING

Recap: What is faulting?

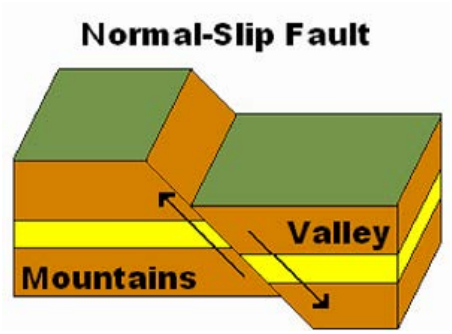
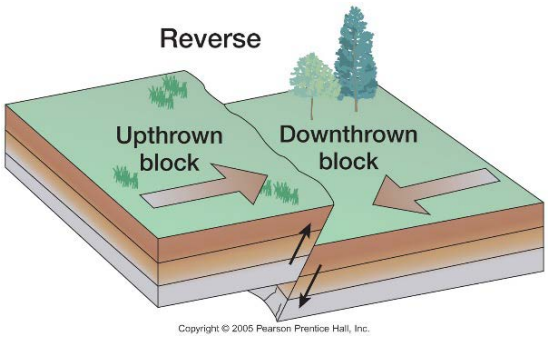
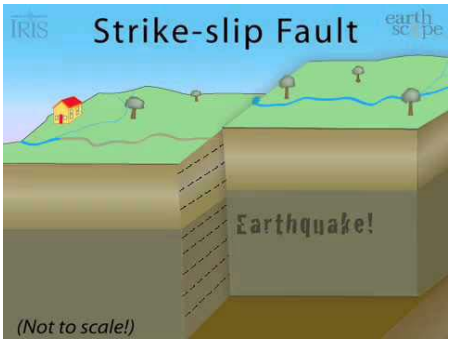
- A fault is a fracture (or break) in the Earth's crust.
- This is caused by stress created in the crust as a result of the movement of the plates.
- The stress builds up and the plates shift violently and rapidly – creating a fault.
- This stress is a result of either compressional or tensional forces within the crust.

In the space below, draw diagrams to show the difference between ***compressional*** and ***tensional*** forces.

Compressional Force and Tensional Force



In the spaces below, draw well-labelled diagram of the different types of faults.

Normal Fault	Reverse Fault
	
Strike-Slip (Lateral) Fault	**Oblique Strike-Slip Fault**
	

ACTIVITY 4: RIFT VALLEYS

1. Describe the process involved in the creation of rift valleys known as rifting.
   Rift valleys are caused by tectonic activity. The valleys from when continental crust is pulling apart allowing the land to drop down between parallel faults. These also form when oceanic plates are moving apart forming a divergent boundary.
2. Using an atlas, locate the Great East African Rift Valley. Describe its general position and list some of the countries in which the Rift Valley can be found.
   Kenya, Ethiopia, Uganda, Rwanda, Burundi, Zambia, Tanzania, Malawi and Mozambique.
3. Explain the formation of block mountains.
   These mountains form when faults or cracks in the Earth's crust force some materials or blocks of rock up and others down. Instead of the Earth folding over, the Earth's crust fractures (pulls apart) and breaks into blocks or chunks.