

**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:**

	<b>Definition</b>	<b>Forces responsible</b>	<b>Example of landforms created</b>
<b>Folding</b>			
<b>Faulting</b>			

**LANDFORMS ASSOCIATED WITH FOLDING**

A fold is a bend in a rock caused by compressional forces.

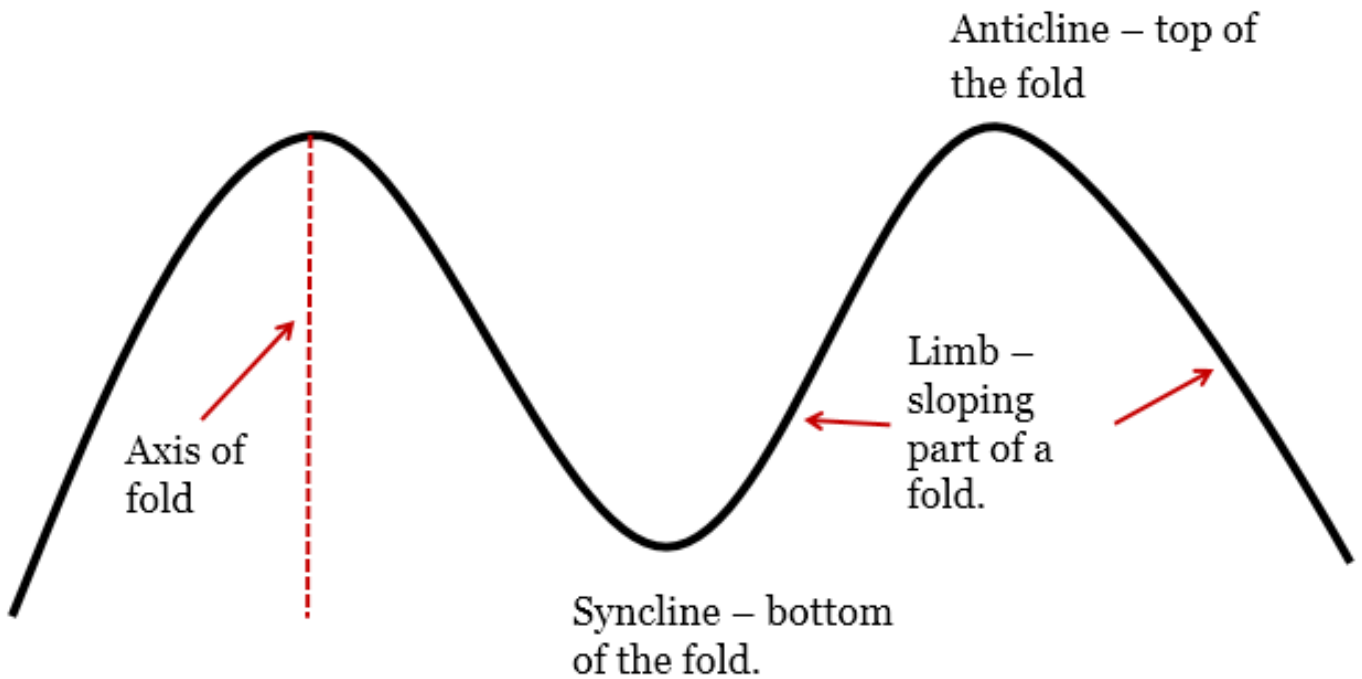
a. Symmetrical Folds:

The rock layers are subjected to equal forces.

b. Asymmetrical Folds:

These occur when the rocks are subjected to unequal compressional forces. One side of the fold will "lean" over more than the other – this is also called an overturned fold. A monocline is a fold that is subjected to weak compressional force on one side only and will look like a step.

**Parts of a fold**



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

<b>Isoclinal folds</b>	<b>Open Folds</b>
<b>Overturned Folds</b>	<b>Overthrust Folds</b>

**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.

<b>Compressional Force</b>	<b>Tensional Force</b>

- Tensional forces cause the crust to stretch (areas in the crust are moving apart).
- Compressional forces cause the crust to “squash” together – areas in the crust are moving toward each other). These forces will cause rocks to break along an area of weakness. This is called the fault line (the point where the fault occurred).
- The area where the movement occurs and the crust slips is called the fault plane.

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

<b>Normal Fault</b>	<b>Reverse Fault</b>
<b>Strike-Slip (Lateral) Fault</b>	<b>Oblique Strike-Slip Fault</b>

## ACTIVITY 4: RIFT VALLEYS

1. Describe the process involved in the creation of rift valleys known as rifting.

---

---

---

---

---

---

---

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.

---

---

---

---

---

---

---

---

---

---

---

---

3. Explain the formation of block mountains.

---

---

---

---

---

---

---

---

---

---

---

---