

## Folding and Faulting| sample answer

**Q: 'Examine the impact of folding and faulting on the landscape. In your answer refer to one landform in each case' (2007 Q3 B.)**

The Earth's crust is broken into around 16 major slabs called plates-these plates float on the mantle, constantly moving due to convection currents. They can pull apart, or collide, causing earthquakes, volcanos and folding and faulting along fault lines.

**Folding** is when 2 continental plates collide- neither one is less dense so they do not subduct- they are uplifted instead.

When rocks are under compressional pressure due to plate tectonics, fold mountains occur. eg the Andes.

Fold mountains in Ireland can be found in the Valley Province of Munster and Carrauntoohil.

The geological make of the mountain in Munster is from when all the rivers ran south, they brought sands, sills and other sediments and as they built up they became the sandstone we see today

The mountains were formed in the Armorican mountain building period in a process called **orogeny**.

Folding caused a big impact on Munster's landscape and because the pressure was coming from the south, we now see that the mountains have an East-West trend.

350 million years ago Ireland was under tropical sea. Due to lithification processes, a layer of carboniferous limestone covered the sandstone in the Old Red Sandstone area.

Because limestone is easily eroded we can see the sandstone **anticlines** in places such as Macgillycuddy Ridge.

In other places the sandstone actually protected the limestone and in the Blackwater Valley you can see mounds of limestone **synclines**.

**Faulting**. A landform created by faulting is a rift valley/ graben. eg East African Rift valley.

Rift valleys occur due to tensional pressure.

When 2 plates start to move away from each other, cracks start to form in the crust (faults). These weaken the crust.

When movement continues there becomes more and more faults formed. When these are parallel the land between can do one of two things; Be uplifted or sink down.

A flat floor valley is formed when the land between the faults sink down. The valley has steep escarpments-marking the place where the faults occurred.

The East African Rift Valley was formed due to the Caribbean and the Nazca plate pulling apart from one another because of a hotspot underneath the plate boundary.

The African Rift Valley has had a big impact on the landscape because it is up to 100 km wide in some places and runs from Ethiopia to Mozambique.