

A2x

These are two theories explaining the endogenetic forces inside the earth. One of them is the Continental Drift theory given by Wegener.

According to this theory, the continents drift over the oceanic crust due to 2 forces -

i) Pole-fleeing force

Responsible for movement of continents away from the poles, towards the equator.

ii) Tidal force of moon & Sun

Responsible for movement of continents towards west.

Under the influence of these 2 forces, the initial huge land mass called Pangea was divide which existed in the carboniferous period along with the super-ocean Panthalassa, was divided into 2 parts \* in the Jurassic period -

i) Lauretia \*, comprising North America & Eurasia

ii) Gondwana, comprising of South America, Australia, Africa, Antarctica & Peninsular India.

Over time, due to pole fleeing force & tidal force, they divided & subdivided to form the present day continents.

## ★ Evidences in support - ~~to want~~

### i) Jig-saw fit

The eastern coast of South America and the western coast of Africa geographically complement each other. There are other continental boundaries geographical complementing each other like a jig-saw fit which suggests <sup>that</sup> they existed as a huge land mass.

### ii) Palaeontological evidence

Scientists have found the fossils of multiple species belonging to carboniferous era over different continents. These species were terrestrial, non-swimming species. This shows that the continents were united in the carboniferous period.

### iii) Dilites

Dilites are ro sediments, belonging to the glaciars. They are found in South America, Africa, Antarctica, Peninsular India & Australia suggesting that these continents have drifted away from the poles due to pole-fleeing force.

### iv) Gold placers deposits are found in Ghana but there is an absense of parent gold containing parent rocks in Ghana. The

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gold containing parent rocks are found in Brazil suggesting that these two regions were united in the past where Ghana region was drained by the Brazilian rivers.

- v) The mountain systems of Afras <sup>(Africa)</sup> are geographically similar to that of Europe suggesting that they <sup>were</sup> ~~are~~ formed due to same processes and hence existed together. The continental drift theory had some lacunas which were removed by plate ①