

Continental drift

Jigsaw

I 5 min

A jigsaw of the lands making up Pangea is made from hard board using a fret saw. The geology is painted on. Students are given the pieces to put together.



Magnetic jigsaw

D

A jigsaw of Pangea is made from card and magnetic strips stuck on the back of each piece. If placed on a magnetic board the pieces can be moved around to show how the positions of the continents have changed.

Matching the shape of Africa and South America 1

D

The actual shape of the two continents as they are today is cut from coloured acetate. These are placed on the overhead projector to show that the fit is poor. A second set is made using the shape of the 2000m deep contour line around the continents. These are shown to fit well except for the Niger Delta and the Walvis Ridge both of which are recent.

Matching the Geology of Africa and South America 2

D

Five copies of the shapes of the edge of continental crust of Africa and South America are cut out of OHT acetate. A separate pair is coloured to illustrate each of the following : distribution of shield areas, fold belts, mylonite belt, glacial erosion and deposition, and the source and

deposits of diamonds. The continents are shown separately initially and are then put together to show how they match.

Evidence for continental drift

Pa P **E** 10 min

Students are given a map of Africa and South America before they split showing aspects of the geology of the two continents. They must answer questions about the geology.

Polar wandering curves

D

To demonstrate how the matching of polar wandering curves helped prove the theory of continental drift use overhead transparencies showing the polar wandering curves of Africa and South America first assuming no continental drift and then assuming they were once joined together.

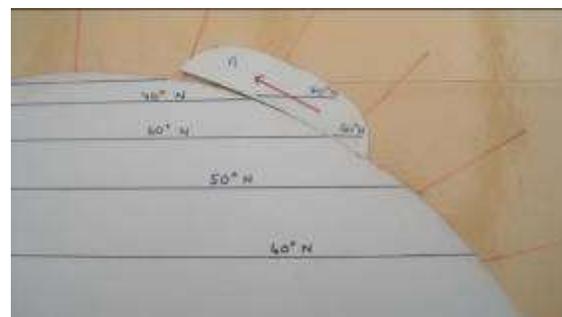
Palaeomagnetism and continental drift

D **E**

A disc, representing the world, made of thick card with the lines of latitude marked on rests on a board showing the magnetic dip for each latitude. Curved pieces of card which fit against the disc represent continents. These have lines showing their present day latitude. Other lines in different colours represent the palaeomagnetic dip of rocks found on the continents, different colours representing different ages. Students move the continents until the palaeomagnetic dips match modern magnetic dips thus showing the movement of the continent.



whole disc



Detail of top

Plotting polar wandering curves

Pa I 30 min

Students are provided with the latitude and magnetic dip for England for each period. They calculate the position of the pole for each period and

plot it on a map of the world and then join the points up to make the polar wandering curve.

Northward movement of India

Pa [E](#) 15 min

Students convert palaeomagnetic data collected in India to latitude and then plot the movement of India. They then work out its speed of drift.

Cartoons

D

Amusing illustrations by J. C. Holden of ways animals may have moved from one continent to another can be found in Open University S102 p24.