EVIDENCE FOR CONTINENTAL DRIFT

1. ***Shield areas are those areas with rocks over 2,000 million years. Look at the outcrop patterns of the shield areas in both Africa and South America. Is that pattern likely to be the result of coincidence?***

2. ***Look at the patterns made by the ancient mountain belts on both continents. What do they suggest?***

3. ***The Roraima Sandstone (A) is a thick and extensive unit of sandstones deposited by rivers. The cross bedding suggests the rivers flowed <u>from</u> the sea. The sandstones very occasionally contain diamonds but there no known source of diamonds in South America. Diamond pipes are found in Sierra Leone (B). How could you explain the direction of the rivers and the occurrence of diamonds in the Roraima Sandstone.***

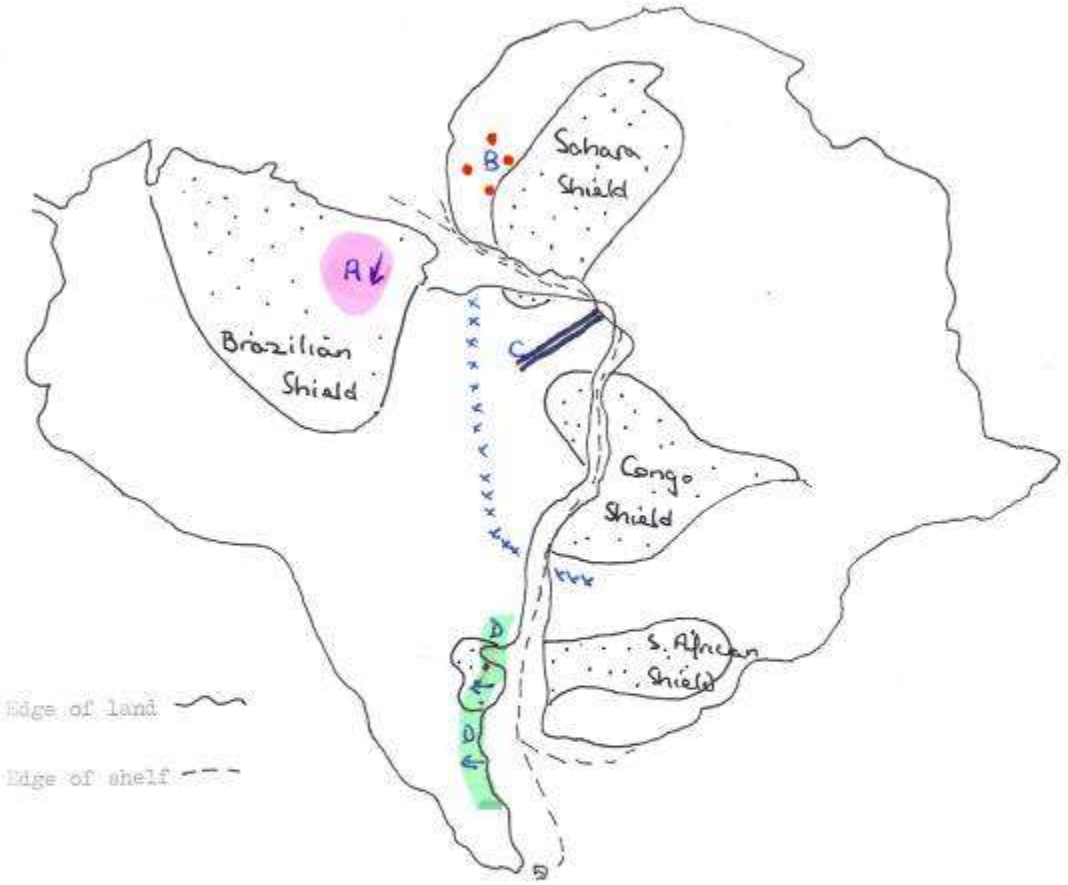
4. ***A large belt of a rare type of rock, mylonite (partially melted fault breccia) is found at point C. Where would you expect to find a continuation of the belt in Africa?***

5. ***In Argentina (D) there is much tillite (lithified boulder clay) representing the deposits of large glaciers. The rock types found in the pebbles in the tillite do not match any rock found in South America. Furthermore the direction of movement of the glaciers as deduced from evidence in the tillite was to the west. Why was this a puzzle to early geologists and how can it be explained?***

6. ***Mesosaurus was a small lizard that lived in swamps. Its fossil remains have only been found in South Africa and South America. Why is this surprising and how do we explain it.***

AFRICA AND SOUTH AMERICA

Topographical and geological fit



xxxx mountain belt

A Roraima Sandstone ← direction of rivers

B Diamond pipes

C Mylonite belt

D Glacial deposits ← direction of ice movement.