



# Cullercoats

## The 90 Fathom Dyke Fault



### What will I see?

A big fault; you need to go on the foreshore to see it. This is a place where rocks have been broken and dislocated by enormous forces in the Earth's crust. This has left two sections of rock that are millions of years different in age next to each other. To the south are shales of the Carboniferous; to the north is the younger, Permian, yellow sandstone.

### How old is it?

The forces that caused the fault (just like earthquakes) were part of a long period of mountain building in Britain that started 290 million years ago. But this break in the Earth's crust has a long history and has probably also been a weak point ever since.

### Did you know?

Coal miners regularly found the fault as they extracted over 20 coal seams below south east Northumberland. They came to recognize that it would dislocate the coal seams by around 150 metres, so they named it the 90 Fathom Dyke.

### Why it is here?

Geologists have traced this fault and line of the changes in the rocks deep in the crust using geophysics; they call it the Iapetus Suture zone. This fault is one of a series of east-west breaks in the crust that are in a zone of weakness where two ancient continents collided and the Iapetus Ocean closed about 420 million years ago.

### And wildlife?

You might see purple sandpipers feeding near the water's edge, and it's a good place for watching birds out to sea.

### Where is it?

Just to the south of Cullercoats Bay and South Pier [NZ366711]. It's easy to reach by bus or car.



### Want to know more?

- **Virtual tour**
- NNP Geodiversity Audit
- Onshore GeoIndex
- iGeology
- Geological history of Northumbria
- Carboniferous rocks

