

EXTINCTION AND CONTINENTAL DRIFT

Purpose

To show the effects of continents coming together on the variety of species.

Instructions

Each of the four continents has four land animals, four beach and four shallow marine animals. The species on each continent are different.

<i>Land (terrestrial)</i>	<i>Beach (littoral)</i>	<i>Shallow marine (neritic)</i>
<i>Rabbit</i>	<i>limpet</i>	<i>shark</i>
<i>Fox</i>	<i>mussel</i>	<i>fish</i>
<i>Snail</i>	<i>crab</i>	<i>scallop</i>
<i>Bird</i>	<i>sea gull</i>	<i>lobster</i>

As the continents move together the animals are able to compete and eventually one species of each type survives and the others become extinct.

The top diagram on the table shows the four islands each surrounded by a shallow sea and separated by deep sea. Subsequent diagrams show the shallow seas merging and then the islands touching.

Fill in each of the columns on the table for each arrangement of the continents.

How does the length of the beach change and how does the number of species and percentage of littoral species change?

If you were examining a rock sequence which represented the coming together of two continents would you expect the nonmarine or shallow marine fauna to show extinctions first?

In what other ways may the movement of continents cause extinctions?

Teacher's Section

Notes

This is more fun done as a classroom exercise. Students are divided into four groups. Each group has one continent. They name their animals and as the continents come together a dice is thrown for each type of animal to see which survives.

Time

30 minutes to fill in table, one hour if used as a class room exercise.

Results

The total number of species is reduced to 25% of the original and the length of beach is halved.

Some of the shallow marine fauna would become extinct before the land fauna. The movement of continents may also cause extinctions because the climate may change.