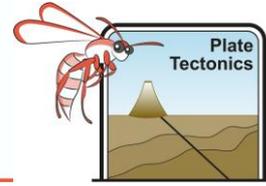
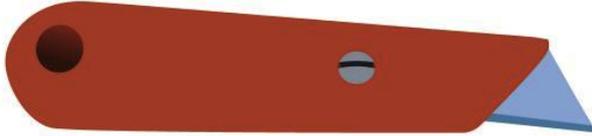


Seafloor Model - Student Activity



Evidence for seafloor spreading

Where magma comes to the surface along mid-oceanic ridges there are changes to the seafloor. Students are asked to create a simple model that replicates what happens here.



If your boxes have not been prepared for you, please write down safety considerations when using a craft knife

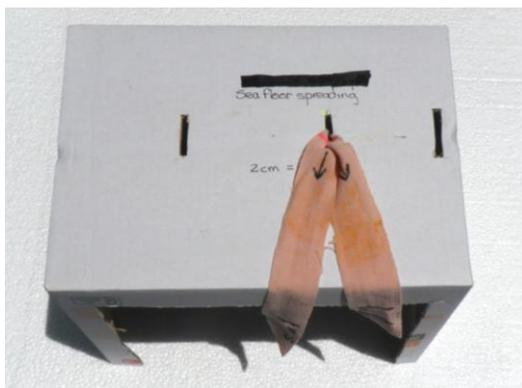
Materials per student or group

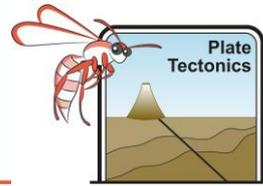
- A box large enough to get both hands inside
- A craft knife
- Two strips of paper about 50 cm long and 3cm wide.
- A stapler and sticky tape
- Four different coloured felt tip pens.

AIM To model seafloor spreading

METHOD

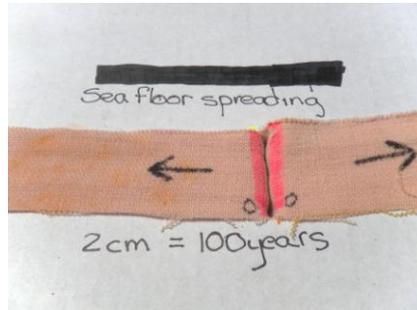
Carefully remove one side of the box to permit access for your hands. Cut three thin slits in the top of the box just a little wider than your strips of paper or other material (as shown in the picture below). Lead each strip down the central slit and down the slit near the edge. Staple or stick each strip below to form two separate circular loops. Ensure the joins hang well below the ocean floor





Seafloor Model - Student Activity

The top of the box represents the ocean floor.
 The central slit represents the mid-oceanic ridge where molten mafic magma rises to the surface.
 Pulling downward on the outer edge of each loop will cause material to rise from the ridge and spread.



Run the first felt tip pen down the central slit until a coloured band appears on both strips. Label these "zero" as above.
 Pull downwards on the outer edge of both loops until 2cm of tape/molten mafic magma has "erupted" on either side of the ridge.
 Run the second felt tip pen down the central slit and label these 100 years on the strips.
 Repeat moving the loops until all four colours have been used.

Results

Draw a cartoon below of what happens each 100 years. Label the mid-ocean ridge and direction of movement.

0 years	100 years	200 years	300 years	400 years

Conclusion and discussion

Describe the banding of the strips on either side of the mid-ocean ridge. _____

After 100 years, how much wider is the sea floor? _____

Does this activity model real seafloor spreading? _____

Is the ridge a zone of convergence (coming together) or divergence (moving apart)? _____

Can we say **new** material is created at the ridge? _____