EARTH DYNAMICS WITH PROF LI ZHENG-XIANG

TALKING POINTS

1. **What are plate tectonics?** (See *About Earth Dynamics*)
2. **What are supercontinents and superoceans? And what were the names of the last supercontinent and superocean believed to have existed?** (See *Imagine this*)
3. **How long does a supercontinent cycle take?** (See *What exactly are Li and his colleagues trying to understand?*)
4. **What is palaeomagnetism, and how is this used to track the movement of tectonic plates over time?** (See *What exactly are Li and his colleagues trying to understand?*)
5. **Why is it important to understand plate tectonics?** (See *Why is it important to increase our knowledge of global tectonics?*)
6. **What does the "4D" in 4D geodynamic modelling mean?** (See *How are they doing this?*)
7. **What do Prof Li and his team believe happened to North America and Australia 1,600 million years ago?** (See *What has Li's group discovered so far?*)

ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

The Geological Society has a number of fun activities suitable for the home or in the classroom: https://www.geolsoc.org.uk/lessonplans.

For example, you can:
Make a classroom volcano using common household ingredients to model a volcano erupting!

You will need:
2x plastic cups
1x paper plate
roll of silver foil
glug of red food colouring
50ml vinegar
50ml washing up liquid
3x table spoons bicarbonate of soda
lump of blue tack

Attach one of the plastic cups to the plate using blue tack – you can use scissors to adjust the height of the cup, depending on how big you want your volcano to be! Cover the plate and cup with a sheet of foil. Make a hole in the foil above the cup for the caldera, a cauldron-like hollow that forms after a volcanic eruption. In the second plastic cup, mix together roughly equal amounts of vinegar and washing up liquid, and add red food dye to give the experiment that molten lava look. Pour the mixture into the cup underneath the foil, filling it to about halfway or slightly over (more if you want a really messy explosion!). Pour in two or three teaspoons of bicarbonate of soda. Stand back and watch your eruption unfold....

BE A GEOLOGIST FOR AN HOUR OR SO!

Research the internet to find out how a comparison of fossils found in Africa with those found in South America first hinted that Earth as we know it might have looked different in the past.