

Name: Professor Colin Pillinger **Job:** Earth Scientist

Colin works as leader of the Beagle-2 Project – the UK-led lander element of the ESA's Mars Express Mission.

The job involves getting ready to explore materials from the 'red planet' Mars for signs of life, past or present. In reality, this will mean analysing the mineral composition of any soil or rock samples brought back from Mars by the Mars Express Mission.

Benefit of the work: This study will add to our continual search for other life systems beyond our own planet Earth.

Think you might be interested?

Here are some of the skills you might need.

Personal skills or aptitudes:

- Patience – the strength to wait for a definitive answer
- Inquisitiveness and curiosity
- Creative imagination – scientists all have this essential ingredient.

Skills Build

First steps – moves you can take now

If you're interested in digging up the past, you'll probably watch TV programmes of archaeological digs. You could volunteer to help with a local dig at weekends or during holiday periods. You may prefer to go fossil-hunting. It's better for both you and the environment to go with a geologist who knows what they're doing and can give a steer to the inexperienced. There are clubs you can join, and some great stuff in museums – try the Geological Museum in London or www.geolsoc.org.uk

Third floor

All Earth scientists have a handful of A levels in scientific subjects – the broader the background, the better. You'll need physics, chemistry and one or two of biology, geography, geology, and maths or maths with statistics. If you're taking vocational subjects, you'll need a VCE A level (double award) and, possibly, another science AS/A level to go higher. Another route is to take a BTEC National Diploma in Science at a further education college and progress from there to a degree course.

Key skills:

- ICT - to take advantage of all the best software programs that can help with data analysis and projection of the findings and with statistical conferring
- Communication – to tell the whole world what you've discovered – over the airwaves and through research papers on the internet.

On to the second level

GCSE double science or the separate sciences are essential for understanding molecular bonding and chemical structures and GCSE maths is necessary for all the number-crunching that goes on in the background of Earth sciences. English language and literature are valuable for writing and delivering lectures on the exciting discoveries that you've made and talking to TV audiences and GCSE in design technology helps you understand the behaviour of materials.

Fourth floor

Take a university degree course – such as, a BSc (Honours) in Earth sciences or geology/geological sciences. Most Earth scientists find their particular niche to specialise in – it could be planet Earth, moon rocks or even Mars

