Look Who's Talking Careers By Nick Frearson

STEM Careers in Polar Climate

Grades 7-12

Single Class

Career Area & Job Title:

Engineering,

Senior Engineer/Researcher

The Big Picture - What I do:

Oversee our engineering & software team in the designing and building of very cool sensors for our do airborne geophysics work in the Arctic and Antarctic. This project began with just an idea about a new way to collect remote sensing data! Once we got the 'go-ahead' we had to move quickly to build the team to design and build and the cool sensors, instruments and the software we would need to collect and record the measurements from the ice sheets and sea ice we would fly over. From the sensor design, to shrinking instruments to fit inside a small compartment in the 8.5X2 ft. ice pod, to testing the instruments in extremely cold environments, its my job to make sure it all works!

What I Like Most About My Job:

Going to the coolest places on Earth with my colleagues and standing there in awe looking at, observing and reporting on the massive changes that are going on there.

The Most Unusual Part About My Job:

Working and sleeping in an unheated tent in the middle of the Antarctic Ice Sheet where the outside temperature was -30F i.e. colder than the freezer in your kitchen! We spent about 2 months there as part of the AGAP project – you can read about that: http://www.ldeo.columbia.edu/agap

What Type of Schooling/Experience is Needed?

Degree in Engineering and/or Math and Physics is the starting point but just a degree is not enough! To design and build new instruments and think about new ways to make measurements and 'do' science requires a massive desire to understand what makes our Planet tick wand what part we play, if any, in that. So being curious, asking questions, wanting to know more and wanting to try out new ideas is really important!

Photo

Nick Frearson in the field in Antarctica.

Education

Degree in Electronics

Degree in Physics

Northumberland University, Newcastle-upon-Tyne, England