

Science is imagination

FOR SOMETHING THAT IS SO COOL, SCIENCE HAS A LOT OF OPENING THESE DAYS. COOL AND OPPORTUNITIES: THAT'S A GOOD COMBINATION. *SMART START* REPORTS.

WHAT IS SCIENCE?

Science is the observation and understanding of stuff. Scientists define laws and principles by using creativity, imagination and logic applied to the knowledge that comes from observation and understanding.

WHAT DO SCIENTISTS DO?

Pretty much everything. Scientists combine imagination with patience. They use sharp analytical skills and can work for long periods in search of a breakthrough.

Science is incredibly powerful. So powerful in fact that it has given us some things which seem too powerful for us – nuclear weapons are the obvious example. But science and scientists can help save lives, preserve the environment and improve how we live.

STUDYING

Science gives you more than facts and figures – it reveals how the world works. It can give you problem-solving skills which is why scientists are employed in many more places than labs – business, journalism and even in politics.

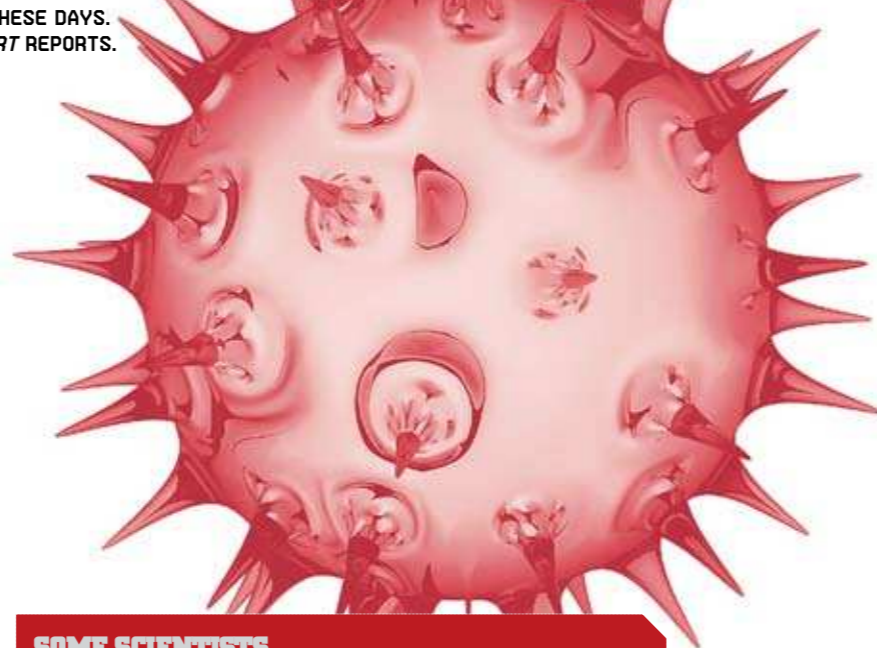
Careers in science are not only for scientists – technicians, managers and administrators also support them.

MONEY

Australia's leading science agencies say starting scientist salaries are around \$50,000 and go up to over \$200,000

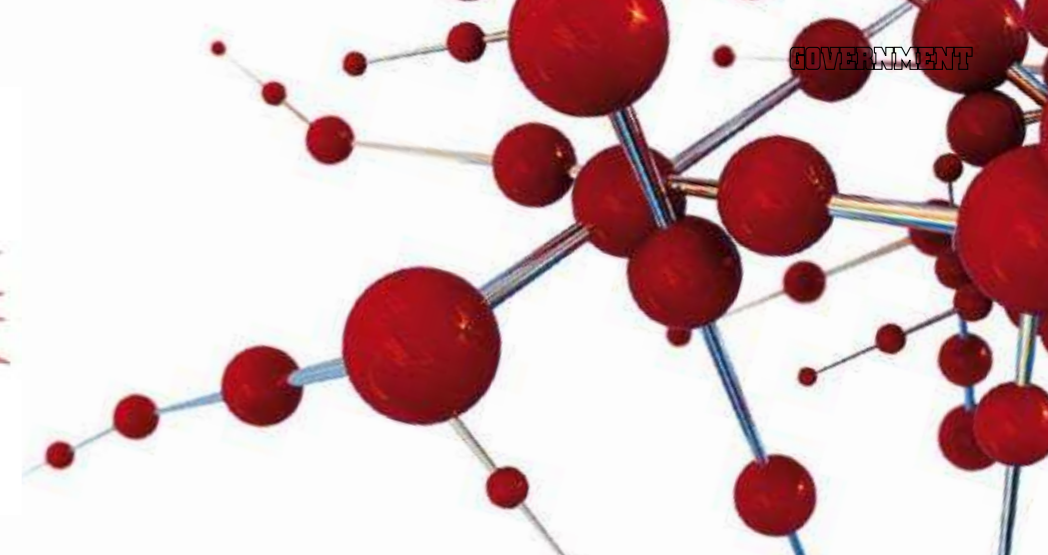
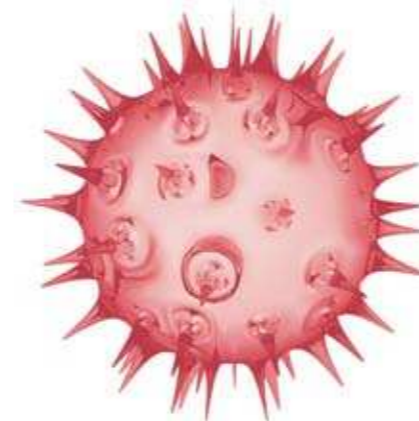
SCIENCE MIGHT SUIT IT YOU

- Want travel.
- Like a fast-paced environment.
- Want to help the community.
- Like working outdoors.



SOME SCIENTISTS

- Agronomists specialise in soil and crops.
- Anthropologists study existing and past human cultures – the way people live.
- Archaeologists study artefacts and ruins from past civilisations.
- Astronomers study stars, planets and galaxies.
- Biologists study living systems.
- Botanists study plants.
- Botanist specializes in plants.
- Cytologist specializes in the study of cells.
- Ecologist study the relationship between living organisms and their environment.
- Environmental chemists study how substances react to effect the environment.
- Entomologists study insects.
- Epidemiologists study the spread of diseases.
- Geneticist study how traits are inherited.
- Geographers study Earth's surface.
- Geologists specialise in the history of Earth.
- Ichthyologists study fish.
- Marine biologists study ocean plants and animals.
- Meteorologists study weather and climate.
- Microbiologists study microscopic plants and animals.
- Oceanographers study the oceans.
- Palaeontologists specialise in fossils.
- Physicists study matter, energy, and how they are related.
- Physiologists study the functioning of organisms and how they move.
- Seismologists studies earthquakes.
- Zoologists study the animal kingdom, classification of animals, animal habits and location of animals.



Taking science to the people

YOU'RE EITHER A 'SCIENCE' PERSON OR A 'PEOPLE' PERSON. TRUE OR FALSE? READ ON TO FIND OUT. ACTUALLY, FALSE. CHECK OUT GRAHAM WALKER'S STORY.



Graham on the job in Zululand

Graham is an intrepid young science guy who has been taking a mini-science circus program on the road to Zulu students in South Africa.

The program, which is operated by the Centre for the Public Awareness of Science at the Australian National University, gives disadvantaged South African children a chance to experience the fun side of science, as well as empowering science educators in Zululand (yes, that is actually a place).

Graham was part of a team presenting shows on curriculum topics such as pressure, fire and energy, as well as teaching local staff to do the same. They conducted teacher workshops on hands-on science activities using cheap materials – a must for the disadvantaged communities they focussed on.

"The program is all about sharing Australian knowledge in the science communication field with people who need it most," says Graham.

"Many Zulu classrooms only have chairs, desks and a blackboard. It's a very special thing for students to have an interactive science display and shows

come to their school."

But how did Graham get into that line of work?

"My dad was a scientist, and I've always had a fascination with the natural world and science."

Graham loved pulling things apart to see what made them tick, and was lucky enough to discover at high school that he had skills in that area as well as a passion.

"I worked hard at science and maths and that was vital for where I am today, and did OK with English but could have put in more effort there and wish I had."

He says his English efforts are now ironic because he is employed as a science communicator; and he does freelance music and science writing.

After Year 12, he went onto the ANU to do a science degree majoring in biochemistry.

"But I found I was more fascinated in telling people about science rather than doing it personally," he laughs. "So I did a post-graduate program in science communication."

He reckons science communication is about taking science to the masses, popularising science and promoting it as a career area. Apparently Dr Karl (Kruszelnicki) and Adam Spencer are the gurus.

"Science and society are crossing over more and more."

He says the Zululand trip was a real road trip and an amazing experience.

"We just packed everything into a car and a trailer and took it out to the kids and teachers."

The two-month trip involved travelling to schools each day and seeing up to 1500 students a day. The final component was a series of tabletop interactive exhibits – the hand-powered radio was a favourite amongst the African students.

"I think the highlight was when we were out at a school and they were doing their Zulu clapping and dancing and we poked heads around the corner and before we knew it I was dragged into the middle of the dancing. I don't quite bend like a Zulu dancer, but I was accepted as one of them and that was pretty special – amazing some of the places this work takes me." •

FOR MORE INFORMATION

- www.careersinscience.gov.au
- www.csiro.au; 1300 363 400

ZULULAND

- Although some corn is grown, the Zulu economy depends primarily on raising cattle.
- The Inkatha movement, an indigenous association whose membership consists primarily of Zulu migrant workers, has played an important and controversial role in the political life of South Africa since 1975.
- Many Zulus still live as members of a traditional extended family in a fenced compound (kraal), headed by the oldest man. Members of the family occupy beehive-shaped huts in the enclosure of the kraal, within which the cattle are kept penned.
- Zululand was the Zulu-dominated area of what is now northern KwaZulu-Natal Province.
- Ridiculous fact: A postal system operated in Zululand from 1888 to 1897, issuing its own postage stamps.

