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Scientists in Schools

Careers talk

Invite the scientist to present a talk about their career and/or science careers in general.

Things to consider

- Presenting to the whole school (for example, at the school assembly) sounds like a great idea but can be confronting or difficult as the talk has to cater to a wide range of age groups and interest areas attending. Questions are also more difficult to handle.
- Discuss in advance what audio-visual equipment is available or arrange to borrow equipment.
- Before the session, share some background information about the students – their interests, what sort of career plans they have (university or VET) and so on.
- The presentation should be interactive and engaging for students. You may like to discuss ideas on how to do this.

Ideas

- Consider a pre-visit activity to get the students thinking about science careers. For example, read profiles of scientists in *The Helix* or *Scientriffic* magazines or in the 'career profiles' section of one of these websites: www.careersinscience.gov.au; www.csiro.au/scope; www.abc.net.au/acedayjobs
- As a class, watch an episode of SCOPE (www.csiro.au/scope) to see some scientists in action. Choose an episode that is related to the scientist's area of work.
- Plan the talk and discuss the expectations you and the students have. The talk could be about:
    - the scientist's career path
    - what it's like to study science at university
    - careers in the scientist's area or organisation
    - science careers in general
    - the way science is used in 'non-science' jobs – for example, the chemicals used by hair dressers or the science behind food storage rules in a fast-food restaurant.
- Allow plenty of time for questions. If questions don't start straight away, ask some yourself or have some discussion questions prepared. For example: who do you know who works with science; name a science activity that you've enjoyed.
- If you can, promote work experience opportunities, volunteer programs, science summer camps and other 'take home messages' that students can get involved with straight away.
- As a follow-up activity, ask students to find someone they know who works with science (take a broad perspective on this!) and interview them for a careers profile. You could create a science careers webpage from the collated profiles.
- Use the careers worksheets on the next pages as follow-up activities after the talk.

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Worksheet - Careers talk (junior)

What is the name of the scientist? _____

Write or draw some of the things the scientist does at work:

What do you think is the most interesting part of the scientist's job? Why?

_____

_____

_____

_____

_____

_____

What do you think is the most difficult or boring part of the scientist's job? Why?

_____

_____

_____

_____

_____

_____

On the back of the page, draw a picture or write a story about a science job that you would like to try one day.

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Worksheet - Careers activities

Aim

Students will explore some aspects of the partner scientist's area of research and discover information on the range of careers available in the sciences.

Background

Scientists use research to discover new knowledge. They learn as much as possible about their subject area, share information with other scientists and frame questions for further research.

These activities are based around a careers talk or class discussion from the partner scientist. They introduce students to some aspects of this scientist's job, then extrapolate to consider how scientists work and to explore science careers.

The scientist could be involved in all stages of this activity, or the activities could be done before or after a visit from the scientist.

Reading and discussion: Exploring the scientist's area

As a class, find out about the scientist's work. Discuss the broad area of science the scientist works in (for example: marine science, engineering, meteorology).

As a class, or in small groups, brainstorm other science careers that are similar to your partner scientist's area. For example, if your partner scientist worked in marine science you could think about careers that study:

1. the ocean itself (parts of the ocean, how oceans are formed etc)
2. things that live in or around the ocean
3. the ways that people interact with the ocean.

It is unlikely that students will come up with job titles; descriptions are fine. Here is one example for each of the categories above:

1. a scientist who tries to learn about waves
2. someone who studies coral
3. a person who finds out ways to clean up pollution in the oceans.

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Research: Working as a scientist

Before they start any new research, scientists need to find out as much as possible about the area they are researching. The information they discover will help them ask the right questions and might provide clues that will help them with their research.

Brainstorm a list of questions about the research that your partner scientist is working on (for example, why is coral coloured?). Then split the class into 'research teams' to research one of these questions each.

Use the information that the scientist told you in their talk plus other information sources such as the internet or the library. You may be able to email questions to the scientist too.

If a research team finds information about one of the other questions while they're doing their research, they should share it with the other research team, just as scientists share their research results.

Note that students may not be able to find answers to all the questions. That's why scientific research is important; it helps us find answers to new questions. The questions your class has developed are the types of questions that scientists use to decide what to research.

Once the students have finished their research, hold a conference for students to present their information. The teacher or scientist could collate the information and display it as a mind map.

Invite the scientist back to the class to discuss your findings and the questions you couldn't find answers to, or hold an email or teleconference discussion with the scientist.

Exploration: Science careers

Ask the students to research a science career that they are interested in. They could use the library or the internet, or they could talk to people who work as scientists.

Suggestions for internet research:

- http://www.csiro.au/scope/profiles.htm
- http://www.careersinscience.gov.au/
- http://www.myfuture.edu.au/
- http://science.uniserve.edu.au/school/resource/careers.html
- http://www.abc.net.au/acedayjobs/

Students could write a profile of their selected career for a school newsletter or school website or record a radio interview with a scientist.