

Australian Physicists

– Lesson Outline

Syllabus Reference

7.1.5 P5 – A student describes the scientific principles employed in particular areas of research in physics

7.1.6 H5 – A student identifies possible future directions of physics research

P 12.3 E – Gather information from secondary sources by identifying practicing male and female Australian scientists, the areas in which they are currently working and information about their research.

Resources

Video: Becoming a Physicist: Professor Tanya Monro
<http://www.hscphysics.edu.au/resource/BecomingAPhysicist.flv>

Video: Careers in Physics: Physics Researcher
<http://www.hscphysics.edu.au/resource/PhysicsResearcher.flv>

Video: Physicist dress code
<http://www.hscphysics.edu.au/resource/p0ujz35tthlo4eix>

Video: Academic Freedom
<http://www.hscphysics.edu.au/resource/81w16b4t7urey0d6>

View Video

Video: Becoming a Physicist: Professor Tanya Monro
<http://www.hscphysics.edu.au/resource/BecomingAPhysicist.flv>

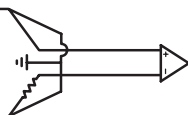
Activities

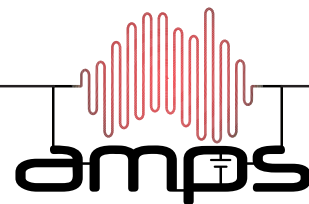
Lead class discussions on the following questions:

Can anyone name an Australian physicist?

Where in Australia in physics research performed?

What is it like being a physicist?





View Video

Video: Careers in Physics: Physics Researcher
<http://www.hscphysics.edu.au/resource/PhysicsResearcher.flv>

Activities

Divide students into pairs or groups of three. Give each group five minutes to research online. Each group should find facts about either the “Brain Drain” in Australia, or ways in which Australia provides incentives for Australian researchers to perform their research in Australia.

Useful internet sites are provided here:
<http://www.hscphysics.edu.au/resource/AustralianPhysicists>

One representative presents the group’s work to the rest of the class. Encourage class discussion and questioning. Collate all groups’ responses on the board.

Lead discussion with the question: Do you think Australia should support its scientists more?

View Video

Video: Physicist dress code
<http://www.hscphysics.edu.au/resource/p0ujz35tthlo4eix>

Activities

Lead class discussions on the following questions:

What is Academic Freedom?

Who funds research in Australia?

What does a physicist do after making an important discovery or breakthrough? Do they publicize the breakthrough or patent it?

View Video

Video: Academic Freedom
<http://www.hscphysics.edu.au/resource/81w16b4t7urey0d6>

