



Science 7-9

Program outline



Welcome to the Science 7-9 program

The Science 7-9 program is co-designed with and facilitated by the University of Melbourne. You'll delve into the Australian Curriculum Science 7-9 and explore new perspectives from the forthcoming SA Curriculum: Science.

You'll deepen your conceptual understanding of science and discover ways to support learner agency by creating engaging learning experiences for students. Each day of the program focuses on a different science discipline, linking key concepts to learning dispositions and capabilities. You'll engage with quality pedagogies that inspire effective learning through curiosity and creativity, including practical work in a school science laboratory.

The program is delivered face-to-face over 5 days.

The learning

Day 1: Earth Sciences

- Understanding the Australian Curriculum – earth science, and its underlying concepts.
- Misconceptions in science education.
- Using the geological concept inventory.
- Hands-on exploration of the big ideas using data and models in earth science.

Day 2: Space and physical science

- Understanding the Australian Curriculum – space science and physics, and their underlying concepts.
- The big ideas in physical sciences.
- Exploring Aboriginal science and knowledge.
- Hands-on exploration around the big ideas in physics – forces.

Day 3: Chemical Sciences

- Understanding the Australian Curriculum – chemistry, and its underlying concepts.
- Using and teaching with laboratory equipment, which includes undertaking risk assessment and management.
- Conventions for scientific diagramming and recording.
- Hands-on exploration of 2 big ideas in chemistry through structured and guided inquiry:
 - the relationship between matter, change and energy
 - representing these relationships by connecting what is observable (the macroscopic) with the sub-microscopic through symbolic representations.

Day 4: Biological Sciences

- Understanding the Australian Curriculum – biology, and its underlying concepts.
- The importance and use of multiple representations in science education.
- Hands-on exploration of a big idea in biology.
- Building and assessing understanding through inquiry.

Day 5: Synthesis

- Synthesising the learning from the previous program days to explore implications for collaborative practice in the teaching, learning, and assessing of science in middle school.
- Exploring science as a human endeavour across the science sub-disciplines.

Applied learning activities

While participating in the program you’ll complete applied learning activities that will support you to transfer your theoretical learning into practice. The primary applied learning task will be a project that you will discuss with peers on the final day of the program. Throughout the program you’ll be supported by the facilitators and university coach to develop, implement and evaluate your project.

Applied learning tasks	Due date
Reflective discussion <ul style="list-style-type: none"> • Respond to the set reflection questions focused on the learning from the program days. • Provide a response to one of your peer’s reflections. 	One week after day 2 and one week after day 4
Project: planning and trialling a learning sequence <ul style="list-style-type: none"> • Plan and trial 2-4 lesson sequences. 	Planning task: 1 week before day 3 Implementation task: 1 week before day 5
Day 5 learning walk/sharing <ul style="list-style-type: none"> • Share and critically reflect on your peers’ projects. 	Day 5

Coaching

A University of Melbourne coach will support work on your applied learning project.

Through MS Teams meetings and email, your coach will:

- assist with forming and developing your applied learning project
- monitor the progress of your project
- provide advice on conducting or modifying your project in preparation for submission and sharing on the final day of the program.

Program requirements

To achieve satisfactory completion, you need to:

- actively participate in all program days and activities
- complete the applied learning task.

If you're unable to meet these requirements, please contact Orbis to discuss.

Accreditation

When you have met the above requirements, you'll receive a certificate of completion from Orbis. This can be used as evidence for your required professional learning hours for registration renewal.

Additionally, you may qualify for 12.5 points of unspecified credit towards an eligible postgraduate qualification at the Melbourne Graduate School of Education. The unspecified credit could also be recognised and accepted by other tertiary institutions. For further information about the university credit, please contact us.

“This course has inspired me to be more creative and think outside the academic box when teaching science.”

Corey Blackmore- Salisbury High School

Engaging.
Empowering.
Purposeful.
Collaborative.
Exemplary.



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