Video transcript

Understanding the Victorian Curriculum F–10 Version 2.0, Science

Hello and welcome.

People have always been curious about the world around them. Questions such as ‘How does it all work? ‘Why does it happen that way?’ and ‘How can we be sure?’ lie at the heart of science, guiding our exploration of the universe. These questions guide our exploration of the universe, from the smallest subatomic particles detected on Earth or the bacteria found in Earth’s microenvironments, to the vast expanses of space.

The Science learning area helps students engage with these questions by studying key science concepts and processes and undertaking hands-on practical activities and investigations.

But it's not just about facts and figures – it’s about understanding the connection between science and society.

The aim of this video is to familiarise you with the Victorian Curriculum F–10 Version 2.0 Science.

Studying science prepares students to be informed, empowered, and responsible citizens who can apply their learning to decision-making in their own lives, as well as make positive contributions to their communities.

Let's turn our attention to the key revisions made to the Science curriculum.

The Victorian Curriculum F–10 Version 2.0 Science has maintained a 3-level band from Foundation to Level 2, and then 2-level bands from Level 3 to Level 10. This is so schools continue to have flexibility in developing programs to meet the needs of their students in their own contexts.

Greater specificity is included in the revised Science curriculum so that it’s clear to teachers the depth to which a topic should be taught. This helps in seeing the continuum of learning across Foundation to Level 10.

Each content description aligns with an achievement standard or part of an achievement standard so that it’s clear what we should teach and what students should be able to write, say, make, or do in assessment.

The strength and connectedness between the achievement standards and content descriptions helps ensure greater confidence in the use of these curriculum components.

The revision of Science as a Human Endeavour from a sub-strand to a strand emphasises the importance of understanding how scientific knowledge develops, as well as appreciating the relationship between science and society.

The elaborations provide clear guidance on how the content descriptions could be applied and have been streamlined for clarity.

Elaborations have been included to show how Aboriginal and Torres Strait Islander Peoples’ knowledge can be used as a springboard to understand scientific concepts.

Real-world problems, including the control of disease, responses to natural hazards, mitigating climate change, evaluating energy options, managing resources, and addressing biodiversity loss can be discussed in terms of the underpinning scientific ideas, possible solutions and current innovations.

Opportunities have been provided to investigate important scientific concepts related to contemporary science-related issues in meaningful ways; for example, participating in a renewable energy design challenge, creating a habitat for native species in the school grounds, or proposing missions for space exploration.

Inclusion of these socio-scientific issues helps develop programs that are engaging and contextualised. Sustainability concepts have been significantly strengthened in the revised Science curriculum across all 3 strands in relation to interrelationships between Earth systems, world views, responsible design, and futures thinking.

The Science curriculum Version 2.0 ensures progression in student scientific learning journey as a continuum from Foundation through to Year 12. It provides opportunities for them to develop knowledge, skills, and understanding necessary for further education, training, or employment in science-related fields, and to develop informed views about science-related issues in society.

The Victorian Curriculum F–10 Version 2.0 Science is organised under 3 strands: Science as a Human Endeavour, Science Understanding and Science Inquiry.

It is important to understand that the content in these strands is linked rather than being extra and separate. This provides depth to what students learn, but also consolidates these 3 curriculum elements.

When planning your curriculum, think about how a topic can be linked to some of the sub-strands in each of these 3 strands. The curriculum elaborations will help show you examples of links that can be made.

A set of sample inquiry questions is included in the band descriptions to help stimulate students’ curiosity and challenge their thinking. These reflect the skills developed through the Science Inquiry strand in independent and collaborative investigations.

The skills of questioning and predicting, planning and conducting, processing, modelling and analysing, evaluating and communicating can involve a range of methodologies and activities, including experimental testing, field work, locating and using information sources, conducting surveys and interviews, investigating case studies, and using modelling and simulations.

These skills are then further developed in post-compulsory secondary studies, including VCE. In Science, students progress along a continuum of learning that provides the first achievement standard at Level 2, and then at Levels 4, 6, 8, and 10.

The content descriptions in Science sequence and describe the knowledge, understanding, and skills that teachers need to teach and students are expected to learn.

Developing their science skills enables students to engage with science in their everyday lives and to respond to future challenges and opportunities by supporting critical thinking, scientific literacy, and inquiry skills from Foundation to Level 10.

As mentioned earlier, the curriculum aligns content descriptions with an achievement standard or part of an achievement standard to ensure clarity for teachers about what to teach and how to assess student learning.

The curriculum empowers students to evaluate evidence, understand scientific concepts, and engage with advancements and societal issues.

Through inquiry based learning, students develop curiosity and resilience. They also explore the ethical dimensions of science and utilise digital tools for analysis and collaboration.

Ultimately, the Science curriculum fosters adaptability and confidence and prepares students for diverse scientific careers, higher education opportunities, and informed decision-making in everyday life.

For more information, I encourage you to explore the Victorian Curriculum F–10 website. The website provides easy access to the curriculum and all its supporting resources.

Thank you for watching.