Hello and welcome to this on–demand video on Curriculum planning for Digital Technologies 7–10 .

In this video we'll be discussing how to plan for delivering the Digital Technologies Curriculum.

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In this session we'll look at the background to the curriculum. Here we'll look at the: Rationale, Aims, Structure and strands, Key concepts, Scope and sequence, Content descriptions, Elaborations, and Achievement standards. Then we'll look at planning for delivering the curriculum. This will include: Programme Planning Templates, Curriculum Area Plans, and Integrating with other curriculum areas.

Now we will look at the background to the Digital Technologies Curriculum 7–10.

Starting with the Rationale.

So why Digital Technologies?

In Digital Technologies we want the students to be creative developers and problem solvers. We want students to acquire a deep understanding so they can take an active role in meeting current and future trends. The curriculum has been designed to provide practical opportunities for students and the curriculum encourages students to be discerning decision–makers.

The aims of Digital Technologies Curriculum.

We want to ensure that students can design, create, manage, and evaluate innovative digital solutions. Use computational thinking to create digital solutions, apply systems thinking to monitor, analyse, predict, and shape interactions within and between information systems, confidently use digital systems, and apply protocols and legal practises.

The Digital Technologies Curriculum involves three strands. The strands are Digital Systems, Data and Information, and Creating Digital Solutions.

Digital Systems focuses on the hardware, software, and network components of digital systems. Data and Information focuses on the properties of data and how it is collected and represented to create information. And Creating Digital Solutions focuses on the skills and processes students need to create a digital solution for a real world problem.

The key concepts that underpin the Digital Technologies Curriculum are: abstraction, data collection, representation and interpretation, specification, algorithms and development, digital systems, and interactions and impacts. These concepts can be explored in digital or non–digital contexts.

Scope and sequence.

The curriculum sets out what students are expected to learn and is designed as a continuum of learning.

The curriculum is presented in a scope and sequence chart to support teachers to easily see the progression. This assists in planning teaching and learning programmes to meet the diverse needs of students.

The Scope and Sequence charts can be accessed via the Digital Technologies Curriculum page on the Victorian Curriculum F–10 website. They can be downloaded as Word and PDF documents.

This is an example of a Scope and Sequence chart. Each of the columns represents a band. These include: Foundation to Level 2, Levels 3 and 4, Levels 5 and 6, Levels 7 and 8 and Levels 9 and 10. The table is divided into three strands: Digital Systems, Data and Information, and Creating Digital Solutions. The statements in the top boxes are known as content descriptions. The section at the bottom of the table is the achievement standard.

Content descriptions state the content that should be taught to students. They can be taught individually, or they can be taught as part of a wider unit with other content descriptions.

Achievement standards state what the student should be able to demonstrate. They represent the level of achievement for that band. They describe how the content description or content descriptions could be assessed. The achievement standards indicate where the student sits on the continuum of learning.

These are the achievement standards for Levels 7 and 8 and Levels 9 and 10. You will notice that the achievement standards are divided into three paragraphs. Each paragraph represents one of the strands. The first paragraph represents the Digital Systems strand, the second paragraph represents the Data and Information strand, and the third paragraph represents the Creating Digital Solutions strand. When you look closely at each of these statements, particularly the Data and Information strand and the Creating Digital Solutions strand, you'll see they address several content descriptions.

Linked to the content descriptions are elaborations. Elaborations include a list of statements. These can be used as a guide towards teaching content within content descriptions. They are not meant to be prescriptive and teachers don't have to use any of them.

Now we'll look at planning for delivering the Digital Technologies Curriculum at 7–10.

Delivering the Digital Technologies Curriculum can seem like a challenging task when starting for the first time. So where would you start?

The VCAA has developed a range of planning resources to make planning considerably easier. Programme Planning Templates and Curriculum Area Plans can be found on the VCAA website.

The Programme Planning Templates can be used to ensure that curriculum is effectively covered. They enable a link between the curriculum, what is being taught in the content descriptions and what is being assessed in the achievement standards.

When planning it is important to avoid gaps or overlaps of the curriculum in teaching programmes. Concepts should be taught with depth, not breadth and consideration should be given to EAL and low literacy students.

Curriculum Area Plans visually represent timelines on how the Digital Technologies Curriculum could be delivered in different bands. Each strand is indicated by different colours.

There are three sample programmes for each band. They look at examples for delivering the curriculum in a semester, over a year or over the band.

Digital Technologies can be integrated with other curriculum areas. The Digital Technologies Curriculum provides context within which Mathematics understanding, fluency, logical reasoning, analytical thought and problem solving skills can be applied and developed.

In particular, computational thinking draws on mathematical understanding and skills. An understanding of data and data analysis skills will enhance students' ability to analyse patterns and trends, and logical reasoning will support the design of algorithms.

Digital Technologies can also be integrated into other learning areas, such as Science, Geography and the Arts. In Science, it involves: collecting, organising, storing, presenting, and drawing conclusions from data. In Geography, it involves: sorting, manipulating and recognising patterns in datasets and developing spatial awareness. And in the Arts, it involves: design thinking and the creation and selection of visual designs.

In wrapping up this video it is worthwhile to review what we have covered. We have looked at the background to the curriculum. We have covered the: Rationale, Aims, the Structure and strands of the curriculum, Scope and sequence, Content descriptions, Elaborations and Achievement standards. We have also explored resources to help plan for the delivery of the curriculum. We have covered the: Programme Planning Templates, Curriculum Area Plans, and Integrating with other curriculum areas.

Thank you for watching this video today. If you have any questions regarding the Digital Technologies Curriculum, you can contact the Curriculum Manager for Digital Technologies, Phil Feain, at the email address and phone number shown.

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