



Digital Technologies as a subject aims to teach students critical, creative thinking skills; skills that can be utilised to help students work collaboratively in a rapidly changing world. We aim to create approximately 50 smart lessons covering the knowledge and understanding component of the curriculum.

These smart lessons include information slides that explicitly teach the content and are complemented with automatically marked questions based on the mastery model that can be completed by students at their own pace.

Lessons are designed to encourage a growth mindset, to allow a flipped learning approach and to support teachers in how they teach digital technologies around Australia.

Each topic and the lessons planned are outlined below. Each dot point below will be covered by a smart lesson. These usually take students between 15-30 minutes to complete.



Digital Systems

- ✓ Binary Numbers in Computers
 - The Binary Number System
 - How Computers Use Binary Code
 - Converting Between Decimal and Binary
- ✓ Character Sets
 - Introduction to Digital Text
 - Unicode
 - ASCII
- ✓ Computer Graphics
 - Pixels
 - RGB Colour Model
 - Bitmaps
 - Image Compression: JPEG and PNG
 - Vector Graphics

- ✓ Media Elements
 - How Text is Presented Digitally
 - How Images are Presented Digitally
 - How Video is Presented Digitally
 - How Audio is Presented Digitally

How Data is Transmitted

- ✓ History of Communication Technologies
 - Legacy Technologies
 - Modern Technologies
- ✓ Components of Networks
 - Introduction to Networks
 - Components of Networks
 - Speed and Security of Networks
 - Practical: Create Your Own Network
- ✓ Wired Networks
 - Wired Networks in Telecommunication
 - DSL and Cable
 - Fibre Optics

- ✓ Wireless Networks
 - Microwaves
 - Radio Waves
 - Infrared Waves
- ✓ Mobile Networks
 - Transceivers
 - Mobile Phones
- ✓ Performance of Networks
 - Speed
 - Security
 - Reliability
- ✓ Protocols For Transmitting Data
 - Communication Protocols
 - HTTP
 - FTP
 - TCP/IP
 - Wireless Security
 - Transmission Media