

**Digital Technologies: Sequence of content F-10** *Strand: Knowledge and understanding*

	F-2	3-4	5-6	7-8	9-10 (Elective subject)
<b>Digital systems</b>	Recognise and explore digital systems (hardware and software components) for a purpose (ACTDIK001)	Identify and explore a range of digital systems with peripheral devices for different purposes, and transmit different types of data (ACTDIK007)	Examine the main components of common digital systems and how they may connect together to form networks to transmit data (ACTDIK014)	Investigate how data is transmitted and secured in wired, wireless and mobile networks, and how the specifications affect performance (ACTDIK023)	Investigate the role of hardware and software in managing, controlling and securing the movement of and access to data in networked digital systems (ACTDIK034)
<b>Representation of data</b>	Recognise and explore patterns in data and represent data as pictures, symbols and diagrams (ACTDIK002)	Recognise different types of data and explore how the same data can be represented in different ways (ACTDIK008)	Examine how whole numbers are used to represent all data in digital systems (ACTDIK015)	Investigate how digital systems represent text, image and audio data in binary (ACTDIK024)	Analyse simple compression of data and how content data are separated from presentation (ACTDIK035)

**Digital Technologies: Sequence of content F-10** *Strand: Processes and production skills*

	F-2	3-4	5-6	7-8	9-10 (Elective subject)
<b>Collecting, managing and analysing data</b>	Collect, explore and sort data, and use digital systems to present the data creatively (ACTDIP003)	Collect, access and present different types of data using simple software to create information and solve problems (ACTDIP009)	Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information (ACTDIP016)	Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIP025) Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (ACTDIP026)	Develop techniques for acquiring, storing and validating quantitative and qualitative data from a range of sources, considering privacy and security requirements (ACTDIP036) Analyse and visualise data to create information and address complex problems, and model processes, entities and their relationships using structured data (ACTDIP037)
<b>Creating digital solutions by:</b>					
<b>Investigating and defining</b>	Follow, describe and represent a sequence of steps and decisions (algorithms) needed to solve simple problems (ACTDIP004)	Define simple problems, and describe and follow a sequence of steps and decisions (algorithms) needed to solve them (ACTDIP010)	Define problems in terms of data and functional requirements drawing on previously solved problems (ACTDIP017)	Define and decompose real-world problems taking into account functional requirements and economic, environmental, social, technical and usability constraints (ACTDIP027)	Define and decompose real-world problems precisely, taking into account functional and non-functional requirements and including interviewing stakeholders to identify needs (ACTDIP038)

**Digital Technologies: Sequence of content F-10** *Strand: Processes and production skills*

	F-2	3-4	5-6	7-8	9-10 (Elective subject)
<b>Generating and designing</b>			Design a user interface for a digital system (ACTDIP018)  Design, modify and follow simple algorithms involving sequences of steps, branching, and iteration (repetition) (ACTDIP019)	Design the user experience of a digital system, generating, evaluating and communicating alternative designs (ACTDIP028)  Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (ACTDIP029)	Design the user experience of a digital system by evaluating alternative designs against criteria including functionality, accessibility, usability, and aesthetics (ACTDIP039)  Design algorithms represented diagrammatically and in structured English and validate algorithms and programs through tracing and test cases (ACTDIP040)
<b>Producing and implementing</b>		Implement simple digital solutions as visual programs with algorithms involving branching (decisions) and user input (ACTDIP011)	Implement digital solutions as simple visual programs involving branching, iteration (repetition), and user input (ACTDIP020)	Implement and modify programs with user interfaces involving branching, iteration and functions in a general-purpose programming language (ACTDIP030)	Implement modular programs, applying selected algorithms and data structures including using an object-oriented programming language (ACTDIP041)
<b>Evaluating</b>	Explore how people safely use common information systems to meet information, communication and recreation needs (ACTDIP005)	Explain how student solutions and existing information systems meet common personal, school or community needs (ACTDIP012)	Explain how student solutions and existing information systems are sustainable and meet current and future local community needs (ACTDIP021)	Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)	Evaluate critically how student solutions and existing information systems and policies, take account of future risks and sustainability and provide opportunities for innovation and enterprise (ACTDIP042)
<b>Collaborating and managing</b>	Create and organise ideas and information using information systems independently and with others, and share these with known people in safe online environments (ACTDIP006)	Plan, create and communicate ideas and information independently and with others, applying agreed ethical and social protocols (ACTDIP013)	Plan, create and communicate ideas and information, including collaboratively online, applying agreed ethical, social and technical protocols (ACTDIP022)	Plan and manage projects that create and communicate ideas and information collaboratively online, taking safety and social contexts into account (ACTDIP032)	Create interactive solutions for sharing ideas and information online, taking into account safety, social contexts and legal responsibilities (ACTDIP043)  Plan and manage projects using an iterative and collaborative approach, identifying risks and considering safety and sustainability (ACTDIP044)