

Cambridge NATIONALS LEVEL 1/2

INFORMATION TECHNOLOGIES

On the reverse of this page, we've shown how to plan the teaching of all the learning outcomes of the **Cambridge Nationals in Information Technologies**. Each area of teaching content is noted with assessment opportunities.

For each learning outcome, we will provide a range of interesting and innovative teaching activities. These activities will be combined into a single Delivery Guide. Below you'll find examples of the kind of activities you'll find in the Delivery Guide.

Unit No	LO No	LO Title
R012	LO1	Understand the tools and techniques that can be used to initiate and plan solutions
R013	LO2	To be able to initiate and plan a solution to meet an identified need
R012	LO3	Understand how data and information can be collected, stored and used
R012	LO4	Understand the factors to be considered when collecting, processing and storing data and information
R013	LO5	To be able to import and manipulate data to develop a solution to meet an identified need
R012	LO6	Understand the different methods of processing data and presenting information
R013	LO7	To be able to select and present information in the development of the solution to meet an identified need
R013	LO8	To be able to iteratively review the development of the solution

Delivery guide example activities

Activity – Project analysis	Relates to:	Activity – Presenting data	Relates to:	Activity – Creating a database	Relates to:
<p>A new virtual reality rollercoaster ride is due to open in 12 months' time. There will be four multimedia sections for the virtual reality aspect covering different periods in the history of the UK:</p> <ul style="list-style-type: none"> Victorian era. World War II. The 1970s. Modern times. <p>Each of the multimedia sections will include video, a soundtrack (music, noises, etc.) and a narration guiding the rider through the history of the UK.</p> <p>The planning for these four multimedia sections needs to be completed with 10 months remaining on the project. This will then allow the creation of these multimedia sections to be carried out, each within a 2-month period. There can only be a small production team to keep costs down, so the construction of each section will need to be completed before the next one is started.</p> <p>Using the scenario above learners could:</p> <ol style="list-style-type: none"> Construct a mind map that summarises the key points from the project brief. Construct a work plan for the project 	<p>R012 LO1.4</p> <p>Initial project consideration</p>	<p>Emily runs a small shop that selling clothing and shoes. Her stock levels are stored on a database and includes items that she can't display in the shop as its too small.</p> <p>Emily wants to use tablet computers in the shop to show customers what she has in stock, including the sizes, amount in stock and prices. Customers will be able to select the product they want a Emily, or another member of staff can bring it out to them.</p> <p>Using the presenting data scenario above learners could:</p> <ul style="list-style-type: none"> Create a visualisation of the tablet computer screen interface that customers could use to see and select the clothing that they want to try on. 	<p>R012 LO1.5</p> <p>Planning tools and the software types used to develop project plans</p>	<p>Learners could explore the importance of storing data in a logical order for data recall. Learners could research the different approaches for storing data; then the group could discuss the advantages and disadvantages of using a database? Learners could then create a database to store the information about the music that a streaming service allows subscribers to listen to. Learners could design the structure of ONE database table to hold this data thinking about:</p> <ul style="list-style-type: none"> The fields that will need to be included in the table. The data types that each field will need to be set as. 	<p>R013 LO5.1</p> <p>Learners should be taught how to create, edit and delete data using appropriate software tools and techniques</p>
	<p>R013 LO2.1</p> <p>Learner should be taught how to initiate a project by analysis the requirements to a given context</p>		<p>R013 LO2.3</p> <p>Learners should be taught how to use planning documentation</p>		

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CURRICULUM PLANNER

Unit No	Unit Title
R012	Understanding tools, techniques, methods and processes for technological solutions
R013	Developing technological solutions

Year	LO	Content	LO	Content	LO	Content	LO	Content	LO	Content	LO	Content	LO	Content	LO	Content
Year 1	LO1.1	Stages of the project life cycle and the tasks carried out in each stage	LO4.4	(R013 RELEVANT) Prevention Measures	LO8.1	Learners should be taught how to carry out and document an iterative review ie Phase review	LO1.5	Planning tools and the software types used to develop project plans	LO3.1	Data types	LO6.1	Selection and justification of the appropriate tools and techniques and formats to process data to meet the defined objectives in a given context	LO8.1	"Learners should be taught how to carry out and document an iterative review"	LO3.1	Data types
	LO1.2	Interaction and iteration between the stages of the project life cycle	LO4.5	(R013 RELEVANT) Current legislation, its implications and applications	2.3	Learners should be taught how to use planning documentation	LO5.1	Learners should be taught how to create, edit and delete data using appropriate software tools and techniques	LO6.2	Purpose and suitability of presenting methods	June assessment	LO3.2	Information and relationships			
	LO1.4	Initial project considerations	LO2.2	Learners should be taught how to mitigate risks through the planning process	2.4	Learners should be taught how to undertake iterative testing for	LO7.1	How to select and present information for a given purpose and audience	LO7.2	Learners should be taught how to present information using appropriate software tools and techniques						
	LO2.1	Learners should be taught how to initiate a project by analysing the requirements to a given context														
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Christmas</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Easter</div> </div>																
Year 2	LO3.2	Information and relationships	LO1.3	The inputs and outputs of each stage of the project life cycle	LO4.4	Prevention measures			LO6.1	Selection and justification of the appropriate tools and techniques and formats to process data to meet the defined objectives in a given context	June assessment					
	LO3.3	Methods used to collect and store data and information, and the appropriateness of the use of these in a given context	LO4.1	Types of threats	LO4.5	Current legislation, its implications and applications			LO6.2	Selection of the appropriate tools and techniques to present information to meet the defined objectives in a given context and justification of the use of the selected tool and format						
	LO3.4	Storage and the appropriateness of the use of these in context	LO4.2	The vulnerabilities – which can be exploited in a cyber-security attack	LO4.6	Importance of validity, reliability and bias when collecting and using data and information			LO6.3	The resources required for presenting information and data and the appropriateness of the use of these in context						
	LO3.5	Use of data in a given context including Big Data	LO4.3	The impacts of a cyber-security attack												