Cambridge Technical Introductory Diploma in IT

Y12 to Y13

Summer Independent Learning 2025-2026

Due date: Ready to submit in the first lesson back in September

Unit 5 Virtual and Augmented Reality

LO 1: Understand virtual and augmented reality and how they may be used

	Pass	Merit	Distinction
1. Understand virtual and augmented reality and how they may be used	P1: Describe the uses of virtual and augmented reality by organisations	M1: Explain the impact that an identified virtual reality resource has had on society	D1: Assess the impact that an identified augmented reality resource has had on society
4. Be able to predict future applications for virtual and augmented reality	P6: Suggest possible future roles of virtual and augmented reality in future applications	M3: Evaluate the specific benefits to be gained by repurposing current examples of virtual and augmented reality into identified roles	

Task 1: A Report – P1

You need to produce a report which describes the use of Virtual and Augmented reality in a variety of organisations. You must make it clear whether each use is **VIRUTAL** or **AUGMENTED**. The organisations and their use you must cover are:

- **architecture**
- **business** (marketing, service and planned maintenance)
- **education** (e.g. textbooks, skills development, remote collaboration)
- **entertainment, leisure and the media** (tourism, games, museums)
- **health care and surgery** (training, simulations)
- **military** (training, simulations)
- **sport** (live streaming of scores and other statistics, sponsorship images)

Task 2: A presentation for an open evening – M1

You need to create a PowerPoint Presentation which explores the impact of ONE use of augmented or virtual reality from Task 1.

Detail your presentation with images, links to suitable videos and explore the impact and where it could go in the future.

Some of the things you could thing about:
Possible impacts, i.e.:
- visualisation of designs
- simulations
- training
- demonstrations of concepts
- virtual tours

Task 3: Extension to Task 2 PowerPoint Presentation – D1
You need to evaluate the chosen use of augmented or virtual reality selected for task 2. This should include a critical look at how much difference has it made to the world / society /individuals and so on.

Evaluate the main positives of the chosen use, the main negatives and what could be done to improve it further and potential long term impact of those changes.

Task 4: A report – P6

You need to write a report that explores A MINIMUM OF 3 future uses of augmented or virtual reality that DO NOT CURRENTLY EXIST or EXTEND BEYOND CURRENT USES. You should explain how it could be used and the impact of each of these potential developments.

Task 5: A report – M3
You must produce a report which evaluates the re-purposing of augmented or virtual reality in at least 4 ways. Focus on the potential benefits of repurposing this augmented or virtual reality in this way.

Suggested ideas: Re-purposing, i.e.:
- how existing products may be re-purposed and used in wholly new ways
- benefits of repurposing using current examples of resources in new ways (e.g. medical uses in the field of animal welfare, training uses in the field of education)
- heads up display used to augmented learning in schools

Guidance:

P1: Learners are required to describe the use of virtual and augmented reality by organisations. Learners should discuss at a wide range of uses and include examples of where and how they are used. The learner must ensure that they clearly identify whether they are describing virtual or augmented reality applications and their uses. The evidence could be presented as a report, part of a technical guide or a presentation (either videoed or with detailed speaker notes).

M1: Learners are required to select one example of a virtual reality resource and explain the impact that the use of the identified technology has had on society. The evidence could be in the form of a presentation (either videoed or with detailed speaker notes), report, or information sheet.

D1: Learners are required to select one example of an augmented reality resource and assess the impact that the use of the identified technology has had on society. The evidence could be in the form of a presentation (either videoed or with detailed speaker notes), report or information sheet.

P6: Learners are required to suggest possible future roles for virtual and augmented reality in future applications. Both virtual and augmented reality should be considered and a range (at least three) of predictions should be made. The evidence could be a written report, a journalistic report (to camera or as a written piece for inclusion in a magazine), or a presentation with detailed speakers notes.

M3: Learners are required to use the research into current uses of virtual and augmented reality applications in LO1 to identify and describe the benefits to be gained by utilising specified applications in new and creative ways. Both virtual and augmented reality should be considered and a range (at least three) of possible instances of repurposing should be made. The evidence could be a written report, a journalistic report (to camera or as a written piece for inclusion in a magazine), or a presentation with detailed speakers notes.

This is the indicated content from the exam board and gives you an idea of what we are looking for across these tasks:

Learning outcomes The Learner will:	Teaching content Learners must be taught:

1. Understand virtual and augmented reality and how they may be used	1.1. Virtual reality as a concept i.e.:
	• pioneers of virtual and augmented reality e.g.:
	   o Douglas Engelbart
	   o Ivan Sutherland
	   o Tom Caudell and David Mizell
	
	• uses of virtual and augmented reality e.g.:
	   o US Military Nuclear Defence systems
	   o pilot training
	   o Mattel "data glove"
	   o personal guidance system for visually impaired
	   o chameleon
	
	1.2. Areas of use, e.g.:
	• architecture
	• business (marketing, service and planned maintenance)
	• education (e.g. textbooks, skills development, remote collaboration)
	• entertainment, leisure and the media (tourism, games, museums)
	• health care and surgery (training, simulations)
	• military (training, simulations)
	• sport (live streaming of scores and other statistics, sponsorship images)
	
	1.3. Possible impacts, i.e.:
	• visualisation of designs
	• simulations
	• training
	• demonstrations of concepts
	• virtual tours

4. Be able to predict future applications for virtual and augmented reality	4.1. Future uses, i.e.: • possible developments of virtual and augmented reality and how these may impact on society. (e.g. advances in treating injuries or disease, leisure activities, the environment, the home and education). 4.2. Re-purposing, i.e.: • how existing products may be re-purposed and used in wholly new ways • benefits of repurposing using current examples of resources in new ways (e.g. medical uses in the field of animal welfare, training uses in the field of education) • heads up display used to augmented learning in schools

Optional Activities
Although the below are optional, we would suggest you look through all the below and make notes where appropriate. This will give you a head start and will work to your benefit from September 2021

Take a look and read through the contents at some of the coursework units for next year!

Unit 19 Computer systems - software
Unit 4 Computer networks
Unit 8 Project Management
Unit 9 Product Development
Unit 12 Mobile Technology
Unit 16 Developing a Smarter Planet
Unit 13 Social Media and Digital Marketing
Unit 17 Internet of Everything
Unit 5 Virtual and Augmented reality

Ed Stout – IT Support Services Manager at Leeds Beckett University. Talks about his journey from college to current managerial position. Tips on how to gain experience, routes into the industry and what he looks for when recruiting.

IT Work Experience Talk

Here are a collection of interesting talks and interviews that will expand your understanding of the world of IT and Computing:

Joe Rogan Experience #1368 - Edward Snowden

YouTube CEO Susan Wojcicki | Full interview | Code 2019

How I used to rob banks! by FC (aka Freaky Clown)

GOTO 2018 • The Future of the Web • Sir Tim Berners-Lee

The mind behind Linux | Linus Torvalds

There are a series of good YouTube channels that regularly post interesting videos about the world of IT and Computing:

Linus Tech Tips

Computerphile

Techquickie

Crash course computing

Explaining computers

Another great exercise is to regularly read news articles and stories. These will keep you up to date with all of the latest happenings in technology:

BBC
Sky
The Guardian
Computer World
CNET

Other clips you can watch related to the units:

Unit 5
https://youtu.be/H7ZHemE2nRs
https://youtu.be/uIsEZiP_Pwc
https://youtu.be/6MhBHNlKTCU
https://youtu.be/Ep1F1J6-OSw
https://scholar.google.co.uk/scholar?q=uses+of+augmented+reality&hl=en&as_sdt=0&as_vis=1&oi=scholart