De La Salle School IT Curriculum Year 10

RO60 and RO70 are controlled assessment units. We complete one of the units with both Year 10 and Year 11 at the same time so that moderation and exam results can be entered together. This also gives Year 10 students the opportunity to resit if needed, or to achieve their results in Year 10, which can help motivate them for Year 11 and give them a clearer understanding of what they need to do to continue progressing. **Please check with the department to see which controlled assessment the pupils will be starting in term 1.**

Year 10 Term 1	Year 10 Term 2	Year 10 Term 3
Unit R050: IT in the digital world (Exam) Topic Area 1: Design tools Although R050 focuses on exam preparation, it also supports controlled assessment Task 1. Pupils will use design tools such as flow charts, mind maps, wireframes, and visualisation diagrams to plan ideas. They will identify user requirements, target audiences, and client needs, and justify their design choices. Pupils will also understand the advantages and disadvantages of design methods and software, and produce clear design documentation to support planning, creation, and evaluation in controlled assessments. Unit R070: Using Augmented Reality to present information (Controlled assessment) Task 1 – Designing the Augmented Reality (AR) model prototype This is the first task of the controlled assessment and is based on a given scenario. Prior learning from RO50 supports students by developing their understanding of design tools, user requirements, and planning techniques needed to complete the task effectively. Learners analyse the scenario and design an Augmented Reality (AR) postcard prototype for the given scenario which includes the content, user interaction, and information flow. They must use appropriate design tools to communicate their ideas clearly and meet the	Topic Area 3: Creating the Augmented Reality (AR) model prototype for Happy Holidays Ltd Task 3 requires learners to test and review the Augmented Reality (AR) model prototype created from the given scenario. Students carry out technical testing of the prototype, including a test plan to check that key features such as triggers and layers/user interactions function correctly to demonstrate how the product would work. Learners also complete a review of the processes used throughout the design and creation of the prototype, reflecting on the tools and techniques applied across the assignment. This review focuses on the development process rather than whether the final product meets the client brief. This task is worth 14 marks and accounts for 23% of the overall controlled assessment. We aim to complete the controlled assessment by February half term Unit R050: IT in the digital world (Exam) Topic Area 2: Human Computer Interface (HCI) in Everyday Life This unit of work returns to exam content and focuses on Human Computer Interface (HCI) in everyday life, exploring its purpose, importance, and use across application areas such as banking, embedded systems,	Topic Area 3: Data and testing This unit introduces pupils to how data is used, managed, and tested in digital systems, and why these processes are important in real-world computing. In 3.1 Information and data, pupils learn the difference between raw data and processed information, and how data becomes meaningful when it is organised and used correctly. In 3.2 Data use, pupils explore different data types and how they are used in different situations. They also learn how validation and verification help reduce errors and improve the accuracy of data entry using tools such as range checks and format checks. In 3.3 Data collection methods, pupils study how data is gathered using primary and secondary methods, and compare their advantages and disadvantages depending on cost, time, and reliability. In 3.4 Storage of collected data, pupils learn about different ways data is stored, including cloud storage and physical devices like hard drives and USBs, and how each method has different benefits and limitations. In 3.5 Application of testing, pupils learn why testing is important in ensuring systems work correctly,

requirements of the brief. This task accounts for 38% of the overall coursework.

Task 2 – Creating the Augmented Reality (AR) model prototype

Task 2 requires learners to create an Augmented Reality (AR) model prototype based on the given scenario and their design work from Task 1. Students will use Blippar to build a working prototype that includes triggers, layers, and user interactions to demonstrate how the AR experience responds to user input. Pupils use the design tools and user requirements produced in Task 1 to guide and support the development of their prototype.
Prior learning from RO50 also supports this task by developing understanding of design tools, planning techniques, and user needs. Learners test and refine their prototype during development and provide video or screen capture evidence showing how it functions.
This task is worth 23 marks and accounts for 38% of the overall controlled assessment.

entertainment, fitness, home appliances, and retail. Learners develop an understanding of why HCI is used in different contexts, how it improves user interaction and accessibility, and the advantages and disadvantages of its use in each area. This knowledge also supports the RO70 controlled assessment, where students design and create an HCI, helping them apply exam theory to a practical design task.

Topic Area 2.2: Hardware Considerations

This topic explores the hardware considerations involved in Human Computer Interface (HCI) design, including display types and sizes, as well as system resources such as memory and processing power. Learners develop an understanding of how different devices and hardware specifications affect how an HCI functions and appears to the user. They also evaluate the advantages and disadvantages of hardware choices, considering how these factors impact usability, performance, and overall user experience across different devices and contexts.

Topic Area 2.3: Software Considerations

This topic focuses on how software affects Human Computer Interface (HCI) design, including operating systems such as Windows, Apple macOS, iOS, Android, Chrome, Ubuntu, Linux, and Unix, as well as digital platforms like databases, mobile apps, spreadsheets, and websites. Learners develop an understanding of how different operating systems and platforms influence the design, layout, and functionality of an HCI. They also consider how software constraints and features impact user experience and interface design decisions across different environments.

Topic Area 2.4: User Interaction Methods

including the use of valid, invalid, and extreme test data, as well as technical and user testing.

New controlled assessment is released 1st June so we aim to start CA middle of June

Unit RO60 – Data manipulation using spreadsheets (Controlled assessment)

Task 1 – Planning and designing a spreadsheet solution

This is the first task of the controlled assessment and is based on a given scenario. Prior learning from RO50 supports students by developing their understanding of design tools, user requirements, and planning techniques needed to complete the task effectively. Learners analyse the scenario and design a spreadsheet for the given scenario which uses a range of tools and techniques. They must use appropriate design tools to communicate their ideas clearly and meet the requirements of the brief. This task accounts for 38% of the overall coursework.

	This topic explores different user interaction methods used in Human Computer Interface (HCI) design, including gesture, keyboard, mouse, touch, and voice control. Learners develop an understanding of how users interact with interfaces through different input methods and how these choices affect usability and accessibility. They also evaluate the advantages and disadvantages of each interaction method, considering how suitability varies depending on the device, application, and user needs.	
Knowledge, Skills and Understanding		
Topic Area 1: Design tools - Pupils will understand and use design tools such as flow charts, mind maps, wireframes, and visualisation diagrams. - Pupils will identify and interpret client requirements, target audiences, and user needs. - Pupils will justify design decisions and select appropriate tools for different scenarios. - Pupils will understand the advantages and disadvantages of different design methods and produce clear design documentation. **Unit R070: Using Augmented Reality to present information (Controlled assessment)** - Pupils will understand uses of Augmented Reality (AR) in different sectors. - Pupils will understand types of AR, user interaction, and AR devices. - Pupils will use AR knowledge to support design ideas for a given context. - Pupils will create a simple AR prototype (not a full working product).	**Unit R070: Using Augmented Reality to present information (Controlled assessment)** - Pupils will understand uses of Augmented Reality (AR) in different sectors. - Pupils will understand types of AR, user interaction, and AR devices. - Pupils will use AR knowledge to support design ideas for a given context. - Pupils will create a simple AR prototype (not a full working product). - Pupils will use an AR SDK to create, test, and review their prototype. **Topic Area 2: Human Computer Interface (HCI) in Everyday Life** - Pupils will understand what HCI is and how users interact with systems. - Pupils will know common HCI features (e.g. menus, icons, touch, voice control). - Pupils will understand how HCI affects usability and user experience.	**Topic Area 3: Data and testing** - Pupils will understand what data and information are and how data is processed. - Pupils will understand and use different data types (e.g. text, numeric, Boolean, date). - Pupils will understand validation and verification and how they reduce errors. - Pupils will understand different types of test data (valid, invalid, extreme). - Pupils will understand how testing is used to check systems and identify errors. **Unit R060 – Data manipulation using spreadsheets (Controlled assessment)** **Planning (Task 1)** - Pupils will design spreadsheet functionality and outputs - Pupils will create a clear user interface for navigation - Pupils will annotate plans to show design decisions

- Pupils will use an AR SDK to create, test, and review their prototype.	- Pupils will identify suitable HCI designs for different users and contexts.	- Pupils will ensure plans meet client requirements

Assessment and Assessment Focus

- Pupils will also complete regular knowledge recall activities at the start of lessons, usually consisting of five short questions based on previous learning. These help teachers identify gaps in understanding and decide whether pupils are ready to move on.
- Mini whiteboards will be used during lessons to quickly assess pupils' progress and understanding in real time.
- Teachers will provide demonstrations and use knowledge organisers to help pupils focus on the most important content and key terminology.
- Pupils will complete weekly homework using e.Revision, which provides exam-board-created practice questions. Pupils receive instant feedback, a breakdown of strengths and weaknesses, and personalised revision lists. Teachers can also use homework leader boards to motivate and encourage pupils.
- At the end of the Exam RO50 units, pupils will complete a 45-minute exam under formal exam conditions. The paper is created using the OCR Exam Builder and assesses knowledge and understanding from the whole unit.
- The end-of-unit assessment will be marked by the teacher and used in a follow-up therapy lesson, where pupils review mistakes and improve gaps in their learning. The RO60 & RO70 Controlled assessment units are assessed using marking criteria with three-mark bands. Work is marked against these bands, and an overall mark band is awarded based on the level of evidence achieved across the criteria.