Secondary Curriculum 1B

Task 2

102088

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The Rationale for Stage 5 – Multimedia 2: Games and Simulations

Following NESA's requirements for graduate teachers to "understand the importance of collaborating with colleagues" (NESA, 2018, p. 6) I recently engaged Thomas Hollywood from the Computing Studies Faculty at Cronulla High School (CHS) to firstly discuss lesson planning to better understand how to apply allocated hours to a program in the curriculum according to the recommendations in the syllabus. Secondly, to further develop domains of teaching through the professional engagement of activities, thus addressing NESA's standards 6 and 7 requirements.

CHS is a comprehensive, coeducation facility that "empowers young people to achieve their personal best" (Ibrahim, 2018, p. 5) by becoming *creative* users of ITC who academically consistently score 12% above the state's average for industrial technology subjects four years in a row. The aim of this unit outline is to facilitate students at CHS to continue to successfully learn multimedia by applying a variety of creative in the multimedia lessons. As suggested by Thornthwaite (2014) "variety remains the essential ingredient of quality teaching" and supported by O'Connell (2011) who believes that merging a variety of media-forms by way of computing is key to achieve learning that allows modern-day students to be more than just users of multimedia technologies. My intentions are to mix facilitation by microplanning my lessons using a multimodal pedagogy approach that "considers a range of design elements: visual, audio, spatial, gestural" (Henderson & Exley, 2016, p. 22) that expands the student's self-confidence, ability to make connection as well as improving their engagement with instructional tasks in computing technology. Also indicated by Henderson and Exley (2016) is the notion of applying multi-modes of delivery to gain the attention of teenagers as highlighted in a report by Luke et al (2003) into the middle years of schooling, especially with years 9 and 10 students learning ITC.

However, the disadvantage in applying a multimodal methods of teaching is needing to have deep levels of knowledge in multimedia content and a high level of understanding of ITC, so it is important for a teacher to have a good command of the software and the hardware needed to deliver the best learning outcomes for multimedia students at CHS.

To overcome the complexity of assessment work presented by multimedia students at CHS through project-based learning tasks as required by the syllabus, it will be best to observe their progress on a weekly basis through Google Classroom feedback, monitoring classroom activities and short quizzes (*assessment for learning*) as well as supervising student portfolio development through student self-reflection (*assessment as learning*) and keep track of their reports on cooperative team building through their project. The purpose of the following unit outline is to continue to empower students at CHS to better appreciate team participation and learn collaboratory project work in preparation moving into stage 6 and the HSC.

Unit outline

School / Subject	Course / Unit title	Unit Duration	Content for this unit
Cronulla High School Industrial Technology Years 7–10	Stage 5 / Multimedia	**40 Weeks per year:** • 100 hours each topic • 50 minutes each lesson	**Focus Area:** • Multimedia 2 Specialist module **Topic:** • Games & Simulations

Justifications from the syllabus	Overview of content material
The Multimedia focus area provides opportunities for students to develop knowledge, understanding and skills in relation to multimedia, photographic and associated industries. The Multimedia 2 specialised module includes common content and topic content that develops knowledge and skills in the use of tools, materials and techniques related to the study of Apps and Interactivity, and Games and Simulations. Practical projects should reflect the *nature* of the Multimedia focus area and provide opportunities for students to develop specific knowledge, understanding and skills related to multimedia technologies and ITC.	The NSW Syllabus for the Australian Curriculum (2019) for Industrial Technology in Multimedia has two specific focus areas with each module containing two distinct *topics* particular to multimedia. Multimedia 1 Core Module topics for Stage 4: • Web Design • Video Production Multimedia 2 Core Specialist Module topics for Stage 5: • Games & Simulations • Apps & Interactivity. A total of 100 hours per year over 4 terms has been allocated to each topic listed. Each week has 2 fifty-minute lessons as listed in the Cronulla High School For the purpose of this unit outline, I will concentrate on 6 weeks at the beginning of term 1 or 12 lessons at the beginning of the course.

Syllabus objectives relevant to this unit	Syllabus outcomes relevant to this unit	
Students will develop: • knowledge of and capability in applying Work Health and Safety and risk-management procedures and practices • knowledge and skills in the design and production of practical projects • skills in communicating ideas, processes and technical information with a range of audiences • knowledge and understanding of the role of traditional, current, new and emerging technologies in industry and their impact on society and the environment.	**IND5-1**	identifies, assesses, applies and manages the risks and WHS issues associated with the use of a range of tools, equipment, materials, processes and technologies
	IND5-2	applies design principles in the modification, development and production of projects
	IND5-3	identifies, selects and uses a range of hand and machine tools equipment and processes to produce quality practical projects
	IND5-5	selects, interprets and applies a range of suitable communication techniques in the development, planning, production and presentation of ideas and projects
	IND5-6	identifies and participates in collaborative work practices in the learning environment
	IND5-9	describes, analyses and uses a range of current, new and emerging technologies and their various applications
	IND5-10	describes, analyses and evaluates the impact of technology on society, the environment and cultural issues locally and globally.

Key concepts in this unit outline

Literacy	Numeracy	ICT	Diversity
The syllabus provides students with opportunities to develop skills in literacy to effectively communicate and comprehend using a variety of modes and media. The language of industrial technology is often technical and includes specific terms for concepts, processes and features of the world. *Project group work* and the associated documentation provides an authentic context for development of literacy skills, particularly technological literacy. This unit of work provides the learning of literacy by using word banks, PEEL, Alarm Scaffolding, and one-on-one evaluation sessions with individual students.	Real-world numeracy connections are formed when numerical data is collected and manipulated and numeracy concepts, such as size, proportion and measurement, are used by students as tools in the design and production process of their project. Through this unit of work, the learning of numeracy is achieved when students understand key numeracy topics such as: • Image resolution • File size control • Frames per second • Band-width Learning will be supported through group guidance, team assistance as well as tutorials and demos. Students will not be tested on numeracy skills but assessed on their understanding of the software applied to their *group projects*.	The Stage 5 Multimedia 2 Core Specialist Module unit outlines are project based and utilises multiple ICT opportunities that may allow students to form an understanding of: • iPads • Computers • Editing suite • 2D digital software • 3D design software • Animation software • Motion software • Sound effects • Music composition • Google Classroom • Unity online app	This unit outline provides students with opportunities to form critical awareness of gender, beliefs, religion and ethnicity as well as tolerance of ability and acceptance of socioeconomic circumstances, including inclusivity in regards of issues relating to the greater community and industry studied through the use of media in multiple settings. The essence of group-work and participation in team assessment task enables barriers to come down where inclusivity is actioned regardless of the different backgrounds the students come from, thus catering for the diversity of the learners at Cronulla High School. **Differentiation** The unit outline also caters for the needs of students that may experience financial circumstances with equipment and the school will be providing these on a loan basis from the library.

Overview of Topic 4: Games and Simulations	Assessment method
This unit involves students working in groups through a project based model to design and develop a game of survival called: Lord of the Flies. Derived from the book my William Golding, the game of survival requires the students to participate in creating computer game that enables players to make decisions on survival based on three themes common to the story in Lord of the Flies. These are: - Food – Shelter – Rescue	Assessment *of* learning – 35% of total mark: summative • Via final presentations of group project produced Assessment *for* learning – 40% of total mark: observational • Via class work, activities, informal one-on-one feedback Assessment *as* learning – 25% of total mark: reflection • Via collaboration and participation in team and groups and development of digital portfolio.

Note: The current syllabus does not have a ' *Related* ' Stage 5 outcomes listed.

Prerequisite: Introduction to Multimedia together with knowledge of software & hardware as well as a thorough understanding of ICT studied through previous topics in stage 4 and stage 5 of syllabus.

Six-week plan – 12 lessons: overview

Week	Each Lesson 50 minutes in duration	Content in brief
1	**1) Introduce Gaming & Simulations** • Management focus session • Define group setting for better learning • Outline next 6 weeks • Clarify assessment requirements • Justify marking criteria	**The Assessment task – Game of Survival:** • Provide instructions for project work in the gaming industry • Lord of the Flies – Choose a character: learn to survive • Explain assessment tasks – recall English syllabus • Group development and learning how to work in teams **Lesson outcomes – in line with multimedia syllabus: codes** • INDS-2 • INDS-5 • INDS-6 • INDS-10
	2) Software to use - comparison • Explain five choices available • Demonstration using UNITY • Recall assessment task – group work	**The gaming industry: identifying popular computer games** • Discuss choosing UNITY for gaming vs other software **Lesson outcomes** • INDS-1 • INDS-2 • INDS-6 • INDS-9 • INDS-10
2	**3) Developing ideas for the game** • Group work – team development • Recall software use – practical lesson • Apply team-work model for learning	**Lesson activities: focus on analysing what children want to play** • Compare games children play – link to syllabus objectives **Lesson outcomes:** • INDS-1 • INDS-2 • INDS-3 • INDS-5 • Recall assessment requirements – marking criteria
	4) Continuation of previous lesson • Create group structure • Develop team cohesion • Using UNITY – applying the software	**Lesson activities: focus on students working well in teams** • Students continue developing game ideas – working in teams **Lesson outcomes** • INDS-2 • INDS-5 • INDS-6 • Create link between week 2 and week 3 – explain.
3	**5) Introduce story-line for games** • Link ideas for the game with story-line • Outline the production process • Teams work on who does what	**Lesson activities: continue team development** • Students working in teams decide team-roles for next lesson **Lesson outcomes** • INDS-2 • INDS-5 • INDS-6
	6) Recall story-line – apply link • Link story to the game • Link game with elements needed • Link production from previous lesson • Practical lesson – working in teams	**Lesson activities: learning how to use the software** • Students begin to apply skills using software to build game **Lesson outcomes** • INDS-2 • INDS-5 • INDS-6

4	**7) Developing and designing graphics**	**Lesson activities: apply software to different parts of project**
	• Elements needed – team decision • Demonstration – using software	• Students apply computer skills while building their game • Clarify using Adobe Photoshop and Adobe Illustrator • Justify using UNITY with simplicity of application **Lesson outcomes** • INDS-3 • INDS-5 • INDS-6
	8) Recall story-line – ideas	**Lesson activities: focus on production**
	• Link story-line to production process • Introduce GANTT chart to project • Focus on final objectives and outcomes of the course	• Working in teams, students apply computer skills together • Student learn how to develop schedule and organize tasks **Lesson outcomes** • INDS-2 • INDS-3 • INDS-5 • INDS-9
5	**9) Guest speaker**	**Lesson focus on industry guest**
	• From industry – Wargaming Sydney • Justify employment possibilities • Triangulation: ideas – story – game and links between the three	• Students participate in guest presentation • Students engage with guest speaker about employment • Link industry jobs with school game project **Lesson outcomes** • INDS-1 • INDS-3 • INDS-5 • INDS-9 • INDS-10
	10) Short Quiz plus recall triangulation	**Lesson activities: focus on linking game with players**
	• Students participate in online quiz • Ideas – form link • Story – form connection • Game – connect with players • Practical lesson – working in teams	• https://quizizz.com/admin/quiz/ 579ed50adba6c0405d24bcc4/multimedia • Students apply computer skills to identify players • Students develop direction and apply rule of no return **Lesson outcomes** • INDS-3 • INDS-5 • INDS-6 • INDS-9
6	**11) Introduce Simulations**	**Lesson focus – access to Education Services Australia website**
	• Digital technologies tools • Using the Government website	• Game-based learning: student portal **Lesson outcomes** • INDS-2 • INDS-3 • INDS-9
	12) Interpreting a brief	**Lesson activities: making sense of communication**
	• Developing communication skills	• Google Classroom – following instructions **Lesson outcomes** • INDS-1 • INDS-2 • INDS-3 • INDS-6 • INDS-10

Note: The Cronulla High School website lists the school as has the equipment and resources to adequately teach students multimedia through the computing studies faculty within the school with the strong technical support of specialist computing teachers and the TSO from the technology department.

Note 2: NESA Key Words are highlighted in PINK

Multimedia 2 - Topic 4 Content outlines

Design	Tools, equipment and techniques
Students learn to:	**Students learn about:**
- apply design principles and processes when completing a game or simulation that meets the identified needs of a target audience (ACTDEK047) - develop and produce projects allowing for the characteristics and properties of materials, systems, components, tools and equipment available, for example: (ACTDEK046) - processing capability of end-user hardware - identify and investigate factors influencing design in games and simulations, for example: (ACAMAM076) - data that enables the production of precise simulations and/or game components, eg size, speed, weight, density - explore health and safety issues associated with use of augmented reality (AR), virtual reality (VR) & mixed reality (MR) - develop and evaluate component prototypes for games and/or simulations - use and/or modify designs when completing projects (ACTDEP049) - calculate quantities and costs of materials and components used in the completion of projects, for example: - calculate the cost of hardware used in project production - use spreadsheets to calculate material quantities and monitor project costs - apply project management techniques and follow a planned sequence through to project completion - evaluate the impact of design and work practices/processes on the quality of finished projects.	- devices used to interface with games and simulations, for example: - accelerometers and gyroscopes - game pads and game controllers - motion sensors and VR headsets - touchscreens - exploring and/or using animation techniques used to produce games and simulations, for example: - motion capture - path-based animations - sprite sheets - create or modify textures when rendering 3D objects - developing rendered 3D models for use in games or simulations - developing or refining libraries of code to produce game functions - the impacts of storage limitations on the development and delivery of games and simulations, for example: (ACTDEK046) 3D model wireframes and number of vectors - bitmap texture file sizes - online games - storage media, eg portable storage, local storage, cloud storage - determining hardware requirements for both the development and effective display of multimedia products, for example: (ACTDEK046) - processor speed/graphics processing unit (GPU) - memory - storage

Cross Curriculum themes & general capabilities

The unit outlines herewith create links between the Industrial Technology syllabus - Multimedia component and the English Stage 5 syllabus – Outcome 2:

- effectively uses and critically assesses a wide range of processes, skills, strategies and knowledge for responding to and composing a wide range of texts in different media and technologies.

- A student will develop and apply contextual knowledge to evaluate the ways film, websites and other multimedia texts use technology for different purposes, audiences and contexts to convey ideas and points of view.

Note: It will be difficult for students to participate in a multimedia course if they are not able to access technology and computers needed. For the purpose of homework, students are required to access a computer with the latest software. It will be also assumed that the school will provide students with the equipment needed to learn multimedia. I have made provisions in the lessons herewith addressing diversity issues that students may experience according to the syllabus requirements.

Resources at Cronulla High School

Digital – as listed in the school's newsletter	Worksheets
Space: Computer lab **Hardware:** • Laptop computers • Desktop computers • Bring-your-own portable devices • iPads The school has made available the wireless network to students from year 9 onwards enrolled in ITC dependant subjects. iPads are available for students to borrow from the library if needed but students are encouraged to bring their own devices to school. **Software:** • Internet Connection • Google Classroom • Google school account for students • Microsoft Office Professional • Adobe Creative Suite • Adobe Photoshop • Adobe Illustrator • Unity online Both Adobe and Microsoft applications operate via subscription and access to the internet is essential. Unity only operates online but requires computers to be fitted with downloadable application that is free for students and schools. Note: for further information on resources, please visit the school website here: https://www.cronulla-h.schools.nsw.edu.au/	**Google Classroom – access code: sfbqycr** Stage 5 students are expected to know how to use Google Classroom as this has been in operation at CHS since 2012. In the event where students are not familiar with the operation of Google Classroom, additional tuition or lessons will be required to bring them up to speed with the rest of the class. To retrieve Worksheets: • Students access Google classroom via code above • Students work interactively with the teacher via email • Google Classroom has folders and files accordingly • All students get access to the Google Drive Worksheets are listed in the units of work herewith and contain specific coursework belonging to corresponding lessons. Worksheets are used to compliment the teaching and used as a support to help students learn what is required in the course. Worksheets are available to help students and contribute to the information as provided by the teacher. Worksheets include: • Lesson number • Date via Google Calendar • Links to external resources • Links to additional learning material • Links to educational support

Additional Important Notes:
Appendix: There is an appendix at the end of this document with screenshots of available material and in some cases – copies of the 'worksheets' and 'fact sheets' used in some of the lessons. It also includes key links to supplemental learning material and access to further information students can use in their projects and for their ongoing portfolio work. **Life Skills Outcomes:** INDLS-10 - explores the effects of current and emerging technologies has been addressed via IND5-9.

Lesson 1 Plan

Date: Tuesday 02 February, 2021 Location Booked: Computer Lab	Week 1A Term 1	Name of lesson: Introduction to Gaming and Simulations
Objectives for this lesson:	• Students learn to identify and investigate factors influencing design in games and simulations • Students learn about devices used to interface with games and simulations	
Teaching & Learning Strategy:	• Explicit / Direct Instruction • Small Group Work learning strategy	

Design content:

- identify and investigate factors influencing design in games and simulations, for example: (ACAMAM076)
- data that enables the production of precise simulations and/or game components, eg size, speed, weight, density
- develop and evaluate component prototypes for games and/or simulations

Tools, equipment and techniques:

- devices used to interface with games and simulations, for example:
    - accelerometers and gyroscopes
    - game pads and game controllers
    - motion sensors and VR headsets
    - touchscreens

ALARM Scaffolding - BLOOMS stage 1:

First class of the year and student have just come back from holidays so they will be keep to tell stories and carry on saying hello to each other.

It will critical for teacher to maintain control. It will be important for the teacher to address the issue of being young adults and needing to take responsibility for their own learning by suggesting to students the importance of self-regulation and class participation.

Student begin the process of learning how to communicate ideas amongst team members in their group and start defining the project tasks while listing what to do and what steps need to be taken.

At this level, students are beginning to construct the project and begin to appreciate process as recommended by industry.

Explicit instructions will be needed to get them started but then move onto applying small-group strategy to establish team leaders and team support.

Suggested teaching, learning and assessment

Teacher:

- Using overhead projector, provide instructions for project work in relation to the games industry
- Describe learning outcomes in detail
- Provide written assessment tasks not just PDFs
- Demonstrate using Google Classroom and accessing learning material and resources
- Develop a timetable using Google Calendar and share – provide links
- Help student identify popular games available
- Assist students in learning about team work
- Recall Lord of the Flies – explain the Choose a character: learn to survive
- Explain assessment tasks – recall English syllabus
- Justify the significance of group development and learning how to work in teams

Students:

- Access Worksheet 1 – project brief. Follow teachers instructions on the planning process and working in teams or in groups
- Access Worksheet 2: A guide to Google Classroom and practice using computers to familiarize themselves while navigating in the Google environment
- Deduce assessment requirements by interpreting the range of tasks needed for presentation
    - identify the challenges of game design
    - compare the differences between the applications needed to produce the project
    - apply previous knowledge of group work and clarify roles of team members
- Investigate time-tabling techniques and begin the learning process ahead of using GANTT charts
- Explore the range of time management skills within their group as they assign roles and work out who will be doing what and when.

Lesson 2 Plan

Date: Friday 05 February, 2021 Location Booked: Computer Lab	Week 1A Term 1	Name of lesson: Software to use - comparison
Objectives for this lesson:	• Students learn to develop and produce projects allowing for the characteristics and properties of materials, systems, components, tools and equipment available as recommended by industry • Students learn about animation techniques used to produce games and simulations	
Teaching & Learning Strategy:	• Explicit / Direct Instruction • Cooperative/problem solving learning strategy	

Design content:

- recognise and comply with WHS signage

- identifies, assesses, applies and manages the risks and WHS issues associated with the use of a range of tools, equipment, materials, processes and technologies

- explore health and safety issues associated with use of augmented reality (AR), virtual reality (VR) and mixed reality (MR)

- develop and produce projects allowing for the characteristics and properties of materials, systems, components, tools and equipment available, for example: (ACTDEK046)

  - processing capability of end-user hardware

Tools, equipment and techniques:

- explore and/or use animation techniques used to produce games and simulations, for example:

  - motion capture

  - path-based animations

  - sprite sheets

BLOOMS stage 2:

Student now learn to describe and distinguish what software to use to achieve the necessary outcomes in their game design. Teacher still needs to focus on explicit instructions so as to cater for the needs of students whom are not familiar participating in group work or may had a bad previous experience working in teams.

- student calculate moving forward via participation and cooperation with the teacher

Relationship building between students and teacher at this stage is critical and it's important to establish boundaries in an effort to creature class structure. The WHS focus is a good point of measure to begin the process.

- scaffold learning as WHS issues can have serious consequences if not addressed early enough.

Suggested teaching, learning and assessment

Teacher:

- Account the WHS component of this course and provide students with Worksheet on what the safety requirements are.

- Give students approximately 10 minutes to self-evaluate their understanding of the *safety aspects* in Multimedia and games industry.

- Teacher provides feedback through observation

- Recommend available software that school can access for game design and compare the pros and cons of five different resources through examples

- Use Youtube examples to clarify features

- Provide students access to Google Classroom

- Demonstration using UNITY via projector – engage students to participate by using worksheets

- Demonstrate using Google Classroom where students access learning material: Worksheets & Factsheets

- Assist students create login to the Unity portal.

Students:

- Participate in their own understanding of WHS issues associated with the use of ITC in a common computer lab and identify industry standards

- Access assessment Worksheet 5 and through observation, teacher provides feedback – it's either a pass or a fail. Students cannot proceed until they pass and gain a teacher signature

- Evaluate Worksheet and identify possible risks and hazards in a computer lab e.g.: falling off chair

- Recall the assessment task and work in groups to develop understanding of requirements

- Access Worksheet 4 – Unity tutorial online and participate in game design by operating software.

Lesson 3 Plan

Date: Tuesday 09 February, 2021 Location Booked: Computer Lab	Week 2B Term 1	Name of lesson: Developing ideas for the game
Objectives for this lesson:	• Students learn to modify ideas when developing their projects • Students learn about hardware requirements for both the development and effective display of multimedia	
Teaching & Learning Strategy:	• Cooperative/problem solving learning strategy	

Design content:	Suggested teaching, learning and assessment

• use and/or modify designs when completing projects (ACTDEP049)
 	
• apply project management techniques and follow a planned sequence through to project completion
 	
Tools, equipment and techniques:
 	
• determine hardware requirements for both the development and effective display of multimedia products, for example: (ACTDEK046)
 	
    - processor speed/graphics processing unit (GPU)
 	
    - memory
 	
    - storage
 	
BLOOMS stage 2:
 	
Early stages of development, in particular with group cohesion concerning the decision making process. Teacher begins to collaborate with experience students to help the not-so-experienced team members in their own groups.
 	
To measure student learning and evaluate their progress with skills and application of software and hardware, the teacher will need to focus on performance of tasks as well as the student's ability to operate ITC. To achieve this throughout all the lessons, students will be given short quizzes and group analysis via activities and self-reflection.
 	
Students are still finding their feet and are still developing ideas – at this stage, students are learning how to distinguish what to do and how to do it:
 	
    - students compare games children play – link to syllabus objectives projected on the screen
 	
Some students may not have had the opportunity to access computers or may not have had the time to familiarize themselves with using Google Classroom. In these cases, teacher is to provide close guidance and scaffold their learning perhaps with the help of their parents – establish the available community support through the school counsellors and provide student feedback on what is possible is equipment is hard to access.
 	
Note: to maintain class "order" it may be required to re-introduce explicit instruction if cooperative problem solving does not work.
	Teacher:
	
	• Assist students developing teams and creating group tasks. Monitor student progress through class activities they follow using Worksheets, for example, class activities to include:
	
	    - comparing hardware to use
	    - evaluating using the correct software
	    - applying their own mobile phones to search for popular apps available
	    - create a "think-group-square-share" session
	    - when time is up – groups share findings
	    - assessment via observation
	
	• Enter results from discussion and post "research" findings on Google Classroom
	
	• Recall software use – practical lesson where students get an opportunity to become familiar using Unity while teacher monitors progress. Teacher circulates from group to group.
	
	• Discuss briefly with student the nature of teams – use whiteboard to introduce model used by industry
	
	• Apply team-work model for learning while visiting clusters while circulating
	
	• Account the WHS from previous lesson and link Worksheet 5 with the safety requirements necessary in a computer lab – assess students by observation.
	
	Students:
	
	• extract ideas in groups and participate in developing their project tasks through discussion and comparing between each other
	
	• begin to develop skills and ability in using Unity to produce their game through practice.
	
	• gain competence through individual practice via applying knowledge using Worksheets in Google drive and the tutorials via the Unity website.
	
	• at the same time, continue to learn team work by clarifying personalities in preparation to choose a spokesperson or team leader.
	
	• gain access to their group portfolio and begin to populate Google Classroom with research material

Lesson 4 Plan

Date: Friday 12 February, 2021 Location Booked: Computer Lab	Week 2B Term 1	Name of lesson: Developing ideas for the game Part II
Objectives for this lesson same as previous lesson:	• Students learn to modify ideas when developing their group projects • Students learn about hardware requirements for both the development and effective display of multimedia	
Teaching & Learning Strategy:	• Cooperative/problem solving learning strategy	

Content:

- same a previous lesson

Societal and environmental impact:

- investigate the impacts of storage limitations on the development and delivery of games and simulations, for example: (ACTDEK046)
    - 3D model wireframes and number of vectors
    - bitmap texture file sizes
    - online games
    - storage media such as portable storage, local storage, cloud storage
- explore the social impacts of computer games, for example: (ACAMAM077)
    - health issues related to computer games, eg seizures, sleep deprivation
    - safety issues, eg online gaming communities, augmented reality (AR) and mobile devices
    - social issues, eg collaborative gaming, skill development

Group cohesion continued from previous lesson.

Suggested teaching, learning and assessment

Teacher:

- This lesson is basically adding practice-time to previous lesson for students to learn to use Unity.
- Class activities include:
    - enable exploration of gaming solutions
    - allow students to identify mobile games
    - access Lord of the Flies material in Google Classroom to construct solutions
    - examine book synopsis to develop ideas
- Teacher also continue one-on-one sessions while helping students learn Unity
    - assessment via observation
    - assessment via student reflection in portfolio

Students:

- Continue using Google Classroom to access Worksheet 4 to develop skills using Unity
- Investigate Unity App to compose game
- Are required in groups to recall the assessment tasks for the project and develop step-by-step plan to manage their final presentation – access worksheets
- Examine in their groups gathering data and building knowledge of files and information required for their games such as:
    - vector files
    - raster files
    - animation
    - 3D modelling
- Calculate storage requirements
- Consider time management based on what the teams decide is important or not – students also clarify requirements with teacher as groups seek approval of ideas – students follow instructions in Worksheets
- Groups collaborate with teacher and gain approval of project concepts before moving forward

Lesson 5 Plan

Date: Tuesday 16 February, 2021 Location Booked: Computer Lab	Week 3A Term 1	Name of lesson: Introduce story-line for games
Objectives for this lesson:	• Students learn to apply design principles and processes when preparing ideas for a game or simulation	
Teaching & Learning Strategy:	• Explicit / Direct Instruction • Cooperative/problem solving learning strategy	

Design content:	Suggested teaching, learning and assessment

• apply design principles and processes when developing a game or simulation that meets the identified needs of a target audience (ACTDEK047)
 	
Tools, equipment and techniques:
• investigate the impacts of storage limitations on the development of project and the delivery of games and simulations, such as:
• animation and videos
• time and length of production
- determine
• storage capacity
 	
BLOOMS stage 3:
 	
Three weeks into the project, students should now be familiar with "process" and are required to account more of their individual involvement in their particular groups. Further development of their portfolios is essential as students explain their understanding of the significance of team work as required by the syllabus.
	Teacher:
	
	• Provides instruction on storyline by linking game solutions with story students have created
	• Using projector, demonstrate what a storyline is by using YouTube video as listed in Worksheets and on Google Classroom.
	• Link game with design principles by using whiteboard to determine outcomes
	• Class activities include:
	   - enable exploration of gaming solutions
	   - allow students to identify mobile games
	   - access Lord of the Flies material in Google Classroom to construct solutions
	   - examine book synopsis to develop ideas
	• Continue using Google Classroom and account student's Google Drive capacity for storage
	• Teacher to navigate from cluster to cluster and group to group to encourage team development
	• Continue one-on-one scaffolding while helping students learn Unity
	   - assessment via observation
	   - assessment via student reflection in portfolio
	
	Students:
	
	• Recall Lord of the Flies (LOTF) novel and in groups explain the significance of story in novel and compare game design ideas to:
	   - Food – Shelter – Rescue
	• Access Worksheet on Storyline to recall teacher demonstration on developing game solution
	• In groups, account YouTube video and collaborate with team members composing game by linking story to the sequence of events in the game from initial start
	• Calculate through discussion and application through practice the basic design principles into their game design and explain via Google Classroom portfolios functions required by players

Lesson 6 Plan

Date: Friday 19 February, 2021	Week 3A	Name of lesson:
Location Booked: Computer Lab	Term 1	Recall story-line: link game – story – elements to LOTF
Objectives for this lesson:	• Students learn to understand to transfer knowledge and skills to other experiences • Students value the development of skills and gain satisfaction from their use to solve problems and create quality products	
Teaching & Learning Strategy:	• Cooperative/problem solving learning strategy	

Content:

- understand and respect the need for cultural, personal and social differences and sensitivities to the use of images, sound and video in presentations (ACAMAM077)
- modify and/or apply scripts and storyboards in the completion of projects
- apply knowledge of cultural protocols when working with Aboriginal and/or Torres Strait Islander communities as audiences/hypothetical clients, for example: (ACAMAM077)
  - consider social, ethical and regulatory issues
  - cultural protocols around art, images, graphics, film and sound
  - use of community-owned content

Tools, equipment and techniques:

- Make judgments, within a range of technologies specialisations, on how technologies can be combined to create designed solutions (ACTDEK047)
- explore the application of apps, games and/or simulations used by industry with those developed in the classroom, for example: (ACTDEP049)
  - entertainment
  - educational
  - medical

BLOOMS stage 3:

To continue the scaffolding and enabling student to learn by trial and error, individual student learns to accept their place in their particular groups that they are in.

At this early stage, students are needing to experiment at all levels – social interaction is critical – and acceptance along with relationship building is key.

Teachers needs to provide support and reassurance through informal assessment, one-on-one talks and guidance on what is acceptable and what is not.

Suggested teaching, learning and assessment

Teacher:

- Practical class where teacher through demonstration provides student guidance whilst using Unity
- Provides direction in relation to linking storyline to game and design elements needed
- Activities include:
  - Login into the Unity Portal
  - Accessing digi-tools to construct animations
  - Sourcing images sound and film archives

- Using Google Classroom to demonstrate the creation of student portfolios as required in syllabus
- Teacher to navigate as in previous lessons
- Teacher monitor progress as in previous lessons
  - assessment via observation
  - assessment via student reflection in portfolio

Students:

- begin to apply new skills using software as well as hardware to build game
- link production from previous lesson into the design component of their project
- through exploration, different things and learn what works for them and what doesn't
- research what elements are needed in their game design and clarify through collaboration what their game designs will include
- put together theory into practice through trial and error and interpretation and make judgement via outlining group discussion for their game design
- For homework:
  - Access Unity portal
  - Proceed with tutorial as listed in Google Classroom: lessons 1, 2, 3, 4 only.

Lesson 7 Plan

Date: Tuesday 23 February, 2021	Week 4B	Name of lesson:
Location Booked: Computer Lab	Term 1	Developing and designing graphics

Objectives for this lesson:	- Student develop knowledge and understanding of the role of traditional, current, new and emerging technologies in industry - Students value the development of skills and gain satisfaction from their use to solve problems and create quality products.
Teaching & Learning Strategy:	- Explicit / Direct Instruction - Small Group work learning strategy - Problem Solving strategy

Content:

- document control structures to develop the project, for example: (ACTDEP052)
    – comments in the code
    – system flow charts
- develop user guides that explain how to use the final product and apply design applications such as:
    - Photoshop
    - Illustrator
    - Similar graphics software and applications
- develop design and production folios using appropriate ICT, for example:
    - project management tools
    - simulations
    - supporting video presentations

Tools, equipment and techniques:

- compare and contrast contemporary industry processes, techniques, materials and equipment with classroom experiences, for example:
    - rendering farms compared to rendering on a single computer
    - using an online application

BLOOMS stage 3:

When applying a group work strategy to the mix, it shifts focus where passive students become active in wanting to learn (Killen, 2016) thus encouraging group development and better cohesion between team members.

Progress will be noticed where students begin to feel more comfortable in collaborating with one another.

Suggested teaching, learning and assessment

Teacher:

- Through direct instruction, clarify using Adobe Photoshop and Adobe Illustrator
- Demonstrate the correct use of images
- Demonstrate the application of vector files
- Use YouTube video to help the delivery of information and provide students with tutorial material
- Guide students to Google Classroom Worksheets
- Class activities include:
    - Manipulating images from image-libraries
    - Creating own images using a camera
    - Use mobile devices to capture images

- Continue to assist students as in previous lessons:
    - assessment as in previous lessons

Students:

- Apply computing skills to develop their games and use software as instructed above
- Participate in the decision making process to explain how a player will operate their game
- Distinguish documentation control by continuation of group portfolios as well as personal reflection using Google Classroom
- Demonstrate to teacher how they are progressing by seeking feedback on:
    - storyline
    - graphics
    - images
    - storyboards

Lesson 8 Plan

Date: Friday 26 February, 2021 Location Booked: Computer Lab	Week 4B Term 1	Name of lesson: Recall story-line ideas: focus on the purpose of the game
Objectives for this lesson:	• Students form an understanding to transfer knowledge and skills to other experiences • Students apply knowledge and understanding to critically evaluate products in order to become a discriminating consumer of games	
Teaching & Learning Strategy:	• Explicit / Direct Instruction • Cooperative • Problem solving strategy	

Content:

- modify and/or apply plans in the development of projects in a group setting
- interpret and develop drawings to plan 3D models and environments, for example:
  - blocking diagrams
  - floorplans and/or environmental maps
  - perspective sketches

Links to industry:

- identify new and emerging technologies and contrast with those used in the past
- compare and contrast careers and professions in the multimedia industry, for example:
  - a graphic designer compared to an animator

BLOOMS stage 4: new phase of learning

One cannot imagine students wanting to learn how to create a Gantt Chart as they are difficult and cumbersome and clunky to operate. However, it's important to explain its use by comparing things to student's use of their devices and how time disappears if they are not able to monitor it.

It will be essential to link the Gantt Chart to the project so that students can form a better understanding of their group tasks as the Gantt Chart will define tasks and outcomes.

Explain the use of Gantt Charts in the industry and how perhaps how they can be used at home by mum and dad to run the household. Link the use of Gantt Charts at school by teachers to prepare class work.

Be aware that perhaps if students find Gantt Charts difficult, it will be necessary to provide individual scaffolding additional to class time.

Teacher:

- **Explain** the role of a multimedia operator in the industry and the necessity to monitor time and cater to clients' needs and apply costing solutions
- **Recall** previous lessons with emphasis on production and process and link student progress with the development of Google Calendar and introduce the construction of GANTT Charts
- Guide students to Google Classroom Worksheet 13
- Class activities include:
  - Introduction to Microsoft Excel
  - Instruction on how to create Gantt charts via demonstration using projector
  - Link the Gantt chart to Google Calendar

- Continue to assist students as in previous lessons:
  - assessment as in previous lesson

Students:

- Students access Worksheet 13 and analyse components in relation to scheduling tasks
- Working in teams, students **apply** computer skills together by working out how to create a timeline
- Learn how to develop schedule and **define** tasks using their own Gantt charts created
- **Investigate** the purpose of the scheduling practice as used by industry and compare the benefits of forming better understanding.
- For homework – student watch YouTube tutorials:
  - https://www.youtube.com/watch?v=00s5efQWrgU
- Inform students that next lesson we have a guest speaker attend CHS and remind other classes might join
  - Dean Finnigan – Lead Artist at Wargaming Sydney

Lesson 9 Plan

Date: Tuesday 02 March, 2021 Location Booked: Computer Lab	Week 5A Term 1	Name of lesson: Guest speaker – Wargaming Sydney
Objectives for this lesson:	• Students learn to appreciate the contribution and impact of innovation and technologies on leisure, lifestyle, work and further learning	
Teaching & Learning Strategy:	• Whole Class Discussion – closed session with Q & A towards end of session	

Content:	Teacher:

• discuss the social impacts of mobile technology and applications, for example:
  - use of the iPad and similar
  - privacy
  - screen time limitations for users
• situational awareness, eg GPS to assist finding destinations, looking at mobile devices while boarding public transport
  - the ability to spread information quickly, eg natural disasters
  - investigate
 	
BLOOMS stage 2: Distinguish between school project and real life situations.
 	
Using the whole-class approach the deliver the lesson, Killen (2016, p. 152) indicates that "learners are willing to abide by the rules that facilitate the exchange of ideas" where students actively are open-minded when new perspectives are presented.
 	
For a discussion session involving a guest presenter, it's important that students learn from it by "reflection" technique through observation. This requires students taking note and actively listening to the speaker to deduce meaning for future employment as well as comparing the multimedia industry with others.
 	
Students can access already formulated questions in Google Classroom or they can attempt to recall their own.
 	
Remind students that next week there will be a short quiz on today's presentation and results will be marked. Quiz will also include general multimedia questions.
	• Room will require re-arranging of the space to cater for extra students as well as use of projector etc.
	• Teacher needs to prepare for the guest and it's important to address the guest speaker's needs
	• This could include:
	  - Water and flask
	  - Chair at the front of room
	  - Projector for presentation slides
	• Add into Google Classroom questions that students can ask guest speaker at the end of his session
	• Questions can include:
	  - How much money do you make a year?
	  - Does your organisation hire apprentices?
	  - What do I need to learn to get a job there?
	  - Do I have to go to Uni to get a job in games?
	• Teacher to monitor student involvement in lesson:
	  - assessment through observation
	
	Students:
	• Passive involvement until the end of presentation
	• Learn how presentation are made by watching others and comparing how perhaps they may apply similar techniques
	• Take notes with the intention of summarizing the presentation with their teams by:
	  - interpreting what's being said by writing things down or using the school iPads for notes
	  - filming the presentation
	  - taking photos of guest speaker
	  - recording the presentation with their own devices

Lesson 10 Plan

Date: Friday 05 March, 2021	Week 5A	Name of lesson:
Location Booked: Computer Lab	Term 1	Recall triangulation: ideas – story – game

Objectives for this lesson:	• Students appreciate the contribution and impact of innovation and technologies on leisure, lifestyle, work and further learning • Students appreciate the dynamic nature of design and production processes and how they are used to develop solutions to personal, social and global issues
Teaching & Learning Strategy:	• Problem solving learning strategy

Content:

- explore multimedia productions that consider cultural, personal and social diversity (ACAMAM077)
- investigate how people use multimedia and its effect on society
- consider ethical issues during the development of projects (ACAMAM077)

Tools, equipment and techniques:

- develop and produce projects allowing for the characteristics and properties of materials, systems, components, tools and equipment available, for example: (ACTDEK046)
  - processing capability of end-user
  - evaluating the end-user's hardware

BLOOMS stage 3: quiz

Account previous lesson and explain the significance of multimedia presentations and how games are used every day in society – at home, in the office, at school.

To measure students learning as a formative assessment task students attempt a 45 question multimedia quiz online either on their mobile devices or via the school computers. The questions include connection to last week's presentation by guest speaker as well as general questions on what has been learnt so far at school.

It also includes industry standard multimedia questions on games and simulations.

BLOOMS stage 4: project work

At this stage, students begin to synthesise their learning by showing intent and purpose to their work by being able to predict what the outcomes may result and begin to understand what needs to be done to correct things.

Teacher:

- Referring to previous lesson, creates a short quiz that enables students for recall how multimedia is found in everyday life and the involvement the industry has in society at large
- Guide students to quiz via Google Classroom
- Quiz questions include:
  - How many main elements are there in multimedia?
  - Multimedia means the use of more than one _____ in communication
- After quiz – teacher begins session on triangulation of events so that game can begin to take shape – link elements to include ideas, LOTF story and game.
- Assist students to participate and collaborate in their groups to justify quiz outcomes:
  - assessment via Quizizz portal

Students:

- Access Worksheet 16 for instructions
- Attempt quiz by logging in to Quizizz:
  - https://quizizz.com/
  - Time allowed: 15 minutes
- who are not finished in the 15 minutes allocated will have to complete a second quiz for homework - so to avoid having to do things at home, students are encouraged to fishing things as quickly as possible.
- Scores are measured via Quizizz dot com.
- After quiz, students continue with their project work as in previous lessons
- Students follow 'triangulation' instructions from teacher and evaluate using software
- Log in to Unity:
  - https://learn.unity.com/courses
- Students in groups extrapolate on ideas, story and game and identify pitfalls and difficulties experienced.

Lesson 11 Plan

Date: Tuesday 09 March, 2021 Location Booked: Computer Lab	Week 6B Term 1	Name of lesson: Introduce simulations used in games
Objectives for this lesson:	• Students develop knowledge and skills in the design and production of practical projects • Students learn skills in communicating ideas, processes and technical information with a range of audiences	
Teaching & Learning Strategy:	• Explicit / Direct Instruction • Problem solving learning strategy	

Design content:

- apply design principles and processes when completing a game or simulation that meets the identified needs of a target audience (ACTDEK047)

- applies design principles in the modification, development and production of projects

- identifies, selects and uses a range of hand and machine tools, equipment and processes to produce quality practical projects

Tools, equipment and techniques:

- explore devices and systems used to interface with games and simulations at school

- explore and/or use animation techniques used to produce games and simulations

BLOOMS stage 4:

Students are required to interpret and analyse the new dimensions of simulation by incorporating simulation in their project by linking game design and player or product user.

Teacher needs to make reference by utilizing resources available via the Digital Technologies Hub – access is via Google Classroom for this lesson.

Teacher needs to link simulation concept with the game, focusing on outcomes from the "cause and effect" exercise on the LOTF story and the interpretation of the novel by the students.

The cause and effect' activity addresses key literacy elements in the student's learning.

References:

Link to Enigma machine simulation:

http://enigmaco.de/enigma/enigma.html

Cause and effect source:

https://www.literacyideas.com/teaching-cause-effect-in-english

Teacher:

- Introduce simulations via accessing the Digital Technologies Hub at Education Services Australia:
  - Enigma machine simulation

- Demonstrate what simulations are via projector and Google Classroom

- Demonstration should only last 20 minutes

- Provide YouTube video link to help students understand the information better – this is only to develop student confidence in creating new ideas to incorporate into their game designs

- Worksheets as per previous lessons

- Activities include for this lesson include:
  - Cause and Effect

- Provide students with an overview of the story detailing the main events. Then, introduce the appropriate graphic organizer for the reading material chosen – recall novel Lord of the Flies

- While reading a text with class, have students identify the key events or actions in the story.

- Next, groups of students work to determine whether each event or action is a cause or an effect.

- Finally, students recount each of the events or actions on the graphic organizer via Google Classroom.

- Depending on ability of the students and their appreciation of the text, teacher may find it appropriate to make links with inference strategies.

- Continue to scaffold students as in previous lessons and help them add to their portfolios:
  - assessment as in previous lesson

Students:

- Access LOFT material via Google Classroom
  - Recall Food – Shelter – Rescue

- Teams discuss how to incorporate simulation in game
  - Recall cause and effect results

Lesson 12 Plan

Date: Friday 12 March, 2021 Location Booked: Computer Lab	Week 6B Term 1	Name of lesson: Interpreting a brief – go back to lesson 1
Objectives for this lesson:	• Students learn to prepare design and production folios to describe the management and processes undertaken in the production of projects	
Teaching & Learning Strategy:	• Problem solving learning strategy • Cooperative learning as well as Small Group strategy	

Content:	Teacher:

Content:
 	
• develop and produce projects allowing for the characteristics and properties of materials, systems, components, tools and equipment available (ACTDEK046)
 	
Tools, equipment and techniques:
 	
• produce 2D or 3D animations using animation software
• explore characteristics and features of animation:
 	
  - file types for export, such as gif, mpeg
  - uploading to YouTube
  - frame rate
  - principles of animation, to include timing, secondary actions, anticipation, composition
  - resolution
 	
• explore and apply a range of animation techniques, for example:
 	
  - CGI
  - motion capture
  - path-based animation
  - stop-motion and cell-based animation
 	
BLOOMS stage 5:
 	
In this lesson, the teacher needs to scaffold learning to the next level of Mr Bloom as students are instructed to make reference of *their* project brief provided in lesson 1 and in teams, critically analyse their progress compared to what has been asked.
 	
It's important to collaborate with students so they can explain the benefits of why ideas are critical to game design as well as how ideas are put into place in the production of a game that young people can download for entertainment.
 	
Recall guest speaker's advice to students to link classroom work with employment outcomes.
	Teacher:
	
	• Use 10 minute YouTube video to recall novel and link storyline to how designers conceptualize game ideas:
	
	  - https://www.youtube.com/watch?v=-tXpA3dIEtI
	
	• <mark>Summarise</mark> how the novel is about survival
	• Highlight how fear and reasoning are the focus
	• Use whiteboard to communicate meaning and provide access to lesson's Worksheet
	• When finished, use whiteboard for class activities
	• Activities include problem solving:
	
	  - Unity practical
	  - Photoshop practical
	  - Illustrator practical
	
	• Circulate from group to group monitoring progress
	• Continue to assist students as in previous lessons:
	
	  - observation as in previous lesson
	
	Students:
	
	• continue to <mark>define</mark> their skills in operating both software and hardware.
	• <mark>explore</mark> how animation is used in games by comparing tutorial notes and progress made by teams
	• distinguish ideas being different to other groups by evaluating how a player will enjoy participating in their game by:
	
	  - <mark>recounting</mark> outcomes for players
	  - calculating benefits of playing the game
	  - <mark>predicting</mark> results when a player participates
	  - <mark>justify</mark> the efforts made by recalling syllabus outcomes and purpose of the project.

References

Cronulla High School. (2020). Computing Studies. Retrieved from https://www.cronulla-h.schools.nsw.edu.au/learning/computing-studies

Golding, W. (2005). *Lord of the Flies.* London, England: Faber and Faber Limited.

Henderson, R., & Exley, B. (2016). Planning for literacy learning. In R. Henderson (Ed.), *Teaching literacies: Pedagogies and diversity in the middle years* (pp. 18-56). South Melbourne, Australia: Oxford University Press.

Ibrahim, T. (2018). *Cronulla High School Annual Report*. Cronulla, Australia: Cronulla High School.

Literacy ideas for teachers and students. (n.d.) Teaching cause effect. Retrieved April 11, 2020 from https://www.literacyideas.com/teaching-cause-effect-in-english

NESA (2018). *Teacher Accreditation: The Australian Professional Standards for Teachers.* Sydney, Australia. Retrieved from https://educationstandards.nsw.edu.au/wps/portal/nesa/teacher-accreditation/how-accreditation-works/guide-to-accreditation/professional-standards/

Montgomery, J. (2019). *Cronulla High School Newsletter.* Cronulla, Australia: Cronulla High School.

O'Connell, R. (2011). *Teaching with multimedia: pedagogy in the websphere - volume 1*. New Jersey, United States of America. Hampton Press, Inc.

Quizizz. (2020). Multimedia. Retrieved from https://quizizz.com/admin/quiz/579ed50adba6c0405d24bcc4/multimedia

Thornthwaite, C. (2014). *Not a toy, but a tool: An educator's guide to understanding and using the iPad.* Maryland, United States of America: Rowman & Littlefield.

Appendix next page

Appendix

Lesson 1 – Worksheet 1: Project A

Project instruction	
NAME	**Game Brief**
TASK	Students are to develop an interactive game of "survival" that allows the player to be rescued from a desert island. Game is to the setting as in the novel by William Golding 'Lord of the Flies' written in 1954. The aim of the game is to get rescued as quickly as possible due to certain basic requirements needed to survive on a deserted island. These are:
	- Food and water
	- Shelter
	- Mods and cons of living in society
GAME IS INTERACTIVE	What is important is for a player to select a character from the novel and then take the challenge in getting rescued by making choices as listed in the novel.
	Player is required to log in to play the game. Game finishes when all children get rescued.
WINNER	Player who gets rescued the quickest or player who completes the round the fastest, wins the game. It's not the highest score but the lowest score that makes a player the winner.
	Game time pauses when player takes a break and decides to continue playing later.
ASSESSMENT TASKS	Students are to design the characters – design backgrounds – create island setting with all elements as in the novel. Students are to design and produce all the elements of the game to include the following:
	- Motion
	- Sound
	- Vision
	Students are to link game to story and make a presentation to demonstrate their work.
DEADLINE	Presentation of finished work: Week 18 or week 8 of second term.
ASSESSMENT	Via observation through classwork (40%) – portfolio keeping through homework reporting (40%) as well as final presentation via group work – demonstrational team effort in 20 x 20 Pecha Kucha style (20%).
	Rubric as illustrated in Google Classroom.

Statement about project:

Students will apply a design process to modify, develop and produce original design solutions for a range of practical projects. They identify, select and apply appropriate hand and machine tools and processes to produce quality practical projects.

Through experiences in a range of practical activities, students develop an appreciation of the value of working cooperatively in the achievement of common goals and gain personal satisfaction and enjoyment.

These skills form a basis that enables students to continue their learning experiences in many lifestyle and leisure activities.
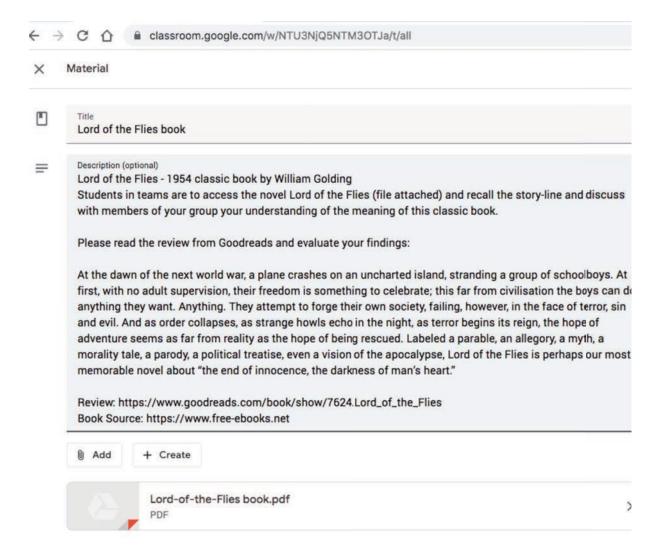
Lesson 1 – Worksheet 2: Google Classroom

Source: https://www.commonsense.org/education/articles/teachers-essential-guide-to-google-classroom
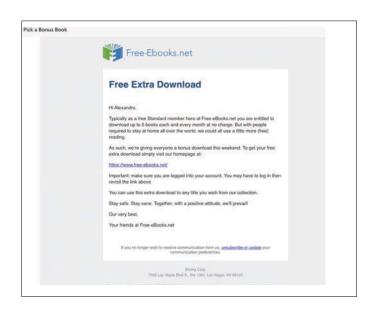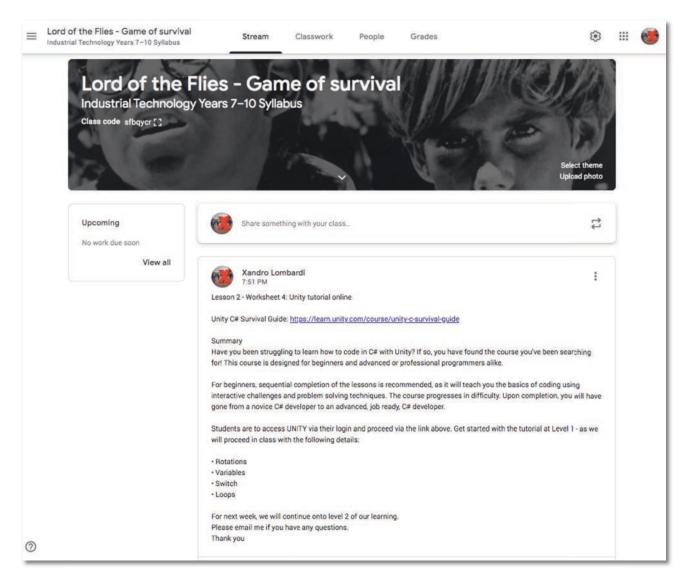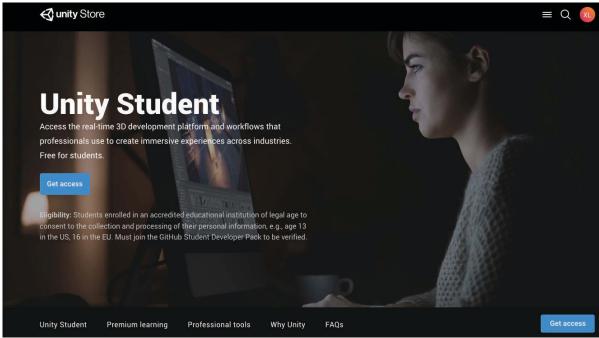
Lesson 1 – Worksheet 3: Game Story-line
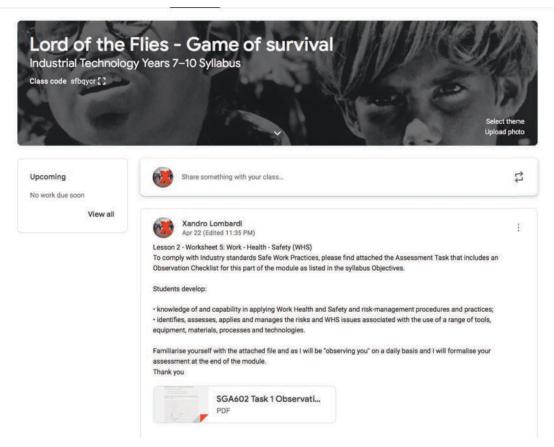

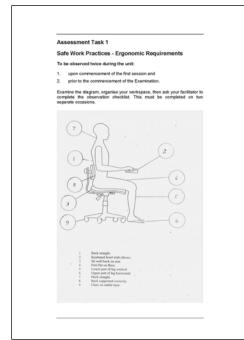Book source: https://www.free-ebooks.net/
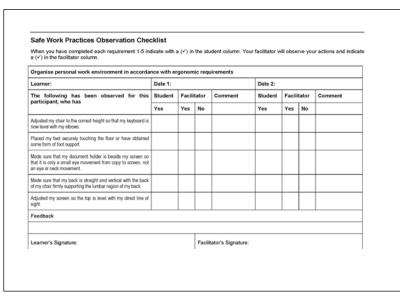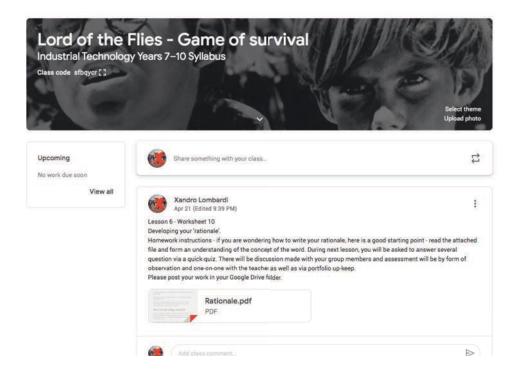
Lesson 2 – Worksheet 4: Unity tutorial online

Lesson 2 – Worksheet 5: WHS

Lesson 4 – Worksheet 6: Game ideas – developing the rationale

What is a rationale?

A written rationale is a description of your thought process behind your design.

Good design is all about communication, not about just making things look pretty.

For every decision in graphic design, there needs to be logic behind that decision. If you do good conceptual work, then a written rationale should be very very easy.

How to write a rationale

When presenting a concept to a client it is often productive to have written rationales to accompany each concept. This can help you, the designer, clarify your thoughts before getting the concepts in front of your client.

The rationales will help your client to better understand the concepts from your point of view (especially if you are not there in person to present the concepts to your client). In turn, this will help your client make an educated decision when picking their final logo. All that effort will also help you to better defend and explain concerns and questions that may arise during the logo revision process.

Here are some topics to consider covering when in your writing rationales. In going through this process you may even see some areas for improvement in your concepts. If possible, run your draft rationales by a non-designer and get their feedback.

Symbolism: Clarity and identity the meanings behind the icons you chose to incorporate into the design. Go into as much detail you feel necessary, the history, cultural relevance and so on.

Style: Why did you choose this style for the logo? Did you give it a distressed look because the mark is for an outdoors company, or is the logo clean and orderly because it's for a closet organization company, etc.
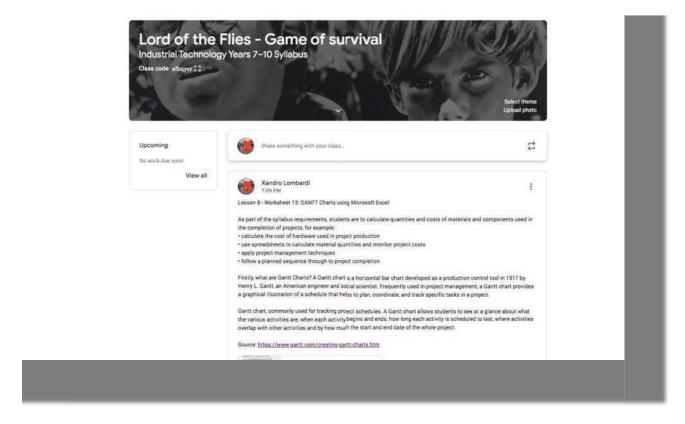
Typography: Explain why you chose the typefaces used in the logo. How do they relate to the rest of the design and the company it represents?
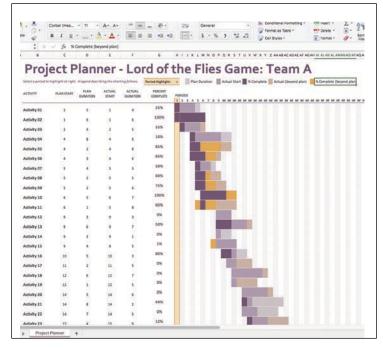
Relationship: How does the concept relate to the company's personality, goals, vision and values? Hopefully you learned a lot about the company in your creative brief process. You can read more about creative briefs in the article "The Creative Brief: Questions to Ask Before Designing a Logo".
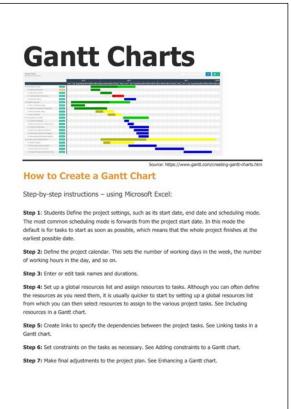
Color: Explain the color choices. Why did you choose them? What does the color represent? How does the color choice relate to the business? Sometimes color isn't a part of the first round of concepts, so whenever color is does get introduced it's important add it to your rationale. You can read more about color psychology here in the article "Color Psychology in Logo Design".

A written rationale is a good tool for communication but don't forget to listen to your client. Make sure you hear their opinions and questions. You likely know a lot more about design than you client, but they know their target audience and company better than you. Translate those ideas into an understanding of what those people's problems really are. In other words So when your client says "Can we add x to the logo?" take the time to understand what it is that they are trying to accomplish with their request.
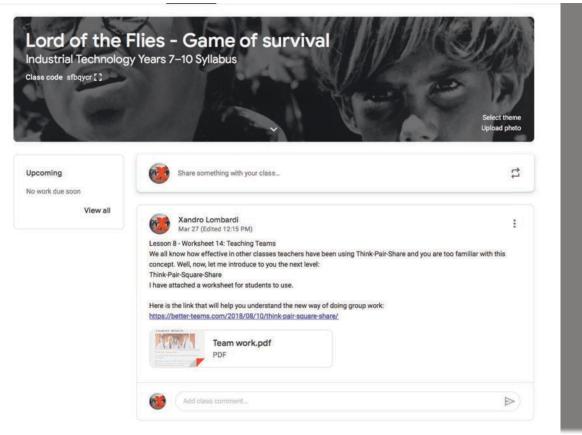
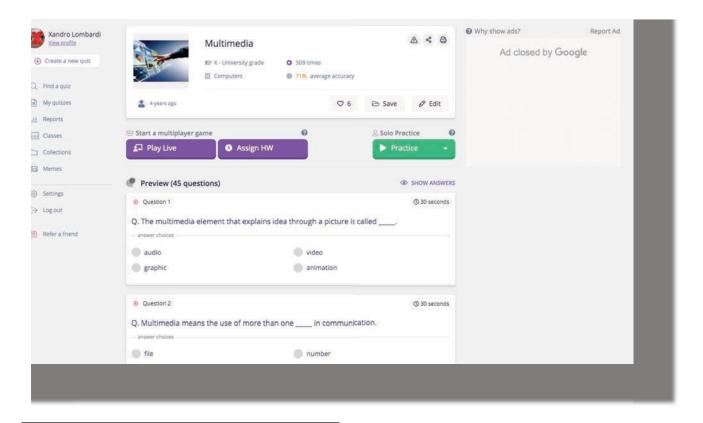## Lesson 8 – Worksheet 13: GANTT Charts

Lesson 8 – Worksheet 14: Project development – team work

Lesson 10 – Worksheet 16: Online Multimedia Quiz - 45 questions

QUIZIZZ

NAME : _____

CLASS : _____

DATE : _____

Multimedia

45 Questions

1. The multimedia element that explains idea through a picture is called _____.
   - ☐ a) audio
   - ☐ b) video
   - ☐ c) graphic
   - ☐ d) animation

2. Multimedia means the use of more than one _____ in communication.
   - ☐ a) file
   - ☐ b) number
   - ☐ c) media
   - ☐ d) sound system

3. Engineers design cars before producing them by using a multimedia application called
   - ☐ a) Computer-Aided Design
   - ☐ b) Computer-Aided Coding
   - ☐ c) Computer-Aided Development
   - ☐ d) Computer-Aided Documentation

4. The multimedia element that makes object move is called _____.
   - ☐ a) audio
   - ☐ b) video
   - ☐ c) graphic
   - ☐ d) animation

5. In ICT, using multimedia means using various _____. The process involves interaction between the technology and the user.
   - ☐ a) arts
   - ☐ b) news
   - ☐ c) media
   - ☐ d) design

6. In medicine, doctors can practise or be trained in performing high-risk surgery by using _____ surgery
   - ☐ a) two dimension
   - ☐ b) space
   - ☐ c) virtual
   - ☐ d) media

7. Using a multimedia directory and an _____ are examples of multimedia application for finding information.
   - ☐ a) text
   - ☐ b) joystick
   - ☐ c) voice over
   - ☐ d) encyclopaedia

8. There are _____ main elements in multimedia.
   - ☐ a) four
   - ☐ b) five
   - ☐ c) eight
   - ☐ d) seven

9. A combination of _____ and entertainment makes learning enjoyable in schools.
   - ☐ a) training
   - ☐ b) education
   - ☐ c) transferring
   - ☐ d) examination

10. Companies nowadays make multimedia _____ to promote their products.
    - ☐ a) indirectly
    - ☐ b) catalogues
    - ☐ c) opportunity
    - ☐ d) encyclopaedias

11. Access to information in the multimedia content is flexible in a _____ interactivity.
    - ☐ a) linear
    - ☐ b) hypertext
    - ☐ c) non-linear
    - ☐ d) hypermedia