Teaching Guide.

One Minute Mentor

Introduction

Video games is a growing industry. In this lesson learners will investigate current video games industry job roles, identify the skills required for different roles and consider the roles they might be interested in. Having chosen their desired role they will interview each other and examine interview techniques.

This lesson can be delivered in person in the classroom or virtually if required.

Contents

Learning Outcomes

1. To be able to identify different job roles within the video games industry
2. To be able to investigate job role descriptions and responsibilities in the video games industry
3. To be able to carry out peer assessment on job role descriptions
4. To be able to undertake an informal interview for a job role in the video games industry

Files/Resources

U = Unplugged activity, P = Plugged activity

Filename	Resource Type	Purpose/Description	Activity No
DSH-OMM-teaching-presentation-jobroles	PDF / HTML5 presentation	Teaching presentation	All activities
DSH-OMM-worksheet-starter-Iwouldlikejobrole-template	PDF worksheet	Unplugged activity worksheet 1 copy per learner	U1
DSH-OMM-worksheet-jobrole-template	PDF worksheet	Unplugged activity worksheet 1 copy per learner	U2, U4
DSH-OMM-worksheet-jobrole-peer-matrix	PDF worksheet	Unplugged activity worksheet 1 copy per learner	U3
PC / Laptop	Activity resource	Needed to complete activity	U3
Web Browser with internet access	Software	Needed to complete activity	U3
Pens	Activity resource	Needed to complete activities	U1, U2, U3
https://www.youtube.com/watch?v=ENusNnWAdb8&list=PLA8lfpEv0vOvo5f78SHdtb3UgAsWfYnpR	Video playlist	Needed for students to identify the video games industry role they are interested in finding more about	U2
DSH-OMM-reference-sheet-	PDF reference sheet	Sample job video games job description outlining roles and responsibilities	U2

esports-job-role-examples			
Whiteboard with marker		Activity resource	Needed to write idea on the whiteboard

PLEASE NOTE: The activities outlined in this workshop pack are a suggested outline of how the workshop can be delivered. It is envisaged that teachers will adapt the resources and the organisation of them according to the needs of their class.

Session Overview

Prior to this session, print all worksheets, one copy per student.

U = Unplugged activity, P = Plugged activity

Activity No	Session Content / Activity	Resources Used
	Welcome and introduction. Discuss lesson aims with the learners.	DSH-OMM-teaching-presentation-jobroles - slide 2
U1	Provide learners with the DSH-OMM-worksheet-starter-Iwouldlikejobrole-template (1 copy per learner) and get them to write down how many job roles there are in the video games industry. Extension task – get learners to think about the types of job roles that there are in the video games industry and get them to write down the names.	DSH-OMM-teaching-presentation-jobroles - slide 3 DSH-OMM-worksheet-starter-Iwouldlikejobrole-template Pens
U1	Get learners to think about the types of job roles that they would like to do in the future. They should write their ideas on the following worksheet - DSH-OMM-worksheet-starter-Iwouldlikejobrole-template (1 copy per learner). Some suggested prompts to the class: Programmer, tester, designer, visual artist.	DSH-OMM-teaching-presentation-jobroles - slide 4 DSH-OMM-worksheet-starter-Iwouldlikejobrole-template

		Pens
	Learners should now be allocated some time to use the internet and research available job roles in the video games industry. Students should record their answers on some scrap paper so they can provide their ideas back to the class. If delivering virtually students can be encouraged to use a suitable app to record their ideas e.g. OneNote or Google Jamboard	DSH-OMM-teaching-presentation-jobroles - slide 5 Scrap paper or suitable app for recording ideas PC/Laptop Internet Access
	Teacher should read slide 7 which outlines a few job roles within the video games industry.	DSH-OMM-teaching-presentation-jobroles - slide 7
U2	The next task requires learners to look through the sample job descriptions and then complete their own research into video games industry roles using the worksheet (DSH-OMM-worksheet-jobrole-template). It is suggested that the teacher prints / shares several copies of the reference sheet and allocates one to each learner. Learners should then be directed to use the One Minute Mentor YouTube playlist where they should choose at least one role to research. Learners need to draw out key roles and responsibilities for each job that they have chosen. It is suggested that learners are reminded that they	DSH-OMM-teaching-presentation-jobroles - slide 8 Pens DSH-OMM-worksheet-jobrole-template (1 copy per learner).

7

	need to include enough detail for someone else in the class to gain an overview of the job role. They will also be peer assessed. Allow learners a good amount of time for this task.	DSH-OMM-reference-sheet-esports-job-role-examples https://www.youtube.com/watch?v=ENusNnWAdb8&list=PLA8lfpEv0vOvo5f78SHdtb3UgAsWfYnpR
U3	Learners should be given the opportunity to peer assess each job role from others in the class. It is highly recommended that learners peer assess several job roles so that they can gain an overview of different roles available in the video games industry. Learners should record their peer assessment on the following worksheet (DSH-OMM-worksheet-jobrole-peer-matrix) and provide a rating using the criterion outlined on the worksheet.	DSH-OMM-teaching-presentation-jobroles - slide 10 Pens DSH-OMM-worksheet-jobrole-peer-matrix
U1	Students should revisit the starter activity with their initial ideas about the job role- s) that they wanted to do. They should now reflect and think about if they want to do a new role, add an additional role or stick with their initial idea. Learners should record their idea on the following worksheet - DSH-OMM-worksheet-starter-Iwouldlikejobrole-template.	DSH-OMM-teaching-presentation-jobroles - slides 11 Pens DSH-OMM-worksheet-starter-Iwouldlikejobrole-template

		Teacher should talk through some useful interview techniques when attending an interview. Some suggested ideas on slide 12. Animations activated by click.	DSH-esports-Lesson-2-teaching-presentation-jobroles - slides 12
U4		Teacher should now read out slide 13 and tell learners that they will all be expected to undertake an informal interview for the job role they have chosen. Teacher should pair students up, each student should read each other's job role worksheet before beginning the interview. Learners should use the work they have completed in the lesson today to prepare for the interview. If running this lesson virtually we would recommend the use of breakout rooms to allow students to complete their interviews remotely.	DSH-esports-Lesson-2-teaching-presentation-jobroles - slides 13
		The teacher should summarise the workshop and recap the workshop objectives.	DSH-OMM-teaching-presentation-jobroles - slide 14

9

Digital Schoolhouse Progression Matrix

The Digital Schoolhouse progression matrix is a simplified mechanism for measuring pupil progress. It stretches from base level understanding at the beginner level to introducing GCSE content at the advanced level. The shaded statements reflect skills and concepts covered in the workshop, these have been cross referenced to specific activities in order to reflect both their level of complexity and provide a guideline on which to measure progress.

U = Unplugged activity, P = Plugged activity

Algorithms

	Beginner	Activity No	Intermediate	Activity No	Advanced	Activity No
Understanding	Understands what an algorithm is		Understands that algorithms are not the same as programming		Understands that different algorithms exist for the same problem	
Writing	Represents algorithms using graphical notation such as pictures		Represents algorithms using structured notation such as flowcharts		Represents algorithms using pseudocode	
Limitations	Understands that computers need precise instructions		Can identify tasks best completed by humans or computers		Understands that some problems cannot be solved computationally	
Planning	Can identify the steps needed to solve a problem		Can identify the programming constructs needed to solve a problem (pattern recognition)		Can identify the modules needed to solve a problem e.g. top down design	
Tracing	Uses logical reasoning to predict outputs and show an awareness of inputs		Uses logical reasoning to explain how an algorithm works		Evaluates the effectiveness of algorithms and models for similar problems	
Designing	Designs solutions (algorithms) that use sequence, selection i.e. if, then and else and iteration		Designs solutions by decomposing a problem and creating a sub-solution for each of these parts		Designs a solution to a problem that uses generalization to create objects and classes (OOP)	

Programming

	Beginner	Activity No	Intermediate	Activity No	Advanced	Activity No
Writing	Can create a simple program in an environment that does not rely on text e.g. programmable robots etc		Has practical experience of a high-level textual language, including use of standard libraries		Has experience of designing programs that include a graphical user interface	
Program flow	Understands that programs execute by following precise instructions		Understands how modular programs work using sub-routines		Appreciates the effect of the scope of a variable e.g. a local variable can't be accessed from outside its function unless passed as a parameter	
Selection	Uses selection statements in programs, including an if, then and else statement		Understands the difference between, and appropriately uses if and if, then and else Statements		Uses nested selection statements	
Iteration	Uses loops, within programs		Understands the difference between, and uses 'while', 'until' and 'for' loops		Uses nested iteration and recursion	
Debugging	Detects and corrects simple semantic errors i.e. debugging, in programs		Detects and corrects syntactical errors		Applies a modular approach to error detection and correction	
Program design	Creates programs that implement algorithms to achieve given goals		Can design a program based on an algorithm		Designs modular programs using a range of methodologies e.g. RAD, waterfall	
Data types and structures	Declares and assigns variables		Selects appropriate data types		Understands and uses one and two dimensional data structures	
Operators	Uses arithmetic operators		Uses a range of operators and expressions e.g. Boolean		Understands and uses negation with operators e.g. not equal to	

11

Data

	Beginner	Activity No	Intermediate	Activity No	Advanced	Activity No
Representation	Recognises that digital content can be represented in many forms		Understands how bit patterns represent different forms of data e.g. character sets, sound, numbers and images		Understands how the same bit patterns can be used for different forms of data e.g. metadata	
Transfer	Knows that data can be transferred from one computer to another		Knows that computers transfer data in binary		Understands and can explain the need for data compression, and performs simple compression methods	
Types	Recognises different types of data: text, number		Defines data types: string, integer, real and Boolean		Understands how different data types can be used within data structures e.g. arrays must be made up of the same data type whereas lists can use several	
Binary	Can carry out simple binary to decimal conversions		Performs operations using bit patterns e.g. binary addition, conversion between binary and hexadecimal, binary subtraction etc		Understands the relationship between binary and electrical circuits, including Boolean logic	
File Size	Understands that data takes up space on a computer		Understands the relationship between binary and file size (uncompressed)		Knows the relationship between data representation and data quality e.g. resolution and colour depth etc, including the effect on file size	
Data and Information	Understands the difference between data and information		Recognises that poor-quality data leads to unreliable results, and inaccurate conclusions		Understand the mechanisms used to cleanse data e.g. validation, range checks etc	
Searching	Can sort data, use filters and perform single criteria searches for information	U2, U3	Queries data on one table using a typical query language, including more complex searches for information e.g. using Boolean and relational operators		Queries data on multiple tables using a typical query language	
Structure	Recognises that data can be structured in tables to make it useful		Understands that all the data about a person or thing can be stored as a record		Knows what a relational database is, and understands the benefits of storing data in multiple tables	

Hardware and Software

	Beginner	Activity No	Intermediate	Activity No	Advanced	Activity No

Processing	Understands that computers have no intelligence and that computers can do nothing unless a program is executed	Knows that programs are executed by the processor i.e. the CPU	Understand that processors can work in different ways e.g. multitasking, scheduling
Software	Recognises that all software executed on digital devices is programmed	Knows that there is a range of operating systems and application software for the same hardware	Understands the concept of proprietary and open-source software including how this relates to licencing
Devices	Recognises that a range of digital devices can be considered a computer	Understands why and when computers are used	Understands how technology has developed e.g. Moore's Law
Components	Recognises and can use a range of input and output devices	Recognises and understands the function of the main internal parts of basic computer architecture	Knows that processors have instruction sets and that these relate to low-level instructions carried out in the main internal parts of a computer
Operating systems	Understands that the operating system is software that specifies the function of a computing device	Understands the main functions of the operating system	Understands that there are different types of operating system and some of there common uses e.g. real time on auto pilot systems on a plane
Data transfer	Knows that data is transferred around a computer system using input devices, sensors and application software	Knows that data can be transferred between computer systems using physical, wireless and mobile networks	Knows how data can be transferred between computer systems e.g. packet and circuit switching
Architecture	Understands the difference between hardware and software	Understands how hardware uses software to execute instructions e.g. the fetch-execute cycle	Understands computer architecture in relation to the fetch execute cycle, including how data is stored in memory

Communication

	Beginner	Activity No	Intermediate	Activity No	Advanced	Activity No
WWW	Accesses content using a web browser	U2, U3	Understands that web pages are created using HTML and CSS		Understands how dynamic web pages use the client-server model and that web servers process and store data entered by users	
Online safety	Understands why and how to keep personal information private and knows what to do when concerned about something online		Has an awareness of a range of online harms and demonstrates responsible use of technologies and online services in order to protect themselves		Understands how and why online threats are carried out and how to protect against them	
Search engines	Navigates the web and can carry out simple web searches to collect digital content	U2, U3	Understands how to effectively use search engines e.g. Boolean, advanced search functions etc		Knows how search results are selected and ranked, including that search engines use 'web crawler programs'	
Networks	Understands the difference between the internet and internet service e.g. world wide web		Understands data is transmitted between digital computers over networks, including different topologies e.g. ring, star, mesh		Knows the names and purposes of network components and protocols	
Internet services	Shows an awareness of, and can use a range of internet services e.g. email	U2, U3	Selects, combines and uses internet services		Uses internet services to work collaboratively	

14

IT

	Beginner	Activity No	Intermediate	Activity No	Advanced	Activity No
Invention	Uses software under the control of the teacher to create, store and edit digital content		Uses and selects internet services, digital devices and application software to create, store and edit digital content		Evaluates the appropriateness of digital devices, internet services and application software to achieve given goals	
Audience	Understands what an audience is	U1, U2, U3, U4	Recognises the audience when designing and creating digital content	U1, U2, U3, U4	Undertakes creative projects that are tailored to meet the needs of an audience	U1, U2, U3, U4
Purpose	Can talk about how they use computers		Can talk about how other people use computers		Can discuss the issues around how other people might use computers e.g. Data Protection Act, Computer Misuse Act, Copyright etc	
Evaluation	Can comment on the success of their solution	U1, U4	Designs and uses criteria to critically evaluate the quality of solutions		Documents user feedback, the improvements identified, and the refinements made to the solution	
Content	Can gather content	U2, U3	Makes judgements about content when evaluating and repurposing it for a given audience	U1, U2, U3, U4	Evaluates the trustworthiness of content, considers the usability of visual design features and properties of media when designing and creating digital artefacts	

Computing Programmes of Study Links

2.5   use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

4.1   develop their capability, creativity and knowledge in computer science, digital media and information technology

4.2   develop and apply their analytic, problem-solving, design, and computational thinking skills

16

Computational Thinking Strands

DE – Decomposition

Ref.	Activity
D1	Breaking down artefacts into constituent parts to make them easier to work with
D2	Breaking down a problem into simpler versions of the same problem that can be solved in the same way (recursive and divide and conquer strategies)

GE – Generalisation

Ref.	Activity
G1	Identifying patterns and commonalities in artefacts
G2	Adapting solutions, or parts of solutions, so they apply to a whole class of similar problems
G3	Transferring ideas and solutions from one problem area to another

AB – Abstraction

Ref.	Activity
Ab1	Reducing complexity by removing unnecessary detail

EV – Evaluation

Ref.	Activity
E1	Assessing that an artefact is fit for purpose
E2	Assessing whether an artefact does the right thing (functional correctness)
E7	Assessing whether an artefact is easy for people to use (usability)
E8	Assessing whether an artefact gives an appropriately positive experience when used (user experience)
E13	Using methods involving observing an artefact in use to assess its usability (empirical evaluation)
E14	Assessing whether a product meets general performance criteria (heuristics)