

Parkside House School Key Stage 3 ICT and Computing Scheme of Work 2020 Year 2

Module	Theme	Learning Objectives	Coverage
Term 1 Image Manipulation			
Faking IT	As part of Digital Literacy pupils need to be aware how images are altered before being published online or in print media. It is important that pupils do not use these modified images as a benchmark as to how to judge themselves.	<ul style="list-style-type: none"> • This unit shows pupils a basic set of editing techniques that are used to enhance images using the image manipulation applications, including Paint.NET, GIMP, Pixlr Express and Pixlr Editor. • Pupils will be shown how to access the common tools in each program i.e. selection, cropping, saving/loading and drawing tools. • Pupils will evaluate the strengths and weakness for different image processing applications including: <ul style="list-style-type: none"> ○ Cost ○ Ease of use ○ Toolsets <ul style="list-style-type: none"> ▪ Selection ▪ Colour manipulation ▪ Masking ▪ Brushes and effects ▪ Layering and compositing ▪ Text handling ○ Plug-ins ○ File handling, importing and exporting. • Pupils source images for the internet and use the applications to: <ul style="list-style-type: none"> ○ Remove Red Eye from a photograph ○ Edit out spots and blemishes from a social media profile picture ○ Whiten teeth and change a person’s eye colour ○ Add digital makeup and contour shadowing to a 	<ol style="list-style-type: none"> 1. Creative projects that involve selecting, using and combining multiple applications 2. Create, reuse, revise and repurpose digital artefacts 3. Use technology safely 4. Develop application skills in MS Office and/or a similar package.

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		<ul style="list-style-type: none"> ○ profile picture. ○ Using digital filters to enhance an image ● Pupils produce a reflective document in Word or PowerPoint that: <ul style="list-style-type: none"> ○ Evidences the work they have produced ○ States the positive and negative possibilities of image manipulation in editorial, advertising and social media. 	
Commercial Composite Images	<p>Digital images are often built-up from several sources as a Composite made up of Layers. This is a vocational element that relates to how businesses use IT to create attractive, eye-catching and interesting images to promote their products or services.</p>	<ul style="list-style-type: none"> ● Pupils begin by creating a simple 2D graphic of a house in MS Paint and revise how to use the fill, pattern and line tools. ● They then import that image into Paint.Net and use the Magic Brush select tool to cut the image and place it onto a new background introducing the idea of a digital collage in Layers. ● As a start-up exercise students will be able to demonstrate how to use the Magic Wand tool to select, crop and import an image from one file and place it over a suitable background layer. ● The pupils undertake a film poster project that requires the use of foreground and background images, and, <ul style="list-style-type: none"> ○ Practising select and cropping tools and ○ Managing layer and effect filters. ● The composite image is then imported into MS Word where they can add text using Word Art and Textboxes to create a complex composite final image. 	
Module	Theme	Learning Objectives	Coverage
Term 2 ICT and Business:			
Game On	This unit builds on skills learnt in	<ul style="list-style-type: none"> ● Students will play several board and online games, 	1. Creative projects that

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	<p>the previous term and features an extended project based unit where the students will plan and create their own board game. It is designed to help students see how ICT can support the development of a product, its marketing, legal and ethical issues in gaming industry practice.</p>	<p>comparing rules, rewards and looking at how different genres and content aim products at specific audiences.</p> <ul style="list-style-type: none"> • They collect and analyse examples of game marketing and how different editions of the same game can be used to increase sales. • As part of digital literacy, we investigate how the <i>Hook, Habit, Hobby</i> model is used to keep players spending money in online games (<i>microtransactions</i>). • The pupils practise word processing and basic image importing by using MS Word to create a games review. • Advanced students will be able to use columns and backgrounds to improve their work. • Pupils design their own version of a board game for a specific market i.e. Fortnite draughts using the skills developed in the previous Composite Image unit. • The students investigate the Copyright, Plagiarism, Fair Use in relation to their project: <ul style="list-style-type: none"> ○ What are the laws on using copyright material? ○ What have they used in their project that could be copyrighted i.e. images or game formats? ○ Have they stolen anyone's ideas? ○ How could they obtain legal use of copyright materials? ○ What is Fair Use in education and business? (see You Tube's Fair Use contract) 	<p>involve selecting, using and combining multiple applications</p> <ol style="list-style-type: none"> 2. Create, reuse, revise and repurpose digital artefacts 3. Use technology safely 4. Develop application skills in MS Office and/or a similar package.
Module	Theme	<ul style="list-style-type: none"> • Learning Objectives 	Coverage

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Term 3 Three Types of Data Handling:			
Programming Logical Structures: Introduction to Python	<p>This unit is an online course from Teach-ICT and builds upon work done in the Year 1 Visual programming unit. Here the students will be creating programmes in text instead of visual programming blocks.</p>	<ul style="list-style-type: none"> • Students are introduced to <i>text based</i> programming, and compare the positives and negatives with <i>visual</i> programming languages like BLOCKLY and SCRATCH. • Students learn the basics of how to open the Python shell: <ul style="list-style-type: none"> ○ How to run a program ○ How to write a simple one line program to output text • The Teach-ICT course then teaches them to write programs that use the input function, If ... Else and Elif. • By the end of this unit students will create a simple Chatbot which will respond to user input. • Students will also learn about the history of computing by studying the contribution of British scientist Alan Turing during World War and the <i>Turing Test</i>. • Students will investigate the development of the Siri, Alexa and Cortana digital assistants and report on the pros and cons of such systems. • Students will be given a short project to create a believable Chatbot • Students are taught the Fetch Execute Cycle using the virtual LMC computer at https://www.101computing.net/LMC/ • Some students will attempt the https://www.101computing.net/little-man-computer-mini-challenges/ to extend their knowledge and skills 	<ol style="list-style-type: none"> 1. Design, use and evaluate computational abstractions 2. Understand several key algorithms (input verification) 3. Understand how instructions are stored and executed within a computer system
Presenting Images and Text:	<p>This module is designed to extend students' presentation</p>	<ul style="list-style-type: none"> • Students will create a slideshow based on collecting 	<ol style="list-style-type: none"> 1. Create, reuse, revise and

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<p>Theme Park Project</p>	<p>skills and practice importing text and images to a slideshow and showing how skills learnt in MS Word are transferable other MS Office packages.</p>	<p>information on the top 5 rides or theme parks from around the world.</p> <ul style="list-style-type: none"> • They will be introduced to some of the more advanced Power Point functions including transitions, audio and video, hyperlinks, hot spots and animations to enhance their work with the caveats: <ul style="list-style-type: none"> ○ When does a slide show become too busy? ○ How does a <i>house style</i> affect the presentation? ○ How do we create a suitable style for the content and audience? • Pupils can experiment with predefined templates or create their own. • Using design skills learnt earlier in the year, some pupils will progress to create: <ul style="list-style-type: none"> ○ A poster for an open day at a specific park or create their own park ○ A promotional press release for the event. ○ A map of their own theme park 	<p>repurpose digital artefacts</p> <ol style="list-style-type: none"> 2. Use technology safely 3. Develop application skills in MS Office and/or a similar package.
<p>End of Year Assessment</p>		<ul style="list-style-type: none"> • The students will be given an end of year assessment based on the topics covered this year. • An assessment of progress and performance in class work and projects will made for each student. • These assessments will be combined to provide an overall assessment for the year and be reported to parents/carers via each student's annual report. 	