

Subject	Y9 Threshold Knowledge – Autumn/Spring/Summer term	How to support students' learning
IT	<p>Autumn Term Digital Games -</p> <ol style="list-style-type: none"> 1. Create a new game in GDevelop game making software. 2. Understand how to add particle emitter objects. 3. Add events to create new instances of an object. 4. Understand the key components of a platform game including game objectives, characters, and sprites. 5. Create a theme and concept art for sprites and backgrounds for a platform game. 6. Understand how collision detection works by creating and editing collision masks. 7. Know how to program sprites to fall off screen and respawn back at the start of the level. 8. Use variables to store a score within GDevelop game making software. 9. Create hazard objects that return a sprite to the start of the game. 10. Know how to test and refine the game. <p>Spring Term Digital Graphics -</p> <ol style="list-style-type: none"> 1. Know how a vector graphic is different to a bitmap image. 2. Know the properties of digital graphics: colour depth/bits per pixel/resolution and their impact on quality. 3. Use basic tools of Adobe Illustrator to create a logo. 4. Use selection, retouching and painting tools of Adobe Photoshop to manipulate images. 5. Create a visualisation diagram or flat plan. 6. Select the appropriate properties for a digital graphic (Height, Width and Resolution). 7. Create a simple digital graphic in Adobe Photoshop for a given scenario. 8. Use a range of advanced techniques to create a complex and effective digital graphic that meets the client brief. 9. Know a range of file formats used to store digital graphics. 10. Export graphics into a suitable file format that meets the client requirements. 	<ul style="list-style-type: none"> • Use these GDevelop tutorials to further develop skills in the software: https://gdevelop.io/academy • Wider reading on video game making: https://www.nuclino.com/articles/game-development • Useful blog listing 20 must-read game design articles for beginners: https://en.eagle.cool/blog/post/game-design-article <ul style="list-style-type: none"> • Use the BBC Bitesize information to reinforce learning in this topic: https://www.bbc.co.uk/bitesize/guides/zv2v4wx/revision/1 • Use this website to help their understanding of vectors and bitmaps: https://www.youtube.com/watch?v=a6w4ghQPYu0 • Use these tutorial videos to help with Photoshop skills. https://helpx.adobe.com/uk/photoshop/how-to/ps-basics-fundamentals.html

	<p>Summer Term</p> <p>Animation -</p> <ol style="list-style-type: none"> 11. Use the basic tools of Wick Editor animation software including layers. 12. Understand the purpose of tweening and why it's used in animation. 13. Create own assets in Wick Editor software by creating a traffic light animation. 14. Identify a range of tools used in animation software. 15. Confidently use Wick Editor software tools to create a fully functioning animation. <p>Video Editing -</p> <ol style="list-style-type: none"> 16. Identify the purpose of different types of digital videos. 17. Create and repurpose assets using Adobe Illustrator tools and techniques. 18. Understand the purpose of copyright and the consequences associated with copyrighted infringement when sourcing assets. 19. Edit a video using a range of tools and techniques of video editing software, such as, trim, split, filters etc. 20. Export a video advertisement into a suitable file format for playback. 	<ul style="list-style-type: none"> • Encourage students to use Wick Editor to practice skills: https://www.wickeditor.com/editor/ • Use this YouTube playlist with informative tutorials to develop skills in animation software: https://www.youtube.com/watch?v=KsPFoCPWomQ&list=PL5fmsRtjcmEz9oal6u5NQP9FBCRq4yXZZ • YouTube tutorial for Frame by frame stickman animation: https://www.youtube.com/watch?v=SquQ5V_0wUg&t=81s • Some wider reading on different types of computer animation: https://www.animaker.com/blog/10-types-of-animations/ • Useful information on the different types of graphics and software: https://www.bbc.co.uk/bitesize/guides/zv2v4wx/revision/1 • Use this link to read some video editing tips: https://computer.howstuffworks.com/9-excellent-video-editing-tips-for-beginners.htm • Some wider reading on different types of computer animation: https://www.animaker.com/blog/10-types-of-animations/ • Use this YouTube tutorial for hints and tips of using Clipchamp: https://www.youtube.com/watch?v=mBoSJpRm7gk
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