

# Year 9 – COMPUTER SCIENCE Programme of Study

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Unit/Topic</b>	Text Adventure (part 1)	Text Adventure (part 2)	Bitmap graphics in Affinity 1	Game Development 1	Bitmap graphics in Affinity 2	Game Development 2
<b>Enquiry Question</b>	How can I start to code in Python?	What makes a good adventure game? Develop an idea for an adventure game (using The Hobbit 1982 as a template/example)	How do we create compelling digital artwork?	What are the core skills I need to know to create a 2D platformer?	How do I use advanced techniques within Affinity?	How do I create a compelling game?
<b>Key Content</b>	<ul style="list-style-type: none"> <li>Using the repl website and/or IDLE Python IDE.</li> <li>Reading and writing to/from the console.</li> <li>Using variables, user input, making calculations, selection using if/then/else statements and functions/procedures.</li> <li>Different data types (string, int) and assignment operators (==, !=, &lt;&gt;)</li> </ul>	<ul style="list-style-type: none"> <li>Creating suitable planning structure for a game (mind maps, sketches, rough notes)</li> <li>Creative writing for descriptions of rooms, objects, characters.</li> <li>Review of programming constructs learned in previous 1/2 term as codebase for core of adventure game.</li> <li>Creating and implementing relevant code (series of functions, selection, loops etc) as appropriate to create a functioning game.</li> <li>Further development of adventure game with extras including lives, inventory, characterisation etc.</li> </ul>	<ul style="list-style-type: none"> <li>Introduction to Serif Affinity suite.</li> <li>Affinity Photo as a PhotoShop alternative; purpose of image editing software.</li> <li>Creating new images, the canvas and image attributes.</li> <li>Adding basic shapes. Importing existing images.</li> <li>Cloning areas.</li> <li>Destructive vs. non-destructive editing.</li> <li>Layers; live filters and adjustments.</li> <li>Selection methods.</li> </ul>	<ul style="list-style-type: none"> <li>Introduction to GDevelop. Coordinates.</li> <li>Objects.</li> <li>Sprites: types, animations.</li> <li>The Events Sheet.</li> <li>Variables: instance, scene, global.</li> <li>Advanced events handling.</li> </ul>	<ul style="list-style-type: none"> <li>Layer effects.</li> <li>Advanced selections.</li> <li>Rules of composition.</li> <li>Working to a design brief.</li> <li>Layer masks.</li> <li>Text, styles and transformations.</li> </ul>	<ul style="list-style-type: none"> <li>Recap of prior learning.</li> <li>Creating and sourcing sprites.</li> <li>Adding backgrounds.</li> <li>Camera movements.</li> <li>Prizes; scores.</li> <li>Timers; damage; lives.</li> <li>Exporting a game.</li> </ul>
<b>Milestone Assessment</b>	<a href="#">The working text adventure with key aspects documented into Google classroom.</a>		<a href="#">An INFUSE journal that covers CityScapes and Victorian House.</a>	N/A	<a href="#">Continuation of the INFUSE journal covering Dispersion and InHuman.</a>	<a href="#">A SWEDE journal that highlights key functionality of the events model, object attributes and game functionality.</a>