## UNIT OVERVIEW & LEARNING JOURNEY **YEAR 9 - COMPUTING: TERM 1** (2<sup>nd</sup> half term)



Welcome, aspiring animators and digital storytellers! Get ready to discover the magic behind your favourite films, games, and advertisements in our exciting "Animations" unit. Have you ever wondered how those amazing 3D characters move so realistically, or how stunning virtual worlds are created?

In this unit, you'll step into the shoes of a professional animator and learn how to use Blender, a powerful industry-standard software. You'll explore the basics of creating 3D models, adding textures and colours, and making your creations move through animation. You'll learn essential techniques used by pros, like how to control objects, set up cameras, and light your scenes to make them look incredible.

By the end of this unit, you'll understand the creative processes behind the media you love and gain handson experience in 3D modelling and animation. Get ready to turn your imagination into awesome 3D reality.

## Your creative blueprint: What you'll learn and achieve

What I Already Know! (My Digital Superpowers from before!)	New Adventures This Term! (What We'll Learn!)	Where We're Heading Next! (Your Future Digital Journey!) Create more complex 3D models and character designs	
You understand basic digital creative tools (e.g., drawing shapes, changing colours)	Add, delete, move, scale, and rotate objects in 3D space		
You have some experience with digital media	Add materials and apply color to objects	Explore advanced animation techniques like rigging and physics simulations	
You know about variables from programming	Create useful names for objects and join multiple objects using 'parenting'	Develop animations for games, virtual reality, or film projects	
You can make simple digital presentations	Add, move, and delete keyframes to make basic animations	Master advanced rendering techniques for photorealistic visuals	
	Play, pause, and move through animations using a timeline	Pursue careers in 3D animation, game design, or visual effects	
	Use 'Edit mode' to change objects, including 'extrude', 'loop cut', and 'knife tool'	Understand the principles of cinematic storytelling through animation	
	Use 'proportional editing' and 'subdivision' to refine models	Learn advanced 3D sculpting and texturing	
	Apply different colours to different parts of the same model		
	Add and edit set lighting to illuminate your scene		
	Set up the camera to frame your shot Render out a 3-10 second animation		
	Compare the differences between render modes		





## Weekly missions: Developing your animation superpowers

Week 1: First Steps in 3D - Get introduced to Blender and create your firs	t 3D model			
Skills:		Key words:		
Add, delete, and move objects in 3D	Object	Object   Sphere   Cone   Add		
Scale and rotate objects	Move   I	Move   Rotate   Scale   Colour		
Use a material to add color to objects		(material)		
<b>RAG</b> rate your confidence with this less	on 🔀		$\vdots$	
Week 2: Getting Organized - Learn how to keep your 3D world tidy and co	onnect objects	·		
Skills:	Key words:	Key words:		
Create useful names for objects	Keyframe	Keyframe   Tweening   Stop motion		
<ul> <li>Join multiple objects together using 'parenting'</li> </ul>	Object	Object   Animation   Location		
Apply different colours to different parts of the same model	Rotate	Rotate   Scale   Timeline		
Paper test on topics from Term 1		Parenting		
<b>RAG</b> rate your confidence with this less	on 🔆		$\overline{}$	
Week 3: Shape Shifters - Dive into 'Edit mode' to sculpt and refine your m	odels			
Skills:		Key words:		
Use 'Edit mode' to change objects	Edit mode	Edit mode   Scale   Extrude   Loop		
<ul> <li>Use tools like 'extrude', 'loop cut', and the 'knife tool'</li> </ul>	cut   F	cut   Face   Edge   Vertex		
<b>RAG</b> rate your confidence with this less	on 🔀		$\odot$	
Week 4: Smooth Moves - Make your models look super smooth and deta	iled using specia	l techniques		
Skills: Key words:				
Use 'proportional editing' to make smooth, organic changes	Proportio	Proportional editing   Knife tool		
<ul> <li>Use 'subdivision' to add more detail and smoothness</li> </ul>	Org	Organic   Subdivision		
<b>RAG</b> rate your confidence with this less	on 🔀	·-·	::	
Week 5: Lights, Camera, Action - Learn how to light your scene and set up	your camera fo	or the perfect	shot	
		Key words:		
Add and edit set lighting to illuminate your scene	Render   I	Render   Lights  Camera  Focus		
Set up the camera to frame your shot		Ray tracing		
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Week 6: Render & Share - Create a short animation and render it out as a	video		1	
Skills:		Key words:		
<ul> <li>Add, move, and delete keyframes to make basic animations</li> </ul>				
Play, pause, and move through the animation using the timeline				
<ul> <li>Render out a 3-10 second animation as a video</li> </ul>				
<ul> <li>Compare the differences between render modes (e.g., Eevee vs. Cycles)</li> </ul>				
Review your animation using a "success checklist" (rubric)				
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