Year / Topic	Term
7.3 3D design (CAD)	Spring 1

Resources	**Key Classroom ICT Activity**
Resources Google Sketchup Microsoft Excel PowerPoint Microsoft Word **Target Skills** Presentation Evaluation **Curriculum Links** Technology – CAD/Design Maths – Formulas **E-Safety Coverage** The Students need to think carefully about copyright in relation to both sourcing and creating their own digital content. In conducting their research students need to act safely and responsibly.	In this unit students supplement their knowledge of working with and creating 3D designs using a software application called 'Google Sketchup'. The skills that they learn during these lessons can be transferred to DT lessons to support further 3D and CAD design projects. **By the end of this unit students will be able to**: - Explain why and how 3D design applications are used in the real world - Use Google Sketchup to create a holiday home in Northumberland - To use a Gantt Chart to plan different stages of project (Excel) - To use a spreadsheet to calculate costs and set budget using formulas and functions - To produce a PPT presentation to persuade the Grand Designs team to build your holiday home - To critically evaluate their project and suggest improvements **Assessment - Progression Pathways** All children should – *CS, Understands the differences between data and information. Creates digital content to achieve a given goal through combining software packages and internet services. Makes appropriate improvements to solutions based on feedback and can comment on the success of the solution.* All children s*hould – IT, Recognises the audience when designing and creating digital content. Can identify improvements making some refinements to the solution, and future solutions.* *Some children should- IT, Evaluates the appropriateness of digital devices and application software to achieve given goals. Critically evaluates the quality of the solution and uses criteria to identify improvements and can make appropriate refinements to the solution.*

Assessment Criteria	7.3 3D Design (CAD)
Emerging	✓ I can recognise what is acceptable and unacceptable behaviour when using technologies and online services. ✓ I can create digital content to achieve a given goal through combining software packages and internet services.
Developing	✓ I can make appropriate improvements to solutions based on feedback. ✓ I can comment on the success of a solution. ✓ I can explain why 3D design applications are used in the real world. ✓ I can understand some of the different stages used during the development if a product.
Secure	✓ I can recognise the audience when designing and creating digital content. ✓ I can identify improvements, making some refinements to the solution and future solutions. ✓ I can use tools in Google SketchUp to create a realistic house sketch.
Mastered	✓ I can evaluate the appropriateness of digital devices and application software to achieve given goals. ✓ I can critically evaluate the quality of the solution and use criteria to identify improvements. ✓ I can use Gantt charts to accurately and realistically plan the duration of each task.