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| **Term Pentecost 1: Creating media-3d modelling**  **Subject Computing Year 6 Medium Term Planning** | | | | | | |
| National Curriculum Objectives  ● Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information  ● Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact | | | | | | |
|  | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 |
| **Learning intention for each lesson:** | To recognise that you can work in three dimensions on a computer | To identify that digital 3D objects can be modified | To recognise that objects can be combined in a 3D model | To create a 3D model for a given purpose | To plan my own 3D model | To create my own digital 3D model |
| **Recall and retrieval** | To name variables in game programming. | Explain and demonstrate how to move 3d shapes. | Explain and demonstrate how to lift/lower and recolour 3d object. | To explain and demonstrate how to group 3d objects. | To explain and demonstrate how to combine a number of 3d objects. | To explain choices of 3d objects to create a model. |
| **Sequence of knowledge throughout the lesson**  **:**  **Key skills within each lesson** | **Key knowledge**  I know how to add 3D shapes to a project  I know how to view 3D shapes from different perspectives  I know how to move 3D shapes relative to one another  **To be introduced to the concept of 3D modelling and create a range of 3D shapes.** | **Key knowledge**  I know how to resize an object in three dimensions  I know how to lift/lower 3D objects  I know how to recolour a 3D object  **To begin to manipulate 3d shapes.** | **Key knowledge**  I know how to rotate objects in three dimensions  I know how to duplicate 3D objects  I know how to group 3D objects  **To use manipulation tools to make a 3d badge.** | **Key knowledge**  I know how to accurately size 3D objects.  I know how to show that placeholders can create holes in 3D objects  I know how to combine a number of 3D objects  **T be introduced to the dimensions of shapes in Tinkercad** | **Key knowledge**  I know how to analyse a 3D model  I know how to choose objects to use in a 3D model  I know how to combine objects in a design  **To explore 3D models of buildings to see what shapes they comprise of** | **Key knowledge**  I know how to construct a 3D model based on a design  I know how to explain how my 3D model could be improved  I know how to modify my 3D model to improve it  **To create and evaluate a 3d model based on a design.** |
| **Scaffolding** | Supported to make a simple 3d shape. | Supported to resize objects in one, two, and three dimensions. | Supported to rotate objects in three dimensions, duplicate objects, | Supported to accurately resize and move shapes. | Supported to explore  and plan own 3D building design. | Supported to create a 3d model and guided questioning to evaluate. |
| **Challenge** | To make a more complex 3d shape independently. | To combine two 3D objects to make a new shape and recolour 3D objects | To consider the practicality of 3D printing the objects they have made. | To duplicate and resize multiple objects to create a meaningful 3D object | To design a more complex model based on the skills learnt throughout the topic. | Evaluate and suggest ways of improving and developing their 3d model. |
|  | **Key Vocabulary**  2D, 3D, shapes, select, move, perspective, view | **Key Vocabulary**  Handles, resize, lift, lower, recolour | **Key Vocabulary**  Rotate, duplicate, group | **Key Vocabulary**  Cylinder, placeholder, hollow | **Key Vocabulary**  3D shapes, choose, combine | **Key Vocabulary**  Construct, evaluate, modify |