



Computing

Year 6

Term 2

Digital Media: 3D modelling

Key Question: How can a computer be used to create 3D models?

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

Vocabulary

2D, 3D, shapes, select, move, perspective, view, handles, resize, lift, lower, recolour, rotate, duplicate, group, placeholder, hollow, combine, construct, evaluate, modify

Prior Learning:

- This unit progresses students' knowledge and understanding of creating 3D graphics using a computer. Prior to undertaking this unit, learners will have worked with 2D graphics applications including Vector Drawing in Year 5.

End Point:

The children will plan, develop, and evaluate their own 3D model of a building.

Use assessment rubric to assess this end point.

Safe and Responsible Use:

use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Digital Literacy Skills:

- Use keyboard shortcuts.
- Use a range of programs
- Show skill and control when using a mouse.

Knowledge:

I know:

- that you can work in three dimensions on a computer
- that 3D models can be created on a computer
- that a 3D environment can be viewed from different perspectives
- that digital tools can be used to manipulate 3D objects
- how placeholders can create holes in 3D objects
- that artefacts can be broken down into a collection of 3D objects

Skills:

I can:

- add and move 3D shapes in a project
- position 3D shapes relative to one another
- use digital tools to modify 3D objects (size, position, colour)
- combine objects to create a 3D digital artefact
- use digital tools to accurately size 3D objects
- analyse a 3D model
- plan my own 3D model
- construct a 3D model which reflects a real world object
- explain how my 3D model could be improved
- modify my 3D model to improve it

Cross Curricular Links:

Art and design - KS2

- To improve their mastery of art and design techniques, including drawing, painting, and sculpture with a range of materials

Design and technology - KS2

- Generate, develop, model, and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Oracy:

- Provide sentence stems for evaluating.

Mathematics - KS2 (Y6)

- Recognise, describe, and build simple 3D shapes, including making nets

Key Questions:

1. How can people help others to be good digital citizens?
2. What is 3D modelling?
3. How can 3D objects be modified?
4. How can 3D models be manipulated and combined?
5. How can holes be made in objects?
6. How can objects be combined to make a model?
7. How are 3D models planned?
8. How can a computer be used to create 3D models?