



TSS Primary ICT MTP 2021-2022

Year 6 Block 5 – 3D Modelling

Week	Key Targets and Learning Objectives	Key Activities	Key Vocabulary
1	<p>To use a computer to create and manipulate three-dimensional (3D) digital objects</p> <ul style="list-style-type: none">• I can discuss the similarities and differences between 2D and 3D shapes• I can explain why we might represent 3D objects on a computer• I can select, move, and delete a digital 3D shape	<ul style="list-style-type: none">• This lesson introduces learners to the concept of 3D modelling by creating a range of 3D shapes that they select and move.• They also examine the shapes from a variety of views within the 3D space.	<ul style="list-style-type: none">• 2D• 3D• 3D object• 3D space• view
2	<p>To use digital tools to modify a 3D object</p> <ul style="list-style-type: none">• I can identify how graphical objects can be modified• I can resize a 3D object• I can change the colour of a 3D object	<ul style="list-style-type: none">• This lesson examines the similarities and differences between working digitally with 2D and 3D graphics.• Learners initially discuss the similarities and differences they have identified so far, then move on to combine 3D shapes, including lifting the 3D object to produce a house.• Learners then colour their 3D shapes, followed by adding more shapes and undertaking further reflection on the similarities and differences between working digitally with 2D and 3D graphics.	<ul style="list-style-type: none">• 2D• 3D• 3D object• 3D space• Resize• Colour• lift
3	<p>To construct a digital 3D model of a physical object</p> <ul style="list-style-type: none">• I can rotate a 3D object• I can position 3D objects in relation to each other• I can select and duplicate multiple 3D objects	<ul style="list-style-type: none">• In this lesson, learners will produce a 3D model of a physical object, which will contain a number of different 3D objects.• These objects will need to be rotated and placed into position in relation to other 3D objects.• Learners will need to consider the size of the objects relative to each other.	<ul style="list-style-type: none">• Rotate• Position• Select• duplicate



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4	<p>To identify that physical objects can be broken down into a collection of 3D shapes</p> <ul style="list-style-type: none">• I can identify the 3D shapes needed to create a model of a real-world object• I can create digital 3D objects of an appropriate size• I can group a digital 3D shape and a placeholder to create a hole in an object	<ul style="list-style-type: none">• In this lesson, learners will begin to produce 3D objects of specific dimensions, and will use other 3D objects as placeholders, to create holes with them.	<ul style="list-style-type: none">• Dimensions• Placeholder• Hole• Group• ungroup
5	<p>To identify that physical objects can be broken down into a collection of 3D shapes</p> <ul style="list-style-type: none">• I can identify the 3D shapes needed to create a model of a real-world object• I can create digital 3D objects of an appropriate size• I can group a digital 3D shape and a placeholder to create a hole in an object	<ul style="list-style-type: none">• In this lesson, learners will complete a 3D model of a pencil holder desk tidy.• The 3D model will contain a number of 3D objects of specific dimensions, and will use other 3D objects as placeholders, to create holes with them.	<ul style="list-style-type: none">• Dimensions• Placeholder• Hole• Group• ungroup
6	<p>To design a digital model by combining 3D objects</p> <ul style="list-style-type: none">• I can plan my 3D model• I can choose which 3D objects I need to construct my model• I can modify multiple 3D objects	<ul style="list-style-type: none">• In this lesson, learners will experiment with grouping 3D objects and undertake a number of challenges.• Learners will also begin their own 3D model of a coat of arms that they designed in Art, which will be developed in the next lesson.	<ul style="list-style-type: none">• Resize• Group• Ungroup• design
7	<p>To develop and improve a digital 3D model</p> <ul style="list-style-type: none">• I can decide how my model can be improved• I can modify my model to improve it• I can evaluate my model against a given criterion	<ul style="list-style-type: none">• In this lesson, learners will produce their own 3D model based on their plans from the previous lesson.• They will evaluate their work and make improvements based on feedback from their peers.	<ul style="list-style-type: none">• Modify• Evaluate• improve