

Lesson Plan

Date	
Period	
Class	Year 9
Lesson	Lesson 2 – 3D Design

Context of the lesson Where this fits into the “Big Picture”	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.	
MLO for this lesson. What will pupils know/understand by the end of the lesson (teacher)	<p><i>Know:</i> How to create a basic house design using 3D design software</p> <p><i>Understand:</i> Some of the different stages used during the development of a product such as a car or house</p> <p><i>Be able to:</i> Use the tools in Google Sketchup in order to create a realistic looking house design.</p>	
MLO for this lesson. What will pupils have achieved by the end of the lesson (pupil)	<p><i>All pupils will:</i> be able to use the software to create the basic shape of a house and add rendering.</p> <p><i>Most pupils will:</i> be able to develop their house design so that it has windows, a door, a garage and suitable rendering.</p> <p><i>Some pupils will:</i> have added design features to their house for example, extensions, windows, a door, a garden etc.</p>	
Teacher input/Activities. What the pupils should undertake with approximate timings.	<p>Collect homework as students arrive.</p> <p><u>Starter</u> Follow the instructions from slide 4 of ‘what am I thinking.ppt’</p> <p><u>Teacher led discussion – How is 3D design used outside school?</u> Ask students to work with their neighbour and to come up with at least four items that would be designed using 3D design software. Take suggestions from the class. Some ideas might be: Cars, houses, gardens, furniture, ships, aeroplanes, engine components, bridges, buildings, toys.</p> <p>Show ‘car_house_development.ppt’ slides 1-4 and discuss the different stages of car design. Focus on the 3D design element.</p> <p>Ask students in pairs to consider the process of designing and building a house. What design and development stages do they think will happen. Take feedback from the class and then show slide 5. Students might come up with building a model. For large scale corporate developments this would happen, but probably not for an individual house.</p> <p>Remind students about Google Sketchup and tell them that this application can be used for creating simple house designs. Show slides 6-9 explaining that all of these house designs were created in Sketchup.</p> <p>Explain that they are going to begin to design a house using Sketchup.</p>	<p>10 mins</p> <p>10 mins</p>

	<p><u>Teacher instructions</u> Remind students how to access Google Sketchup. Demonstrate how to use the video tutorials house 1.swf – house 5.swf</p> <p><u>Individual task</u> Students should collect a pair of headphones, log on, open Sketchup and begin to work on designing their house.</p> <p>Offer help and assistance as required.</p>	<p>5 mins</p> <p>30 mins</p>
Review/Summary At least 5 minutes before end.	Hand out a copy of the 'lesson summary square.doc' to each student. Ask them to write down what they thought the three most important points of the lesson were. Use this to help inform whether students have met the learning objectives.	5 mins
Extension work	<p>Find out what the 3D sketchup warehouse is and investigate what you can do with it:</p> <p>http://sketchup.google.com/3dwarehouse/</p> <p>Incorporate some things from the 3D warehouse into their house design.</p>	
Homework	Draw a rough sketch of how they think some of the houses in their street will look in 100 years time. They should bring this to their next lesson. Provide paper if required.	
Materials required	<ul style="list-style-type: none"> • What am I thinking.ppt • Car_house_development.ppt • House1.swf • House2.swf • House3.swf • House4.swf • House5.swf • Lesson summary square • Plain paper 	

You may:

- Guide teachers or students to access this resource from the teach-ict.com site
- Print out enough copies to use during the lesson

You may not:

- Adapt or build on this work
- Save this resource to a school network or VLE
- Republish this resource on the internet

A subscription will enable you to access an editable version and save it on your protected network or VLE