Lesson Plan

Date	
Period	
Class	Year 9
Lesson	Lesson 1 – 3D Design

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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)	Know: Why 3D design applications are used in the real worldUnderstand: Some of the advantages and disadvantages of 3D design packages		
	Be able to: Use a simple 3D design application in order to create a 3D design of a chair		
MLO for this lesson. What will pupils have achieved by the end of the lesson (pupil)	<i>All pupils will:</i> Be able to open up Google Sketchup, select a template and begin to c chair	lesign a	
	Most pupils will: Create a design that resembles a 3D image of a chair		
	Some pupls will: Investigate other tools and features available in Google Sketchup such as shadows and fog		
Teacher input/Activities. What the pupils should undertake with approximate timings.	<u>Starter</u> Display 'starter.ppt' on the board and ask pupils to work in pairs to determine what the four images have in common with one another. Take suggestions from the class. Display the answer.	5 mins	
	<u>Teacher led discussion</u> Find out if pupils have any experience of using 3D design software, perhaps in DT. What have they used it to design? Ask pupils to identify some of the advantages and disadvantages of using 3D design software. Possible answers might include:	10 mins	
	 Advantages Cheaper to design on the screen rather than build a prototype (check they understand this term) Can make changes quickly and see the overall effect this has on the final design Different versions can be stored and accessed at any time The design can be worked on by people in different offices Different renders or finishes can be tried out Copies of the design can be printed on paper Disadvantages Software might be expensive Might need an expensive, powerful computer Some software can be complex and the designer will need to learn to use it. 		
	 Fire design on the screen can't give you the same reening that a real object in front of you would Explain that pupils are going to learn to use a free piece of 3D design software called 'Google Sketchup'. 		

	Display the ppt, 'Sketchup_designs.ppt' and show them some things which have been created using Google Sketchup. <u>Teacher instructions</u> Tell students that when they log on, they must create a new folder and give it a sensible name. Demonstrate how to find Google Sketchup on the system. Demonstrate how to access and use the video tutorials called 'chair1.swf', 'chair2.swf' and 'chair3.swf'. <u>Individual task</u> Students should collect a pair of headphones and then log on. They should open Sketchup and 'chair1 swf' and begin to follow the instructions	5 mins
	Provide help and assistance as required.	
Review/Summary At least 5 minutes before end.	Work with a partner and discuss the different tools and techniques that they have used to create their chair. Provide feedback to one another about possible improvments which could be made.	5 mins
Extension work	Investigate some of the different tools available in Sketchup, for example in the 'Wi menu, they could try using shadows or fog or see what the soften edges tool does.	ndow'
Homework	Hand out a copy of 'homework lesson 1.doc' to each student.	
Materials required	 Starter.ppt Sketchup_designs.ppt Chair1.swf Chair2.swf Chair3.swf Headphones Homework lesson 1 	

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

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