



Student activity guide

How to use 3D printing to manipulate and create characters.

Activity

Tools

1

Download and log in to [SketchUp Make](#) or a similar modelling platform. Introduce the [basic functionalities](#) of this platform. Support students to familiarise themselves with different features of the platform by making simple models. Record 'help' style notes or reminders using a Tree Map as the students find their way around.

2

Introduce students to the SketchUp model warehouse. Try [changing the colour](#), [texture](#), size or shape of a variety of models.

3

Ask students to review the specifications for their cow characters and record these on a Bubble Map for easy reference. Support students to upload the file of Rosie cows to SketchUp Make. [Manipulate the models](#) with the criteria for their cow character in mind. Add texture, colour, elongate, reduce, expand and create each model. Encourage students to persevere so that the models reflect their criteria as closely as possible.

4

View the cow models. Direct students to select those that best fit their character specifications. Remind them to be critical - do they need to make more changes?

5

Help students to export their model cow creations as .stl files. Check that you have exported these in the .stl format so that they can be printed as a 3D model. Dispatch the files to a 3D printer or print provider.



SUCCESS CRITERIA

Students can check they have completed the task successfully by:

- Ensuring they have a good working knowledge of SketchUp Make.
- Successfully creating a 3D .stl file that meets their criteria.
- Being clear about their character specifications.