One hour lesson plan to learn about Computer Aided Design and to try out Tinkercad, an easy to use CAD software which works in the web browser.	

Learning objective:
We will find out about Computer Aided Design - what it is, and how it is used. Then we will try out a Computer Aided Design software.

Context
Tinkercad is a colourful and easy to use Computer Aided Design (CAD) software that works in the web browser, so there is no software to download. It is ideal for getting primary school children (KS2) involved in the design process and we have used it with school pupils through KS3.

Why it is used by WMG Outreach. CAD is used in a wide range of jobs, including diverse areas such as product design, carpentry and computer game design. Tinkercad is perfect for getting younger children involved in CAD. It is easy for children to get started with the software, so they can concentrate on learning about the design process and the importance of taking measurements to ensure products are functional.

Preparation
Tinkercad is free to use at www.tinkercad.com Before you begin using it in the classroom, you will need to sign up for a Tinkercad account. These short tutorials will give you the information you need to set up the account and learn the basics of how the software works.

Getting started with Tinkercad (allow 30 minutes to read this and set up and organise your Tinkercad account)
Practising Tinkercad Basics video (5 minutes)

Familiarise yourself with the what is CAD? presentation and with the practising Tinkercad basics sheet ready for use in the lesson. The practising Tinkercad basics sheet can be downloaded and printed for pupils to use, if you prefer this to the digital version.

Timing	Teaching & learning	Resources
15 minutes	**Introduction** Use the What is CAD? presentation to explain what Computer Aided Design is and how it is used.	What is CAD? presentation
20 minutes	**Learn the basics of how to use Tinkercad** Show the children the practising Tinkercad basics video. Ensure children have Tinkercad open ready to start and ask them to work through the Tinkercad basics practise sheet. As children finish the practise exercise, ask them to experiment with Tinkercad to create an object from that by adding shapes, using shapes to cut away, resizing, etc.	Practising Tinkercad Basics video practising Tinkercad basics
20 minutes	**Draw a keyring in Tinkercad** Show the keyring video tutorial. Ask the children to design their own keyring in Tinkercad	keyring video tutorial
5 minutes	**Showcase** The children show each other their keyring designs	