Can you redesign an object to make it easier to use?
Lesson Plan – GCSE & Above

Skills that you'll use

- You will identify the needs of a particular user.
- You will learn about hacking existing designs.

Materials needed

- Pencil or pen
- Some paper

Optional task
- Cardboard
- Sticky tape (preferably masking tape)
- Scissors
- Glue

Activity plan

**Introduction
(5mins)**

Grant Douglas has cerebral palsy, a condition that makes you shake. This means that Grant finds it difficult to do many tasks, including eating. If Grant goes to a restaurant with friends then he has to order something that he is able to feed himself.
Grant had an idea: what if he had a spoon that helped him keep the food on it?

Although Grant wasn't a designer, he was using design thinking. He had a problem that he was determined to solve. Armed with just a prototype, Grant contacted design company 4C who he tasked with the challenge of taking his prototype and making it into an end product.
Mark Penver from 4C Design was given the task of working with Grant to make a spoon that he could use.
With Grant as the end user, Mark iterated his designs and got Grant to try out different versions in order to find out what worked and what didn't. Soon they had their final product.

Grant says that the S'up spoon has made the difference between going to a restaurant and ordering what he can eat to now going to a restaurant and ordering what he wants to eat.

Watch the Design Museum film about the S'up spoon to see Grant and Mark talk about why the S'up spoon's simplicity was key to its success.

Activity plan

**Discuss
(5-10mins)**

The S'up spoon is not just a story about design helping people but it's also one of a successful simple design.
- Can you think of any tasks that you do that require careful steady hands?
- How could you design a simple solution to these tasks?
- Which of your everyday tasks would have caused you problems if you had shaky hands?

**Research
(10 mins)**

Find something around the house like a game controller, mobile phone or a remote control (remember to ask permission from the owner first).
Look at the object you've found and try using it.
- Are there any buttons?
- How is it meant to sit in your hands?
- Try to imagine how difficult it would be if you couldn't grip it or if you had shaky hands.
- Do you think that Grant would be able to use your object easily?

Activity plan

**Activity
(20 mins)**

Draw out your object on a piece of paper. How would you adapt your object so that it would be easier to use? Draw your alterations and additions to your object. This could be larger buttons that are easy to press or even a handle to hold on to. Annotate your design to show what materials you'll make it from and any special features that it will have.

Now that you've hacked an everyday object and made it more user friendly, share it with the Design Museum on social media with the **#DesignFromHome** hashtag.

Optional task

**Extra
(1 hour)**

Use some cardboard and preferably some masking tape to add the parts of your design to your object.
You may want to make a handle to go on your remote control to make it easier to hold.
Masking tape will easily peel off and won't damage your object.

If you don't have masking tape then you may want to make a cut-out shape of the object that you're designing for.

Share your 3D solution with the Design Museum on social media with **#DesignFromHome**.