DT   Digital world: Mindfulness Moments Timer   Year 4
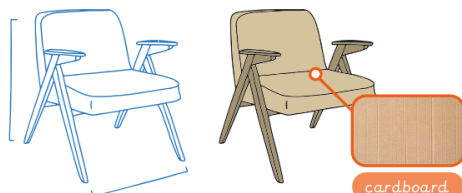
What I should already know

- The name of a variety of 3D shapes.
- That a prototype is a mock-up of the deign created to identify if anything needs to be improved before the final design.
- Evaluating the things that work well and suggesting how to make improvements.

Sticky Knowledge

- To know that a prototype is a 3D model made out of cheap materials, that allows us to test design ideas and make better decisions about size, shape and materials.
- To know that an algorithm is a set of instructions to be followed by the computer.
- To know that it is important to check code for errors (bugs).
- To know that an exhibition is a way for companies to showcase products, meet potential new customers and gather feedback from users.
- To know that a simulator can be used as a way of checking code works before installing it onto an electronic device.

Prototypes are the first examples of a product made with cheap, easy-to-find materials. They let you test the form and function of an idea and help gather feedback about ergonomics and aesthetics.

cardboard

Technical skills

- Writing design criteria for a programmed timer (micro:bit).
- Investigating and analysing a range of timers by identifying and comparing their advantages and disadvantages.
- Evaluating a program against points on a design criteria and amending them to include any changes made.
- Developing a prototype case for a mindful moment timer.
- Using and manipulating shapes and clipart by using computer-aided design (CAD), to produce a logo.
- Testing a program for bugs (errors in the code).
- Programming a micro:bit in the Microsoft micro:bit editor, to time a set number of seconds/minutes upon button press.

Vocabulary

Advantage	Something good about a product that helps the user.
Aesthetic	How something looks
Brand	A particular company's product and logo
Disadvantage	Something about a product that makes things more difficult.
Ergonomic	How comfortable a product or piece of equipment is to use.
Exhibition	An event where things are shown in public.
Loop	A series of instructions that is repeated.
Prototype	A first example of something.
Research	A detailed study of something to get more information.
Variable	A word that stands for a set of values or numbers.
Ivy Ross	Ivy Ross is a British-born designer who works for Google and is known for creating beautiful technology products by mixing art, colour and sustainability to make everyday objects both useful and stylish.