

A CHALLENGING, ENTERTAINING AND PRACTICAL ENGINEERING EXPERIENCE



EPSRC Centre for innovative
manufacturing in ultra precision

EPSRC
Pioneering research
and skills

THE EPSRC CENTRE FOR INNOVATIVE MANUFACTURING IN ULTRA PRECISION DEVELOPED THE WATCH IT MADE™ PROGRAMME AS AN EDUCATIONAL DEMONSTRATOR

The idea is to enthuse school children into science, technology, engineering and mathematics (STEM) subjects by providing a challenging, entertaining and practical engineering experience.

The initial target audience was pre-GCSE school ages (years 7 and 8), but evidence suggests that both younger and older children are interested in the concept, hence Watch it Made™ is not limited to just this age bracket.



► THE EXPERIENCE

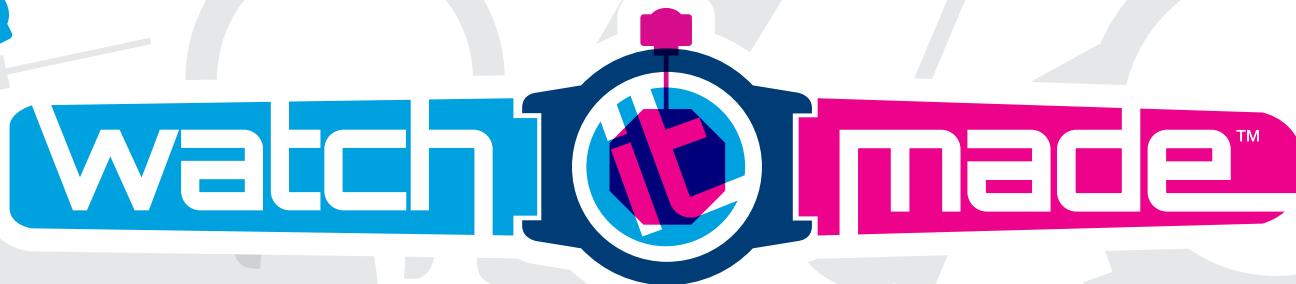
The Watch it Made™ programme delivers an experience in creating a customised product; the participants get to design, manufacture and build their own watch.

In the **design phase** they can **produce a unique image for the dial**, choose the **type of decoration and style of numbering** and which **hands** to use. They also get to determine the **colour of the watch case and strap**.

In the **manufacturing phase** the participant will finish off the **machining of their watch case on a lathe**, giving a high quality feature to the watch case provided. They also get to have their designed **dial printed** using an industrial ink-jet printer using ultra-violet cured resin to create the face of the watch. Lastly they are able to have a **back-plate for the watch custom engraved**, with their own personal brand on the back.

Once they have manufactured the main components the participants then **assemble the watch** using the manufactured parts together with pre-supplied components, e.g. the watch glass, setting crown and stem.

At the end of the experience, not only have they designed, manufactured and assembled their watch, **they get to take their own quality timepiece home** with them and have something that is unique to themselves.



► ROLL OUT

The programme has run pilot experiences at the Cambridge Science Festival in 2014 and with smaller groups of children in the Ultra Precision Centre at Cranfield University. Both these pilot programmes showed extremely high levels of engagement by the children, and a learning experience that they literally wear on their wrist. The EPSRC have recognised the impact of this programme

as an exemplar educational demonstrator and encouraged the Centre to continue its development.

The first **Watch it Made™ Manufacturing Learning Studio** has been created at Cranfield University. This will enable schools to bring groups of students to the studio, where in a relaxed environment they can experience the Watch it Made™ educational programme.

The **website www.watchitmade.org** will widen engagement with schools and other interested groups, e.g. Scouts/Guides, youth clubs etc. The website will include further details of the programme and how you can book to attend the Watch it Made™ experience.



WATCHITMADE.ORG

Email: info@watchitmade.org



EPSRC Centre for innovative
manufacturing in ultra precision

EPSRC

Pioneering research
and skills