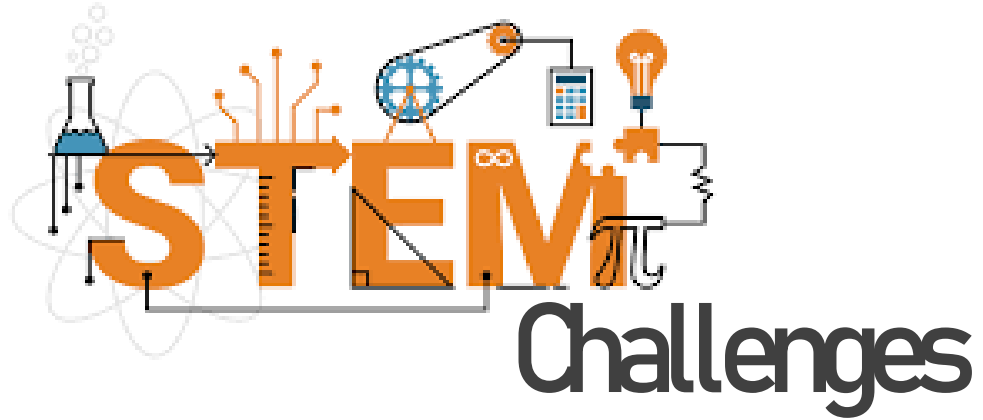


THE JCB ACADEMY



What's it like at the JCB Academy?

<https://jcb-academy.com/>



STEM Challenge

Introduction to Welding

Welding

Welding is a fabrication process that joins materials, usually metals, by using high heat to melt the parts together and allowing them to cool, causing fusion.

At UTC South Durham, the welding processes we use are-

- MMA (Manual Metal Arc) Welding
- MIG (Metal Inert Gas) Welding
- TIG (Tungsten Inert Gas) Welding
- Spot Welding



We also use other hot joining methods including soldering and brazing.

Objective

To use welding software to give students an introduction to the welding process. To use welding software to give

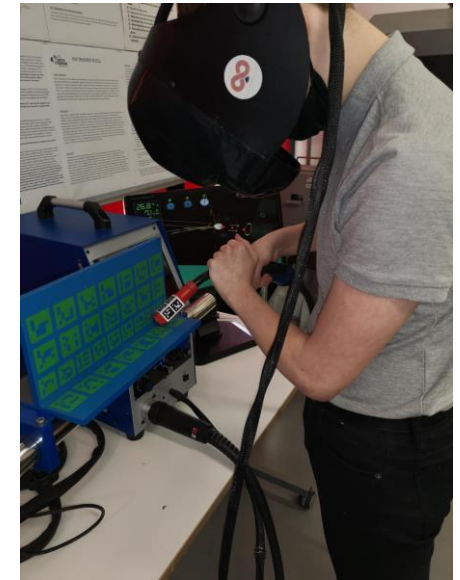
STEM Challenge

Introduction to Welding

Virtual Welding

Welding can be quite a dangerous process due to the very high temperatures involved. Before UTC Students use the welding equipment, they practice using our Virtual welder.

This can be set up for MMA, MIG or TIG.



The virtual experience gets students to appreciate how they hold the torch, at what angle and what speed they need to travel.

Objective

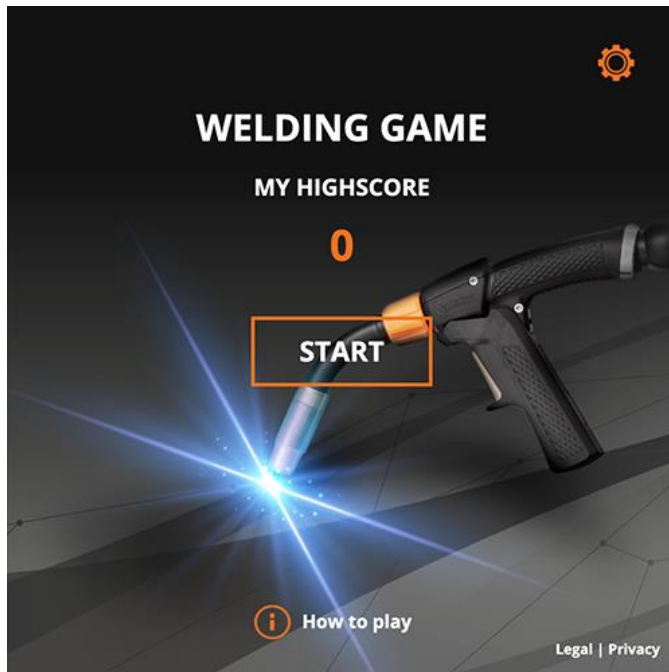
To use welding software to give students an introduction to the welding process. To use welding software to give

STEM Challenge

Introduction to Welding

[Welding Game \(welding-game.firebaseio.com\)](https://welding-game.firebaseio.com)

This is a great chance to have a go at Virtual Welding at home or at School



The key to success is the same for actual welding –accuracy, speed and a steady hand.

Objective

To use welding software to give students an introduction to the welding process. To use welding software to give

STEM Challenge

What's next?

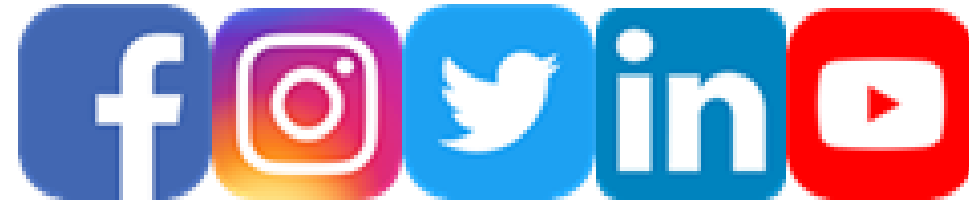
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- **Try some more Challenges from our website!**