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PROVIDERS ACROSS
THE MIDLANDS

OPEN TO TEAMS OF
THREE, AGED 13-16
OR 16-19 YEARS

RECRUITING
FOR TERM
ONE NOW

JOIN THE MIDLANDS MAKER CHALLENGE AND HELP INSPIRE THE MAKERS OF THE FUTURE

The Midlands Maker Challenge **Climate (in)Action Challenge** is a fantastic opportunity for pupil-led design, discovery and making

13-16 age group challenge launching week
commencing 18 October 2021



Supported by:
IMI

midlandsmakerchallenge.co.uk



CLIMATE (IN)ACTION

WHAT IS THE CLIMATE (IN)ACTION CHALLENGE ABOUT?

We are looking for each team to imagine, design and create a solution to a challenge that puts people at its core – key to this is the development of ideas, the creation of a prototype and a presentation detailing the journey undertaken, the solution and who it was designed for.

CHALLENGE THEME

Many studies have evidenced young people's concerns about the impact of climate change. Climate (in)Action is our theme because it reflects these concerns and gives control to young people to design and make the changes they would like to see in the world.

The challenge has been constructed to offer flexibility for young people to consider positive action, as well as the impact of inaction. Young people can design and create a meaningful solution to the challenge, whilst learning design and making skills along the way and developing confidence to make change.

The challenge is driven by the idea that local action can have a global impact and champions young people and their ability to make big changes with big ideas.

THE BRIEF

This brief, set by IMI, a Midlands Based engineering company whose IMI Hydronic division has asked teams to consider:

How can we use and preserve water for the future?

From this brief, participants can design solutions to tackle water usage in the home, in farming or even on a global scale.

Water shortages will affect many of us in the years to come, and this challenge gives young people the chance to make big changes in our water usage.

SOME BIG IDEAS FROM THE FIRST CLIMATE (IN)ACTION CHALLENGE



Resinktoloo - A household device that filters waste water from the bathroom sink into the toilet cistern, meaning we use waste water to flush the loo!



A **coral reef planter** that dispenses genetically modified coral polyps- resulting in new coral reef growth that is unaffected by climate change.

A plant inspired **air filtration system** that can be placed in high pollution areas to reduce emissions.

A **water wheel** in shower pipes to power a USB to charge your phone while you shower!



A GREAT OPPORTUNITY FOR YOUR PUPILS

OPPORTUNITIES TO DEVELOP NEW SKILLS AND KNOWLEDGE

The challenge provides participants with methodologies to support their learning both in school and in their future. Real experience of responding to an industry brief is an amazing opportunity to demonstrate new skills.

FOCUSSED SUPPORT

Each team will receive focussed support including digital resources, tools, and a physical making kit with a range of materials to help prototype ideas.

MENTORING AND COACHING

The challenge provides each team with a mentor who will support them through the process, acting as sounding board and critical friend. This is enhanced by access to volunteer skills coaches who bring with them experience, knowledge and enthusiasm.

WINNING TEAMS

The winning teams will win exciting making-themed prizes, the recognition from industry experts and an exclusive invitation to a Maker Celebration event in the summer of 2022 at the Museum of Making where their winning prototypes will be displayed with inventions from the past.

GREAT FOR YOUR SCHOOL

The challenge offers an opportunity for the school to celebrate the creativity and inventiveness of their pupils. Winning schools will receive exclusive 'Meet the Experts' access to the Museum of Making for a group of 30 young people as well as a maker kit for their school.

WHAT'S INVOLVED?

The challenge uses STEAM (Science, Technology, Engineering, Arts and Maths) methodologies and takes place over eight weeks. It introduces Human Centred Design principles ensuring that meaningful solutions are created with people at their core. The prototypes will be judged by experts from industry, education and heritage.

CHALLENGE DELIVERY

This challenge uses a blended approach, with two contact days at the new Museum of Making. The launch day will give teams and teachers the knowledge and confidence they need to get started on the challenge. A celebration day will end the challenge with fun activities and presentations. The content between these dates will be delivered weekly via Canvas; Derby Museums' online learning platform.

HOW MUCH TIME IS REQUIRED?

Attending two days at the museum	11.5 hrs
Accessing content on Canvas and completing short tasks *	4 hrs
Completing the prototype and presentation	4-5 hrs
Engaging with mentors	up to 5.5 hrs
<u>Optional</u> mid point review	1 hr

*The content is designed to be accessed at a time convenient to the team, for example in the timetable or extra-curricular sessions/clubs.

HOW TO SUPPORT THE TEAM

The challenge is pupil-led, so as their teacher we suggest that time and space is made available for them to complete the team elements in school.

DIGITAL ACCESS

Participants will need to access digital content, this means access to the internet and a phone, tablet or computer will be required.

DIVERSITY AND INCLUSIVITY

The Midlands Maker Challenge is open to all abilities in all educational settings including schools, colleges, work based learning providers and SEN (Special Educational Needs) providers. Please get in touch if you would like to discuss how your team(s) might engage with the challenge.

MORE INFORMATION

Visit midlandsmakerchallenge.co.uk or email info@midlandsmakerchallenge.co.uk with specific questions.



ENTER NOW

To enter the challenge your school can nominate teams of three to the following challenges:

Aged between 13-16 (runs 18 October to 13 December)

To submit your team(s) send an email to info@midlandsmakerchallenge.co.uk with the team names, year group and nominated teacher.

A maximum of three teams from each school can enter.

Upon receipt of this email we will send documentation to confirm the teams place on the Climate (in)Action Challenge including: summary of the content, information on team/individual activity, key contact points and safeguarding information.

RECORDING ACHIEVEMENT

The challenge will support pupils in the creation of a portfolio using their activities and ideas to demonstrate their journey.

Alongside this, participants will earn badges by demonstrating skills and knowledge gained. The badges are issued by the Institute of STEAM, a quality mark for all Derby Museums STEAM powered learning programmes.

The skill areas are: **CREATIVITY**, **CRITICAL THINKING**, **COMMUNICATION**, **COLLABORATION** and **MAKING**.

SUPPORTING TEACHERS

It's not all for the teams, supporting teachers will be given the opportunity to attend an Introduction to Human Centred Design, giving you the tools and confidence to support your teams through the challenge. You will gain new skills, as well as knowledge around STEAM and Derby Museums that can be implemented outside of the challenge.

Teachers will also receive dedicated mentoring support throughout the challenge to answer questions and offer encouragement, ensuring that teachers feel confident and supported during the challenge.

FEEDBACK FROM PREVIOUS CHALLENGE

'I enjoyed the making as it was fun to work in a team with new materials' / Student

'I learnt a lot about how humans are affecting the climate, and how things like wind turbines work!' / Student

'I learnt how to compromise and find ways around problems' / Student

"...the way it is packaged and laid out is fantastic, too, the most excited squeals I've heard in school for quite some time!" / Teacher

QUESTIONS?

If you need more information or have any questions visit the website.

TERMS & CONDITIONS

There are a limited number of places on the challenge and teams will be selected in order of submission.

Team collaboration must follow Government social distancing guidelines and the school will be responsible for implementing the appropriate Health & Safety policy and risk assessments.

The dates for the celebration event in the summer of 2022 will be confirmed in the spring of 2022.

The Midlands is defined as: Derbyshire, Herefordshire, Leicestershire, Lincolnshire, Northamptonshire, Nottinghamshire, Rutland, Shropshire, Staffordshire, Warwickshire, West Midlands, and Worcestershire.