

## Do you want to save the planet?

Since 2018, school students have been gathering across the globe to take part in student strikes, to drive action towards climate change.

This challenge provides you with an opportunity to take the next step.

**Participants must create a 2-minute video showcasing their cutting edge ideas to help save our planet!**

To help you develop your video, the following STEM activity pack contains 3 activities which you have to choose from.

**Good Luck!**

## Home Challenge

**BMT want you to use your STEM knowledge to design an invention to save our planet!**

The winning video entry will be given a 3D printed BMT trophy, and the opportunity to work with a member of BMT's innovation team, to help refine and develop their idea.

Your winning design will then be featured on the BMT website, to encourage others to use their knowledge and expertise to help save our planet!

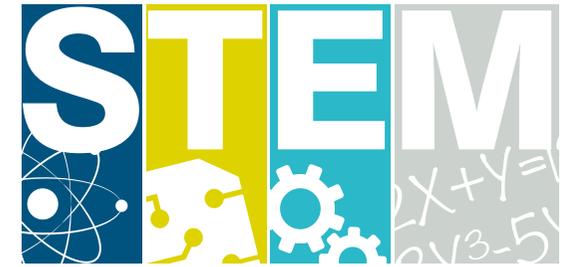
**Deadline:** 26<sup>th</sup> June, 2020

**Competition winners** will be announced on the BMT website and on LinkedIn on 3<sup>rd</sup> July, 2020.

“ You are never too small to make a difference...imagine what we could all do together if we really wanted. ”

**Greta Thunberg**  
Environmental Activist





## Could your invention be the next giant leap for mankind?

Apollo 11 was the space-flight that first landed humans on the Moon in 1969.

Believe it or not, the space craft had less technology than your mobile phone and is still one of the biggest breakthrough inventions of our time.

Take a look at the following examples to see how we can use some of today's inventions to address environmental challenges and help save our planet.

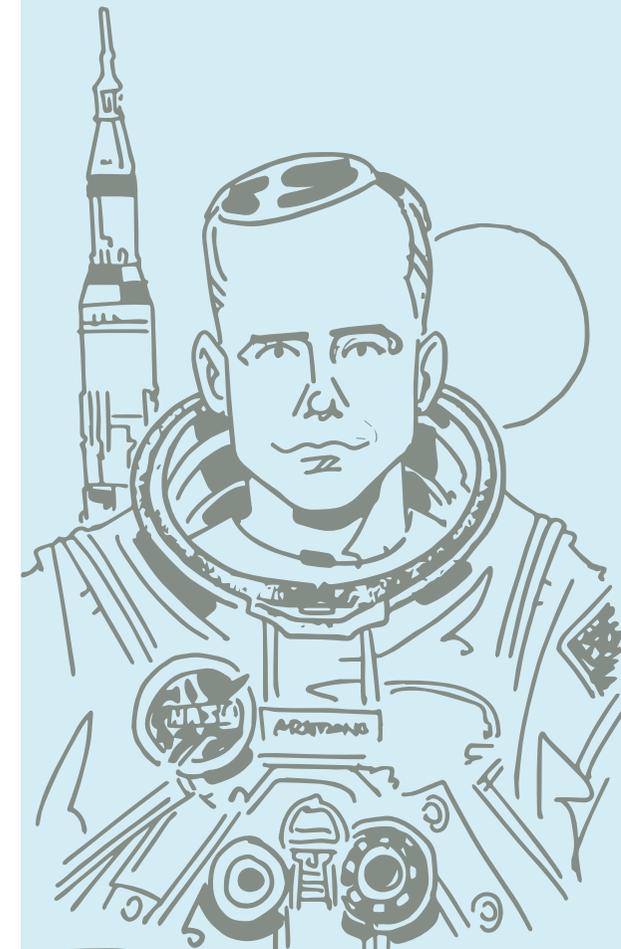
## The Challenge

At BMT our team of scientists, engineers and consultants, work around the world across different industries including: Defence, Space, Environment and Maritime. As we move into the future, we are interested to see how Science, Technology, Engineering and Maths could help save our planet.

We would like to give you the opportunity to get involved. Choose one of the activities below and tell us how Transport, Drones or Satellites could help save our planet.

“ That’s one small step for man, one giant leap for mankind. ”

Neil Armstrong



# Examples of how we can use some of today's inventions to solve the challenges we face in 2020

## Transport that helps the environment

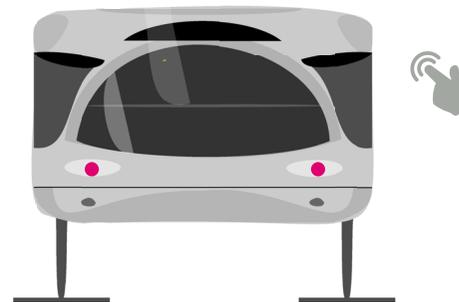
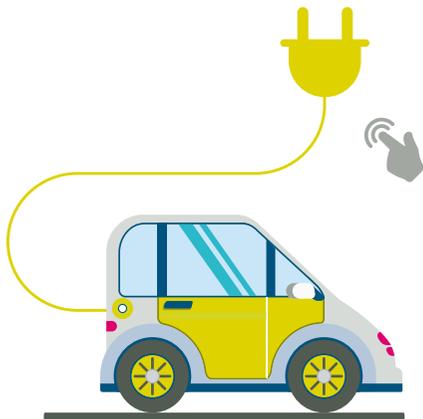
Around the world transport is one of the biggest contributions to greenhouse gas emissions and air pollution.

How can we travel more environmentally friendly? For example, think about electric trains, cars, cycling initiatives and public transport....

**Eco-transport is plain sailing at BMT**

At BMT we specialise in designing ships! Our design engineers are currently exploring greener ships to reduce emissions and transport people and goods around the world quicker and cheaper.

BMT designed passenger ferry, MV Alfred. It is the greenest ferry of its kind using 60% less fuel than similar vessels in the area, carrying up to 430 passengers and 98 cars.



## Activity 1

In your 2-minute YouTube video tell us about your invention. How could it help people travel around the world more environmentally friendly..



### Tell us about your invention ...

What have you called your invention?

How many people can it transport?  
What will it look like?

How could it help save our planet?

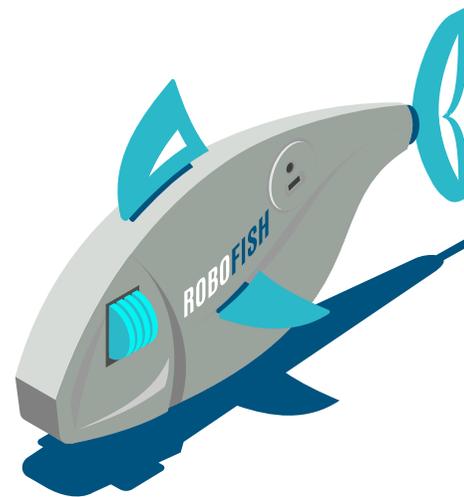
Take a look at the following examples of environmentally friendly transport, to see what scientists, engineers and consultants are developing around the world....

## Examples of how we can use some of today's inventions to solve the challenges we face in 2020

### Drones (flying robot)

Used by the armed forces in risky or difficult situations. Companies are exploring how drones could also be used in everyday life, such as delivering parcels..

At BMT we helped develop an underwater drone in the shape of a fish, designed to sense marine pollution!



### Activity 2

Look at the following pictures and design your own Drone (flying robot). In your 2-minute YouTube video we would like you to tell us how a drone could be used to help save our planet! (Consider how drones could be used to respond to natural disasters and how we might use this technology to deliver basic resources to help people in need.)



Tell us about your invention ...

What have you called your Drone?

What will it carry?

What will it look like?

What materials is it made of?

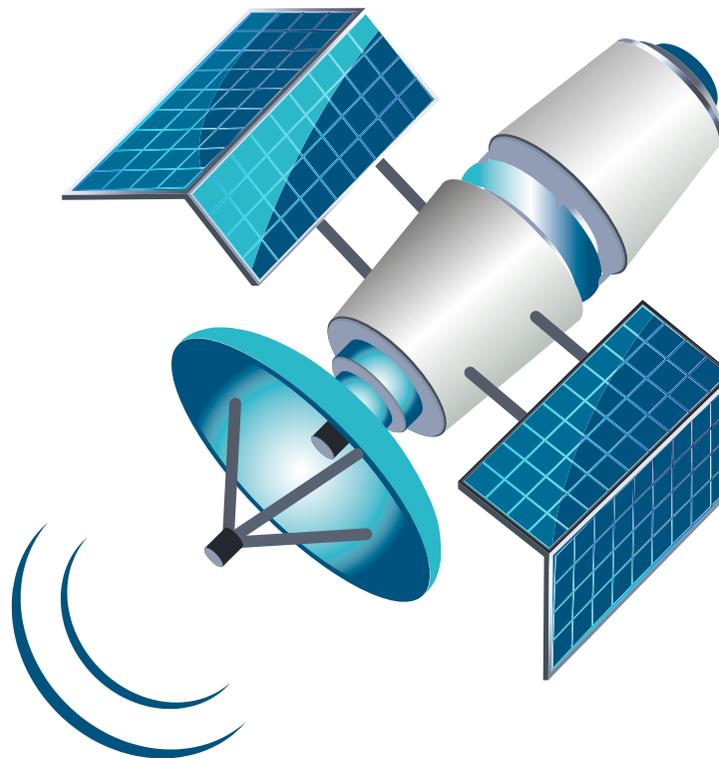
How could it help save our planet?

## Examples of how we can use some of today's inventions to solve the challenges we face in 2020

### Satellites

A satellite for space research is commonly used in Earth orbit for communications and tracking human activity. Satellites have helped us to understand the impact of humanity on planet earth.

So far, we have used satellites to record environmental data around air pollution, melting polar ice caps and images of forest fires.



BMT works with customers in the space industry, to solve problems and open new opportunities for spacecraft and satellites.

### Activity 3

In your 2-minute YouTube, think about further opportunities for satellite technology. Tell us what other images and data satellites could be collecting, to help save our planet.



Tell us about your idea ...

What imagery/data could satellites be collecting?

Where in the world could the data be collected?

How could it help us save our planet?

Could it be used to educate other people about the impact of our humanity on the environment?



## Entering the competition...

How to create an unlisted video on YouTube..

[Please use the following information for simple instructions on how to make an unlisted video on YouTube.](#)

## How to take part

This challenge has been designed for all students aged 10 – 16, no matter where they live in the world. Younger or older children are welcome to get involved if they are feeling up for the challenge.

**Participants must select one of the activities above and create a 2-minute video, showcasing their cutting edge ideas to help save our planet!**

A parent or guardian must create an unlisted video on YouTube and send us a link of the students unlisted video, along with a completed copy of BMT Permissions Form. Please email your entry to [STEMChallenge@bmtglobal.com](mailto:STEMChallenge@bmtglobal.com).

**Deadline:** 26<sup>th</sup> June, 2020



## Judging Criteria

### Convincing



Researched other technologies. Do we have the resources and expertise on planet earth to deliver this invention?

### Environment



Tell us how much of a positive impact your invention will have on the environment.

### Originality



Even if a similar idea has been thought of before, show us how yours is better! Be creative!

### Engagement

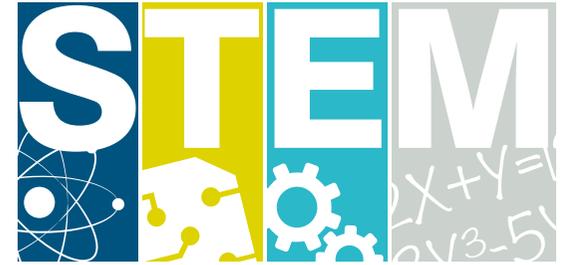


An engaging video to our judging panel of scientists, engineers and consultants.

“ Cherish the natural world, because you’re a part of it and you depend on it. ”

Sir David Attenborough





## Copyright and Permissions

**By submitting a video to the BMT Home Challenge 2020, each entrant confirms and warrants that:**

1. Each entry it is their original work;
2. They have the permission of those pictured in the video (or, where the image shows any persons under 18, the consent of their parent/guardian) for the usage rights required by BMT and will indemnify BMT against any claims made by any third parties in respect of such infringement.
3. They have not licensed or disposed of any rights in the image or video that would conflict with uses to be made by BMT.
4. They have received any necessary permissions from the owner(s) of buildings included in submitted images for the usage rights required by BMT and will indemnify BMT against any claims made by any third parties in respect of such infringement.
5. By entering the competition, you grant BMT a royalty free, non-exclusive, irrevocable licence to reproduce, enlarge, publish or exhibit, on any media, the images/video for any purpose related to BMT community engagement (for example (but not limited to) promotional material, BMT's website, intranet, presentations, conferences, articles and BMT exhibitions).