



STEM Student Challenge 2017

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Challenge Summary

The Microsoft STEM Student Challenge aims to help students connect the dots between the STEM subjects they study today and the impact those subjects could have on their ability to be part of the next generation of technology heroes. We invite students to use their knowledge of STEM subjects and marry it with research and creativity to imagine and depict their vision of technology in 2037.

The challenge is open to teams of 4-6 students in years 8-10. The challenge is to select one of the following categories and come up with an original technology idea that could exist in that field in 20 years' time.

- Artificial intelligence and virtual reality
- Data Security
- Healthcare

Students must depict their idea in the form of a two-minute video and can win up to £5,000 worth of computing equipment for their school as well as individual prizes.

Key Dates

Entry submission deadline: **10 February 2017**

Finalists notified: **10 March 2017**

Grand Final event: **05 May 2017**

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How to enter

1. Form a team

Teams should be made up of 4-6 students in years 8-10. Teams can include students from different classes and school years.

Once you have chosen your team, your teacher needs to register your school [here](#).

Each school can enter multiple teams; but please make sure that each team has different students and a different name. All participants should be UK residents attending a school in the UK.

2. Choose a category and start imagining!

We're surrounded by technology, whether it's in our pockets, our homes or our schools, and it's only going to become more central to our daily lives. Microsoft is working in areas that will change the way we work, play and look after ourselves and we want you to think about how these might look 20 years from now.

So choose from one of the categories below, and get to work – come up with an original idea for a future technology.

Challenge entries should reflect your team's creativity and your knowledge of your chosen category.

The three challenge categories to select from are:

1. Artificial Intelligence and virtual reality
2. Data security
3. Healthcare

You are part of the generation that will help bring the technologies of 2037 to fruition, so in doing this challenge, we hope you'll think more about how you can be part of driving the exciting world of tomorrow's technology.

Each team should choose one category and submit one idea only.

3. Create a video

Create a video that depicts your idea. The tech doesn't exist yet, so you'll have to get creative! Make a science show, do a skit, create a green-screen super-futuristic masterpiece complete with tin foil supercomputer spaceship – just keep it under two minutes. Please make sure that your team is familiar with the judging criteria which you can find in this document.

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4. Submit your entry

When your video is ready get your teacher to email stemsc@microsoft.com providing your school name, team name and Microsoft Account email address*. We will then send them an invitation (valid for seven days only) via email to a secure folder where the video can be uploaded.

Please note: Teachers must have registered for the challenge in order to submit your video entry, if they have not already done this, [register here](#).

*In order to submit your entry teachers will need a Microsoft Account, if they don't already have one they can set this up [here](#).

The deadline for entries is 10 February 2017.

What happens then?

A team of Microsoft computer scientists and other technology partners will review the videos and select 12 finalists.

Finalists will be invited to an exciting one-day event at Microsoft's research lab in Cambridge, where they'll experience the future of computing first-hand and present their idea to world-leading computer science researchers and engineers who will select the winning teams.

The overall winning team will win £5,000 for their school to spend on computing equipment for students to use, plus individual prizes for the students who have participated. We will also award three runner-up teams (one from each challenge category) with £1,500 for their school to spend on computing equipment for students to use, as well as prizes for the students who participated.

Finalists will be notified on 10 March 2017.

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Video Entry Judging Criteria

1. **Originality of idea**

Does the technology idea show creative thinking? Does it stand out from the crowd? Is the idea unique and original?

2. **Quality of research methods**

Have the team shown the research that they have undertaken to lead them to their technology idea? Does the video demonstrate that the team has researched and understood the category they have chosen?

3. **Understanding of STEM subjects**

How well does the video entry demonstrate a sound knowledge in one or more STEM subjects?

4. **Quality of presentation and clarity of idea**

Is the video well presented, clearly describing the future technology idea? Have the team presented their idea in a creative, interesting and entertaining way?

5. **Is it feasible?**

Have the students demonstrated how their technology idea could be possible in the year 2037?

6. **Evaluation of the process**

Have the team demonstrated what they've learned from the experience of coming up with their technology idea?

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Resources

Visit the [STEM Student Challenge web page](#) for fun downloads such as filming posters and 'Join our team' posters.

Challenge resources

Microsoft Research YouTube channel:

www.youtube.com/user/MicrosoftResearch

Microsoft Research work in Artificial Intelligence:

www.microsoft.com/en-us/research/research-area/intelligence-machine-learning

Microsoft Research work in Data Security:

www.microsoft.com/en-us/research/research-area/security-privacy-cryptography

Microsoft Research work in Healthcare:

www.microsoft.com/en-us/research/research-area/medical-health-genomics

Other computer science resources

Computing at School:

community.computingatschool.org.uk/resources

BBC Micro:bit:

www.microbit.co.uk

Hour of code:

code.org

Makey Makey:

www.makeymakey.com

How to be an inventor: Kid President:

<https://www.youtube.com/watch?v=75okexRzWMk>