



# #STEMGlasgow

## Glasgow Secondary Hackathon 2019



# Glasgow Schools Hackathon 2019

## What is a *hackathon*?

A hackathon is a sprint-like event in which a group of creative designers, engineers and technologists work together to collaborate on solving a problem in a short amount of time. Hacks can be a physical product, an app/webpage or a social movement, it's up to you!



Work in teams to identify a problem



Present the hack to the judges

## What to expect on the day

Pupils will have the duration of the event to identify a problem they think they can solve, create a hack and present their solution.

There will be 25 problems for the teams to choose from so they do not need to come up with one themselves. All problems will be themed on Glasgow events and tourism industry and will fit into one of the following categories:

- *Accessibility*
- *Transport*
- *Technology*
- *Facilities*

Teams can come up with as many *hacks* to solve the problem as they want but they must have one fully completed idea by the end of the day. Judges will arrive at lunchtime and will be looking at what the teams have been working on before hearing their final pitches.

Teams can create any kind of hack that they want. This could be a product that they make from modelling materials, website/app or a social movement that has no physical output.

An example problem and hack has been provided for the team to have a look at in advance.



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## Example Hack

This is a persona card. It is double sided and tells the story of someone who has a problem with something in the city. It will sum up their problem and give extra information such as where the issue takes place, their personal history with the problem and some hints on how to get started. These are colour coded to the themes mentioned on the previous page.

GLASGOW SCIENCE FESTIVAL

HACK

EUROPEAN CHAMPIONSHIPS GLASGOW 2018

Hack Task: Transport

**Alex, 19: Public Transport User**

Living in the city centre is great but when a big event is on like the European Championships public transport can get really busy. I would be happy to cycle to most places but I don't want to get soaked in the rain!




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Hack Task: Transport

**Alex, 19: Public Transport User**

 <b>Location</b> <p>Alex lives in the city centre so she normally uses buses or the subway. She can cycle a bike but does not own one of her own. Normally she is travelling to work or the shops so does not want to get wet in the rain.</p>	 <b>History</b> <p>Alex is a confident cyclist but has not owned a bike since she moved into the city. She does not have room to store one so she would need to find another way of acquiring one. She does not want to have to carry her work clothes in a bag as they will get creased. She also does not want to wear a hood as that ruins her hair before she gets to work.</p>	 <b>First Thoughts</b> <p>Where could Alex get a bike in the city centre but not have to store it at home?</p> <p>Are there any materials that are waterproof but not obstruct her view?</p>
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## Example Hack: Solution



The team discussed Alex's problem and identified the main issues as:

- Overcrowded public transport
- Lack of stylish and sensible waterproofs for cyclists



They then conducted some research and found that the 'Next Bikes' can be found near her home and work, so she can rent one when she needs without having to store it.

They also brainstormed the best ways to keep dry when it rains.



The team then decided that what Alex really needed was an umbrella for a bike that kept you dry but was easy to store.

Using the materials available they constructed a prototype and tested it to see if it would work. They made some adjustments and then created a presentation about their idea.

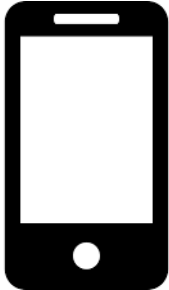


They presented their idea to the judges and other teams. Their solution can be seen in the photographs below.



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## Example Hack: Other Solutions



Alex did not want to use public transport when it was too busy. The team could have developed an app that told Alex what public transport options were the least busy when she wanted to use them.

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Part of Alex's problem was that her work clothes get creased in her bag on the way to work if she cycles. The team could have created a work laundrette initiative that allows employees to wash and iron their clothes for free if they cycle to work.

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Alex wanted to cycle more but had nowhere to store a bike in her flat. The team could have developed a smart storage hack where the bike was hung from the ceiling or on the outside wall of the building.

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