**Chief Scientist Script:**

This script can be used verbatim or amended as appropriate to suit the needs of the group. The script is broken down into four phases, these phases are summarised in the overview sheet, but we would recommend reading this script at least once before commencing the game in order to familiarise yourself with it.

Instructions / notes not to be read out loud are given in boxes.

**PHASE 1 SCENE SETTING**

There has been a new outbreak of a new infectious disease in Edinburgh. We want to stop it spreading to the rest of Scotland. I am the Chief Scientist from the Social & Public Health Sciences Unit our researchers have reason to believe that the disease is going to spread to schools in Glasgow, and fast.

You’ve been divided into two teams: the Environment Team and the Employment team. Your Challenge is to find out which Glasgow school is most likely to be hit by the disease first, so we can dispatch the vaccine and prevent the disease spreading.

Environment team - You hold environmental data on Glasgow. This is really useful data to have, because the environments in which we live can affect our health. For example, being near green space can help you be physically active, and pollution can affect your breathing. We’ve been told that people who live in cities are more likely to catch the disease, because it is harder to keep a distances from other people. Schools that have lots of pupils who live in cities will be most at risk of getting the disease first. So you’re going to need to use these data to work out which school is at highest risk.

Employment team - You hold Employment data on Glasgow. This is really useful data to have, because the jobs that people have can affect your health. For example, people who work on building sites are more likely to be in an accident, while people who sit at desks all day get less physical activity. Research shows that adults who are key workers, i.e. those who work in hospitals, who drive public transport, or work in supermarkets, are more likely to catch the disease. Because they can’t work from home. You’re going to need to use the Employment data to work out which school is at highest risk.

Both teams – please report to your stations and find your dataset.

Each team has a different dataset, but they have some things in common. Both datasets have columns – the first column contains School ID. There are four schools contained in the datasets. Employment team – can you see your school ID? What is it made up of? (numbers, letters). And Environment team, can you see your school ID? What is it made up of? Next there is a column for pupil names. These have been removed, to make the datasets anonymous. Instead each pupil has been given an id. Environment team, can you see your pupil ID? What is it made up of? (numbers, letters). And Employment team what is your pupil ID? We also don’t need to know dates of birth to understand which school is at greatest risk, so these have been blanked out.

The next column contains some really important information which can tell us about who might be more likely to catch the disease. For the environment team you have information on where pupils live and in the employment team you have information on the jobs that pupil’s parents do.

You will need to assign a data officer – this is the person responsible for entering new information into the dataset. And a communication officer– this person will pass on messages to me when you have carried out tasks. Once you decided who will take on these roles, please consult the briefing paper - this will tell you more about your data and what you need to do next.

**PHASE 2: teams are working their way through briefing paper #1 and completing tasks 1 & 2 – analysing the data**

When the communication officers from each team bring you the name of the at risk school:

Thank you, we will get in touch shortly, if we need any other information.

NB it is important for teams to have calculated their scores correctly in order for the next phase to work. Cheat sheets show what they should have found. These could be checked during an ‘audit’ from the Chief Scientist if there are no other adults supporting each of the teams.

Once results are in from both teams, stand to make an announcement:

We have also just been informed that ten new cases of the disease have been identified in Edinburgh. So time is of the essence. Thanks for providing us with your findings. Unfortunately, the teams have identified different schools. An update from our researchers indicates that we need to know about parent’s jobs AND where children live, to identify the correct school. This is no longer a race between teams. You’re going to have to work together and share data. Here are new briefing sheets

Hand out briefing #2 to each team. NB each team has a different briefing paper

**PHASE 3: teams read through briefing paper #2 and complete task 1-2**

Communication Officers will come over from each team and ask to share data with the other team.

We have to be really careful about sharing people’s data, making sure that the data are kept safe and are only used by people in the two teams, for the purposes of identifying the school at risk.

Everyone from your team will need to sign this data sharing agreement. Go back to your team and read through this sheet together. Once you have read and understand it, ask everyone to sign it and then return to me.

When communication officers return with signed agreement, hand them the Sharing dataset and the linkage key. If one arrives before the other, ask them to wait for a moment while you finish something important. Once both communication officers have arrived:

Thank you. This is a Sharing Dataset. This is what you’ll be completing giving to the other team, in order for you to share data. Up until now, your two teams have been using different IDs. This sharing dataset contains a Sharing ID, this will allow you to share data. You’ll need a linkage key to convert your ID into this new sharing ID. Instructions for using this are given in your briefing sheet.

Handout sharing dataset and linkage keys

**PHASE 3: teams are continuing to work through briefing sheet #2 and completing tasks 3-8**

Both schools will return slips of paper with the at risk school – this should be using the Sharing ID (which consists of W, X, Y, Z). **IF** they have not used the Sharing ID, ask them to return to their station and come back with the Sharing ID.

IF they have given the wrong answer (i.e. not school X), and the other team has not been waiting a long time already, you could take them back to their stations to revisit their data.

Ask the teams to shout out their answers. The correct answer is School X (or School I (Environment), School A (Employment))

**PHASE 4: finishing up**

Congratulations to teams for working together and finding which school is most likely to be hit by the disease first. We can now close down the school temporarily and stop the spread.

There is an evaluation sheet or questions to vote on if you wish (see optional materials)

**ADDITIONAL DISCUSSION POINTS THAT COULD BE USED DURING THE GAME:**

* It may be worth pointing out at the beginning of game, that these are pretend data that are being used. And that the scenario, an outbreak of a new infectious disease in Edinburgh, is also fictitious. But that researchers have used data in similar ways to decide which neighbourhoods might need extra support during the pandemic.
* It at any point during the game, one team is waiting for the other team to catch-up, go over and conduct a ‘data audit’. Say you are there to check that they are keeping their data safe etc.
* You may want to discuss some of the terms used in the game – e.g. employment, keyworker, dataset, anonymous
* To increase learning and game length, here are some discussion points that could be introduced during the game, or at the end:
  + What are other examples of how the environment can influence health? E.g. traffic can increase pollution, parks and playgrounds encourage you to do physical activity, fast food outlets might tempt you to eat bad foods, being near nature can make you feel happy
  + What are other examples of how employment can influence health. E.g. people who have higher paid jobs can afford things that can help them to be healthy; certain sorts of jobs can be very stressful and affect mental health.
  + What other things do you think could influence risk of some infectious diseases, like covid? Having brothers and sisters, having a garden, needing to take the bus to the shops.
  + In these datatsets, date of birth has been removed. In what situations we might need to know about date of birth? For example, if we were looking at the whole population, and not just school children, we might need date of birth to identify very old people, who could also be at greater risk of dying if they catch they disease. Would we need the date of birth though? What could we ask for instead – e.g. age in years. Have a conversation about anonymity and how among the teams we could identify people based on their birthday, but if we only had age in years then, it would be a lot harder to identify someone.