



VILLAINOUS VIKINGS AND THE AGENTS OF D.A.T.A

Data-themed Escape Rooms for classrooms: Educators' Guide

1. BACKGROUND:

The Data Education in Schools project develops resources to teach data literacy in Primary and Secondary schools. For this unit of work, we wanted to develop some fun activities that give the excitement of a school trip but without leaving the classroom. Each of the 'escape rooms' involve some aspect of data literacy, such as interpretation of different graph types, logical reasoning and map reading. There are themes of digital safety, including viruses, phishing, social media trolling and fake news.

2. HOW TO RUN THE ACTIVITIES:

- **The activities can all be run independently and in any order** (although it helps if the briefing puzzle is run first, to avoid 'spoilers!'). The activities can be run separately over a series of weeks, whenever there's a little spare time. Alternatively, the activities could be run together all on a special 'secret agents' themed day!
- **Each activity comes with a powerpoint presentation you can use to introduce the task.** There will also be video for each activity to introduce and set the scene, and a video to congratulate the agents at the end. Some activities also have a video or powerpoint to provide assistance during the task, which can be used if required.
- **Each activity also has an extension task or two for learners to continue the adventure in creative ways.** These are generally open-ended prompts that can be used if some learners are finished the task earlier than others, or as challenges for the whole class to work on.
- **We have designed the activities so that minimal equipment and preparation is required.** Although there are educational escape rooms available online, these generally require the teacher to have a set of special padlocks that need to be set to particular numbers or codes for each game. Our activities do not require this to happen. They can be run using a worksheet that can be printed or sent to learners' one-to-one devices. One activity requires a handout to be cut into strips beforehand but this can be done by the learners if there is no time for preparation.



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3. LEARNING OUTCOMES:

A spreadsheet has been provided with details of the outcomes and benchmarks that are covered, including details about how they are covered in the activities.

All activities cover MNU 1.20a / 2.20a as well as some of the other Numeracy: Data and Analysis. Activities also cover selected Social Studies, Digital Literacy, Computing Science, Literacy and Science outcomes, mainly at Level 2.

MORE INFORMATION:

All the activities are available at dataschools.education/escape.

Please do get in touch with us if you have questions or would like to share photos and stories of how you've got on.

We're dataschools@ed.ac.uk or tweet us at [@data_schools](https://twitter.com/data_schools).

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Data-themed Escape Rooms for classrooms: Activities

DATA AGENT INDUCTION SESSION: VIKINGS BRIEFING

Briefing for Agents: You will need to study the intelligence that the DATA Agency has on the local VIKINGS operatives. However, our information has been hacked and muddled. Use logical reasoning to work out which of the VIKINGS is which.

Description of learners' task: Learners use clues and logical reasoning to work out information about each of the VIKINGS villains. They will use a logic grid to match the name, expertise, location and pet of the four VIKINGS.

Timing: This activity will take 30-60 minutes, depending on if learners try the example puzzle as well as the main logic grid puzzle.

Extension activities:

- Draw the VIKINGS villains to pass on to new DATA trainees
- Write out one of the VIKINGS' back story. What turned them evil?

LOCKED IN THE DATA BASE

Briefing for Agents: You were working late on paperwork from your recent DATA mission and you've realised that you've been locked in the base. Solve the puzzles to get out without setting off the alarm.

Description of learners' task: Learners use graphs and tables of data about theme park rides to answer questions. The answers to the questions provide them with the alarm code to be able to escape the base.

Timing: This activity will take around 45-60 minutes.

Extension activities:

Plan out a secret alarm code for your class (see Competition section for more details).



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FIND THE VIKINGS SECRET LAIR

Briefing for Agents: The VIKINGS are trying to build a new secret mega lair. Discover the location to foil their plans! We don't have enough DATA Agents to check out all the possible locations. Use information to narrow down the possibilities so that we can send out Agents to the most likely target.

Description of learners' task: Learners plot sets of information (bunkers, wind farms and data centres) onto a map of Scotland to work out possible locations of the secret lair. Along the way they are introduced to the basics of how the internet works with data centres and undersea fibre cables.

Timing: This activity will take around 60-90 minutes.

Extension activities:

- Draw the secret lair. Draw the floorplan to help pass on this intelligence to other agents.
- Plan a new headquarters for DATA. What will you need in your building? What would be the best location for it?

STOP THE TIME HEIST

Briefing for Agents: The VIKINGS have used their experimental time travel textual transmission technology (or 5T for short) to send information back in time to help them raise the money they need to build their secret lair. Find out the month and year when each of the VIKINGS villains have sent back information to themselves.

Description of learners' task: Learners will use different graphs and tables of data to solve a set of puzzles.

Timing: This activity will take around 90-120 minutes. The four puzzles in this set can be done all together or over separate sessions.

Extension activities:

What information would you send back to yourself in the past to do good, not evil? You can only send 144 characters. What would you send, and when?

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CREATE YOUR OWN ESCAPE ROOM

Briefing for Agents: Create an 'escape room' activity for your fellow Agents. This will be a set of puzzles where a group of players will need to find all the clues and keys, decrypt all the codes and solve all the puzzles to exit the room within a time limit.

Description of learners' task: Learners work in a group to create a themed escape room with a set of puzzles that needs solved to 'escape'. Learners are encouraged to think about the logical progression of the puzzles and to think about the inputs and outputs of each puzzle.

Timing: This project-style activity and timings will depend on your learners and the depth and detail they go into for the planning. You will need to allow time for the groups to playtest their rooms and then run them with another group (or more).

COMPETITION FOR TRAINEE AGENTS (BASED ON 'LOCKED IN THE DATA BASE')

Briefing for Agents:

- Can your team of Agents create a passcode for your DATA base (codename: Your 'Classroom')?
- Use data that is displayed on the walls or information about your team.
- You should not use personal data or information that your agents do not want to share with others.
- Try to use clues based on graphs and charts or maps. Perhaps there is information and facts in books in your DATA base? Maybe you have sensors in your area where you could use the readout for an automatically changing code that's more secure and super secret?!

Description of learners' task: Learners work in a group to create a set of questions that, if correctly answered, will provide a secret code to allow access to the classroom.