



Game Instruction Guide

This game is designed to provide an introduction to the uses of DNA in forensics and the criminal DNA database. The game finishes with several bioethical questions designed to stimulate debate by encouraging your students ideas and opinions. Rough answers to these have been provided.

Before running the game, it is recommended to read through the game flow diagram, questions and their answers in order to make the most of the game.

1. For your class, you need: (file names correspond to underlined text)
 - worksheets - one per group or one per student if preferred
 - a set of DNA evidence cards – to set around the crime scene
 - a set of suspect statements and pathologists report (green and purple respectively)
 - several sets of suspect and victim DNA profile cards (blue and purple respectively) – enough for one per group
 - one evidence DNA profile and DNA database sheet per group (yellow and orange respectively) – the latter should not be given to the students until later.

2. The crime-scene must be set up as follows:
 - A body (maybe a willing student) must be lying on the floor, and a knife or a substitute nearby.
 - The 5 DNA evidence cards must be put in their appropriate positions:
 - the knife blade,
 - the knife handle,
 - the victims fingernails,
 - the victims jacket, and
 - the blood on the window.

3. Once the class is ready, 8 roles should be given to students:
 - 6 will be the **suspects**: Alex, Eric, Lisa, Olivia, Melinda, Dave.
 - They must each have the *statement card* and the *DNA profile card* belonging to their character.
 - To stop cheating, the statement cards and profile cards should be taken away from the students before they get the evidence DNA profiles from the crime scene.
 - 1 **police pathologist**.
 - They must have the *report card* and the *DNA profile cards* belonging to the victim.
 - 1 **dead body** (optional).
 - The remaining members of the class are the **investigators**.
 - The teacher plays the role of the **Chief Inspector** and the **forensics lab**.

4. The game is ready to start - The teacher plays reads out the introduction of the crime to the class, playing the role of the **Chief Inspector**:

Last night in the local hotel, a terrible crime was discovered.

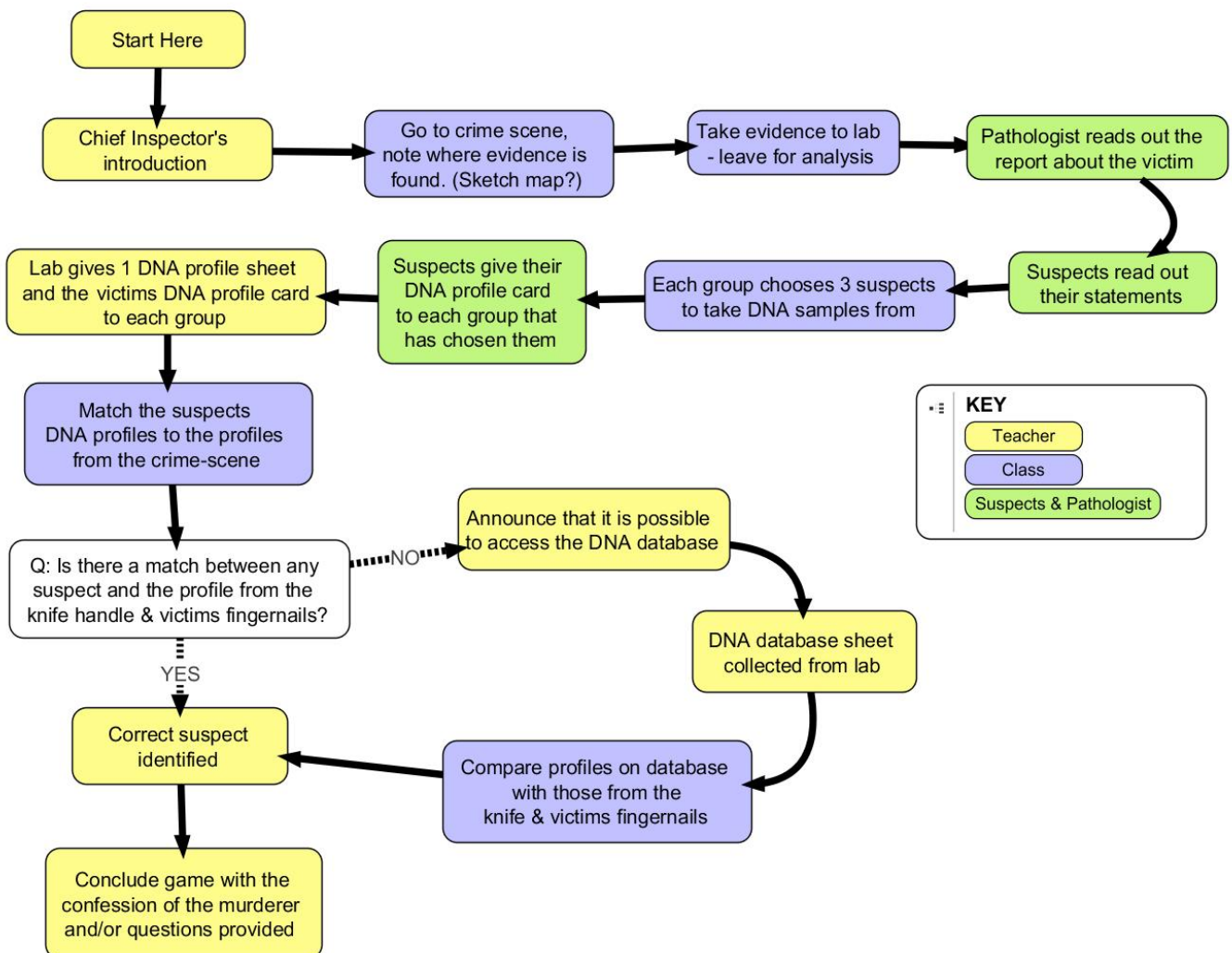
Peter, a well known businessman, was discovered dead in his hotel room by two guests, Alex and Olivia, at 11 o'clock last evening. They immediately telephoned the police, who arrived soon afterwards. The pathologist examined the body, and estimated the time of death at 9 o'clock that evening, not long after Peter had finished dinner.

Peter held a dinner party that evening with some friends to celebrate the finishing of his book about his life story. This party took place in the hotel dining room with his 5 friends who all stayed that night in the hotel. After the police arrived, the 5 guests and the hotel maid were woken, and assembled downstairs to be questioned.

We need you to look at the crime scene and find any samples containing DNA which might help to catch the killer. You will then take your DNA samples to the lab for analysis. Then listen to the suspects statements and the pathologists report.

Finally, using the statements and the evidence you find, you must try to work out which of the guests has killed Peter.

5. The following flow diagram illustrates the game sequence:



6. The workshop is concluded by the teacher revealing the murderer's identity as Eric and following this by reading his confession:

After his arrest, Eric decided to confess to the police what happened that night.

In his former life Eric had been arrested several times for carrying and taking drugs. He had decided to forget his old life, and he now owned his own restaurant. Only a handful of people knew about his past, including Peter. Peter also had a dark past, and had known Eric very well. He decided to write about Eric and include details of his criminal activities in the book of his life story.

The evening of the murder, Peter was celebrating the completion of his book by having dinner in the hotel with some friends, including Eric. During the conversation over the meal, Eric realised what Peter had written about him in his book, and how it could damage his reputation.

After dinner, all the guests stayed in the restaurant for coffee. Eric finished and went for a walk in the gardens to plan a way to silence Peter and steal his book.

He crept into the kitchen and stole a knife, concealing it in his trouser pocket. Eric hatched a plan to meet Peter in his hotel bedroom for a chat, and when Peter was least expecting it - to kill him using the knife.

Everything went according to his plan, however whilst Peter lay dying on the floor covered in blood, Eric heard footsteps walking past the room, and as he grabbed the book, he panicked, accidentally dropping the knife.

After quickly walking back to his room, he hid the book in his suitcase in order to destroy it later. He planned to use the excuse of an early business meeting to leave first thing the next morning.

7. At the end of the worksheet several ethical questions have been posed in order to provide a rounded and critical view of the forensic uses of the DNA database.
Ideas for answers have been included in italics – these can be read out loud, or used to drive the discussion.

Remember, there are no correct answers here: governments, doctors, scientists and the general public all have different opinions. A balance must be made between everyone's point of view. Discuss these questions in your group or class.

Question 1:

Why do you think the murderer's DNA was on the DNA database? How might you have found the murderer if his DNA was not on the database?

The murderer had been convicted on several occasions for drug possession, and each time his DNA was put onto the DNA database.

If the murderer was not on the database, DNA samples would have to be taken from all of the suspects; more 'traditional' evidence would also be useful, such as fingerprinting, CCTV if available, and deduction from the suspect and witness statements.

Question 2:

What do you think should happen to the DNA taken from the suspects who turn out to be innocent? Should their DNA be put onto the DNA database or should their profiles be destroyed?

In Scotland, a suspects DNA must be destroyed immediately if they turn out to be innocent. For serious crimes such as murder, an innocent suspects DNA may be kept on the database for 3 years.

DNA from convicted criminals is kept permanently on the database.

Until recently in England, DNA was taken from everybody who was arrested and put onto the database – even the DNA from those who were later proven innocent was kept permanently.

Question 3:

What do you think should happen to the DNA profile of a 12 year old shoplifter? Should children's DNA be on the DNA database – and does it depend on how serious the crime is? What about a 12 year old convicted of murder?

In Scotland, the age when someone is responsible for a crime that they commit is 8 years old.

Some people believe that children should be protected from punishments which are normally given to adults because they should be given a chance to learn from their mistakes.

Other people believe, however, that young offenders are more likely to re-offend, and that putting their DNA on the database will help catch them if they do commit a crime in the future.

Question 4:

After playing this game, what do you think about using DNA databases for solving crimes? Can you think of any reasons why you might not want your DNA on a database?

Whilst a DNA database is very useful in catching criminals and identifying dead bodies, there are several reasons why people wouldn't want their DNA on a database. Some are listed below.

- *Some people worry about having their DNA associated with that from convicted criminals on a database*
- *Some people are concerned about the chances of mix-ups on the database, or that someone may hack in and change information*
- *Criminals themselves might be concerned as if they re-offend they might be caught more easily*
- *Many people are worried about privacy, as DNA can reveal personal information*
- *An answer which might not be raised by the class is proportionality – this is the term used to ask the question: is putting everybody's DNA onto a criminal DNA database going to solve or cause more problems?*

All of these are these personal concerns are valid, however a balance between the concerns and benefits of using the criminal DNA database must be found. These are identified by discussion and reinforced by law.