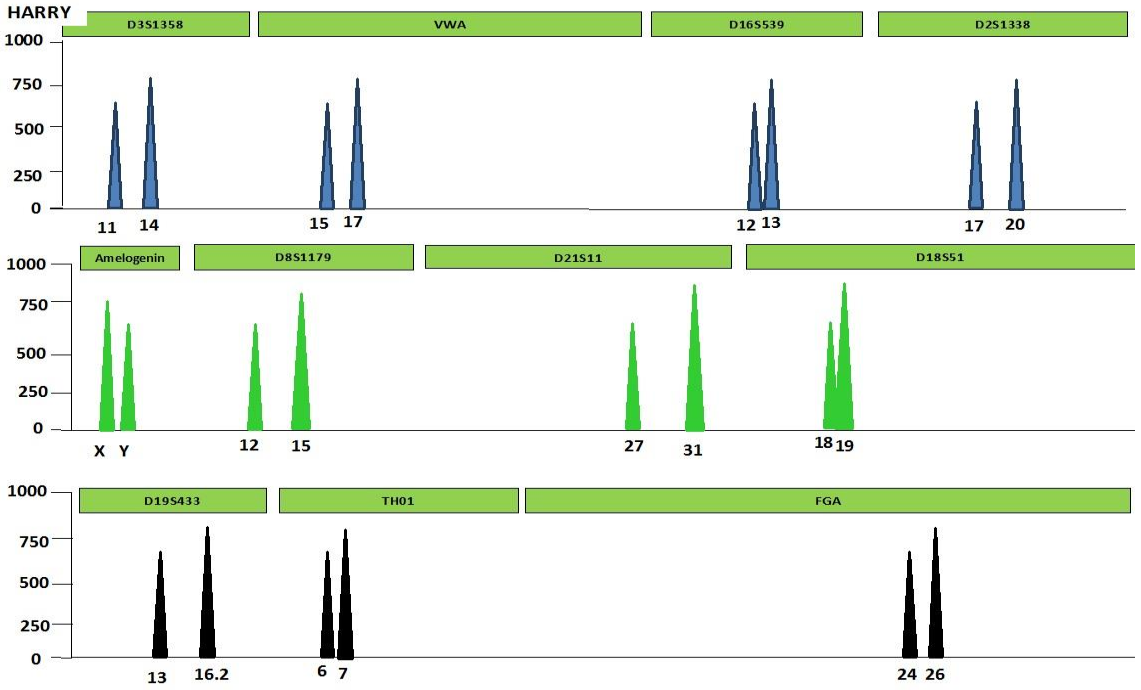
What is a DNA profile?

When Forensic scientists are trying to identify a criminal they use what is called a "**DNA profile**". This is a pattern generated in the laboratory from someone's DNA. This pattern is unique to that individual. No one else will have the same pattern – unless they are identical twins! The DNA profile has coloured peaks and numbers on it and it looks like this;



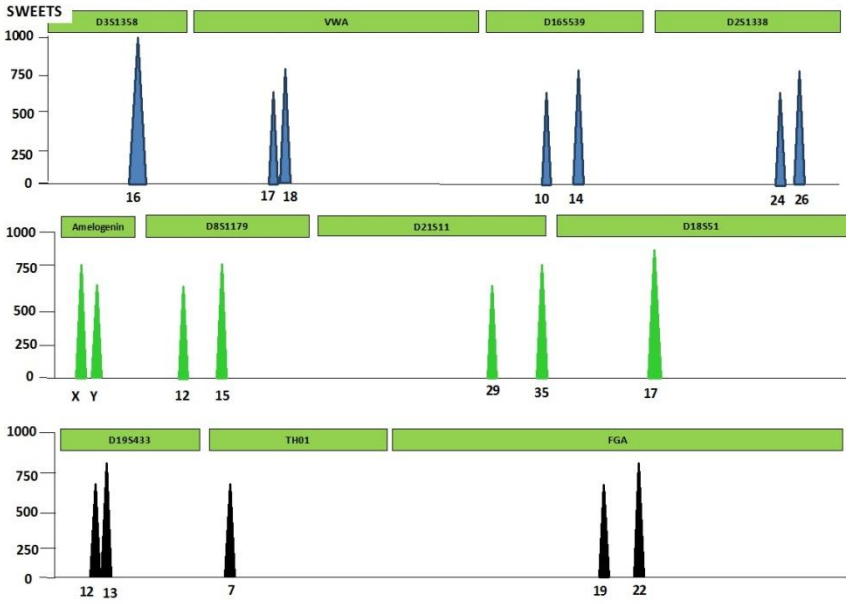
If the DNA profile from a person is an **exact match** (every coloured peak and number is the same) with the DNA profile generated from DNA found at a crime scene there is a good chance that the person being tested was there!

The suspect will have to explain why their DNA was found at the crime scene!

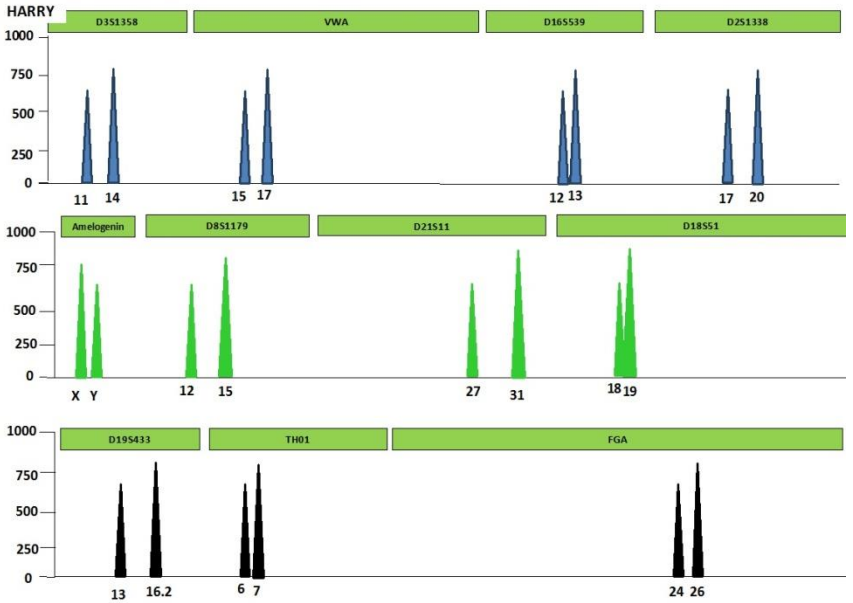
Just like in Dr Wallace's Forensic workshop can you work out who stole the sweets? Was it Harry or Peter? Remember **ALL** the coloured peaks and numbers have to match.

Who stole the sweets?

DNA profile from the sweet



DNA profile from Harry

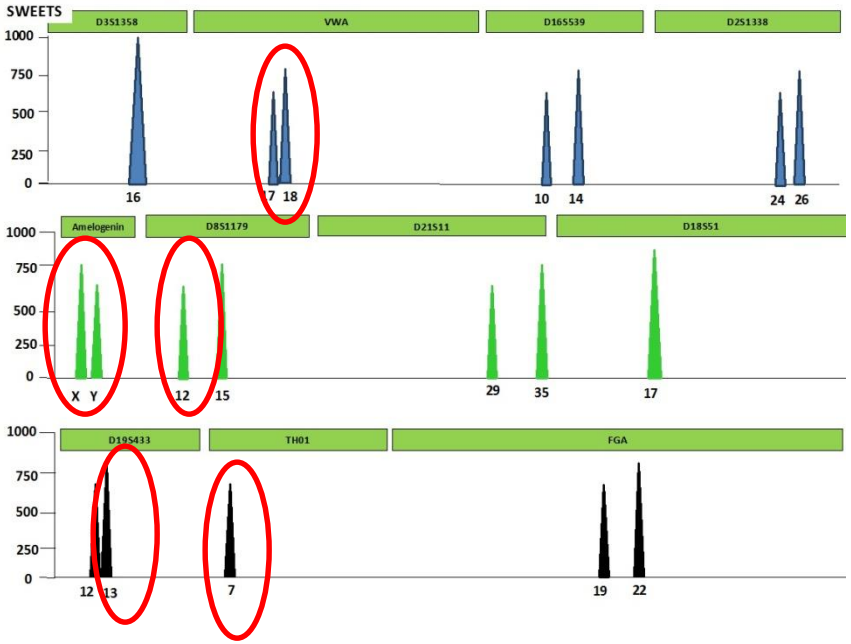


IS IT A MATCH?

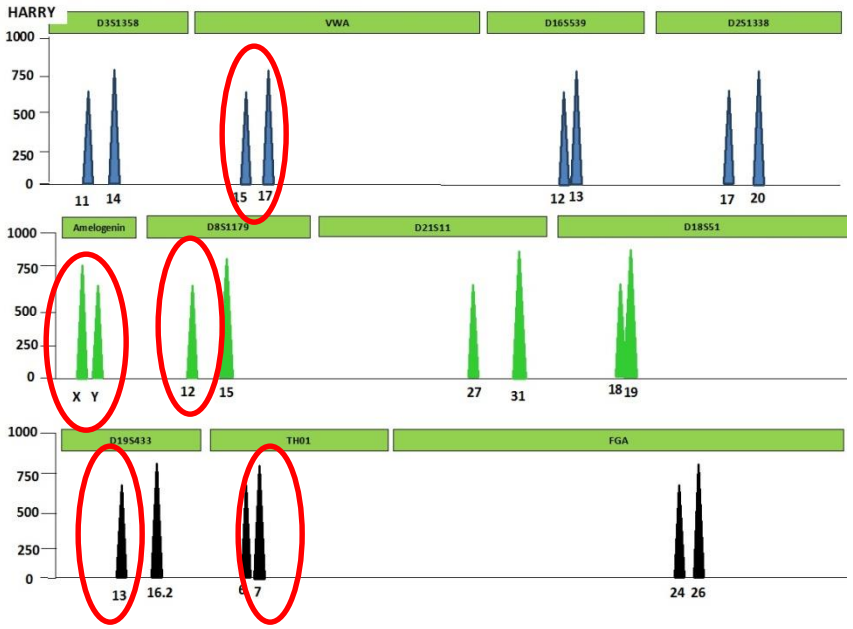
Do the coloured peaks and numbers for the DNA profile from the sweet match with the DNA profile from Harry?

Who stole the sweets?

DNA profile from the sweet



DNA profile from Harry

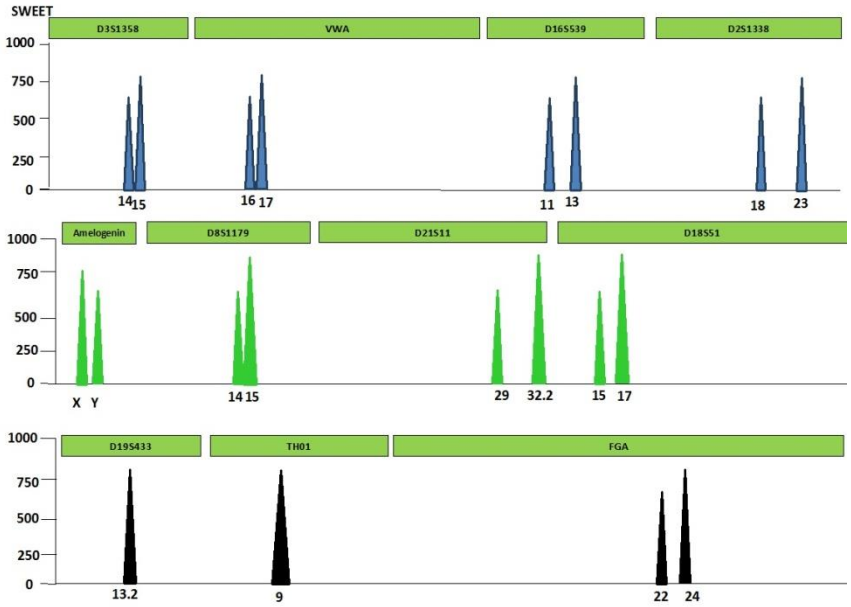


NO MATCH!

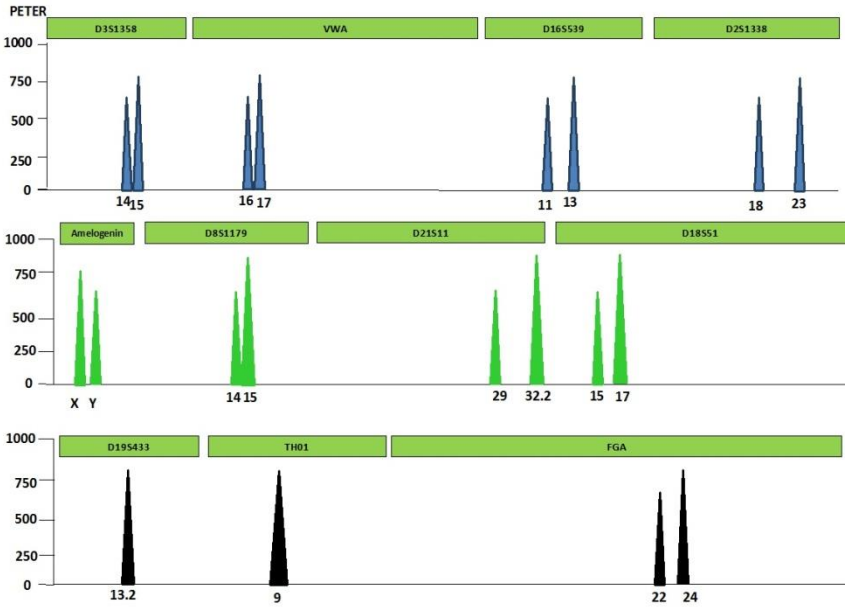
Some peaks and numbers match. But for a DNA profile to be a real ‘match’ **ALL** the peaks and numbers must be the **SAME**. Harry is not a match. It was not Harry who stole the sweets! Did you identify that Harry was not the thief?

Who stole the Sweet?

DNA profile from the sweet



DNA profile from Peter

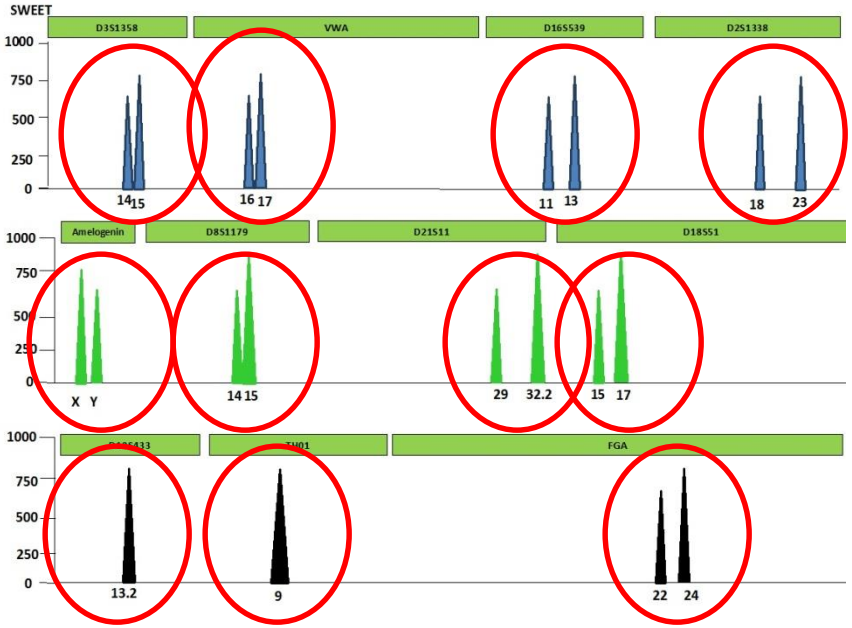


IS IT A MATCH?

Do the coloured peaks and numbers for the DNA profile from the sweet match with the DNA profile from Peter?

Who stole the Sweets?

DNA profile from the sweet



DNA profile from Peter

IT'S A MATCH!

Peter's DNA profile matches the DNA profile from the sweet! All the coloured peaks and numbers are the same. This is good evidence that it was Peter who stole the sweet. Did you correctly identify Peter as the thief?