

Who is Carelton Comet's Murderer?

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Background

- Carleton Comet invited 5 people to go on a picnic
- These 5 people were Theresa Therra, Glen Glee, Sam Sophomore, Nancy Normal, and Fred Flimmer
- As they were all eating, the sky darkened, giving the killer the opportunity to kill Carleton Comet
- When the sky lightened up again, Carleton Comet, was found dead, with a knife in his neck
- Nancy Normal had also cut her hand on a glass when the sky darkened
- The 5 people who attended are all suspects to the murder of Mr. Comet

Types of Homicide

1st Degree Murder an unlawful killing that is both willful and premeditated

2nd Degree Murder an intentional killing that is not premeditated or planned

3rd Degree Murder: homicide committed with the intention of causing bodily harm, but not necessarily death

The Murderer

We would like to have a search warrant granted for **Nancy Normal** on **1st degree murder of Carlton Comet**

Fingerprint matching

Name	Does it match?
Theresa Terra	No
Fred Filmer	No
Glen Glee	No
Sam Sophomore	No
Nancy Normal	Yes
Carelton Comet	No

We have concluded that only Nancy Normal's fingerprint matches the one at the crime scene

Ink Matching

Name	Does the ink match?
Theresa Terra	No
Fred Flimmer	No
Glen Glee	No
Sam Sophomore	No
Nancy Normal	Yes
Carelton Comet	No

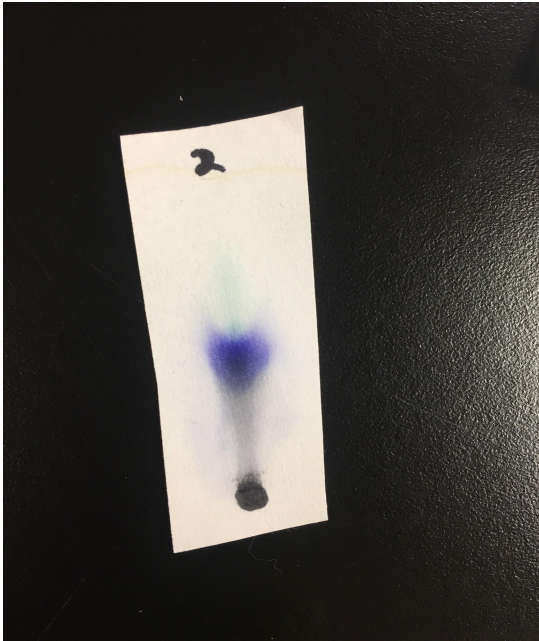
This shows that Nancy Normal's pen was the pen used to write the note left at the crime scene that said: "You are a dead man"

Ink Chromatography

To determine which pen matched the pen that wrote the note at the crime scene that read, “you are a dead man,” we used the process of ink chromatography. We tested the ink from the crime scene and compared them to 3 pens collected from the crime scene. Pen 1 belonged to Glen Glee, pen 2 belonged to Nancy Normal, and pen 3 belonged to Fred Flimmer. To test the ink, we put a dot from each pen on a slip of paper, and put it in a flask with rubbing alcohol. As the alcohol rose, the ink rose with it and the colors from the ink started to show. The ink from the crime scene was purple, pen 1 was many different colors, pen 2 was purple, and pen 3 was pink and blue. An Rf factor is how far the pigment runs up the paper. It is determined by dividing the length of the pigment by the length the alcohol runs up the paper. The Rf factors for both pen 2 and the crime scene pen were the same. This determined that pen 2 was the pen that wrote the note, and pen 2 belonged to Nancy Normal.

Pictures of Ink Chromatography

Pen 2 (Nancy Normal's Pen)



Pen from the note



Blood Types

To determine the blood types of each of the suspects, we put anti-A and anti-B antigens in their blood

- If anti-A antigen clumped, it was A type blood
- If anti-B antigen clumped, it was B type blood
- If neither clumped, it was O type blood
- If both clumped, it was AB type blood

Blood Type

Name	Blood Types
Theresa Terra	A
Fred Flimmer	O
Glen Glee	A
Sam Sophomore	O
Nancy Normal	A
Carleton Comet	O
Crime Scene 1	O
Crime Scene 2	A

Huntington's Disease

Name	Yes or No?
Theresa Terra	No
Fred Flimmer	No
Glen Glee	Yes
Sam Sophomore	Yes
Nancy Normal	Yes
Carelton Comet	No

Huntington's Disease

Individuals with Huntington's Disease experience mood swings or become uncharacteristically **irritable, passive, depressed, or angry**. **Nancy Normal has a history of Huntington's Disease in her family.**

Chromosome Disorder

Name	Yes or No?	If yes, what?
Theresa Terra	Yes	Down Syndrome
Fred Flimmer	Yes	XXY
Glen Glee	No	No
Sam Sophomore	Yes	XYY
Nancy Normal	Yes	XXX
Carelton Comet	Yes	XYY

XXX Syndrome

Nancy Normal has a chromosome disorder known as Triple X (XXX) Syndrome which occurs when a person has 3 X chromosomes. This can only occur in women. Triple X syndrome is associated with an increased risk of learning disabilities and delayed development of speech and language skills. Delayed development of motor skills (such as sitting and walking), weak muscle tone (hypotonia), and **behavioral and emotional difficulties** are also possible

DNA Fingerprinting

We made agarose gels to determine the color pattern in each of the suspect's DNA. After the process of electrophoresis, we compared the color patterns found in their DNA to the color patterns in the DNA from the 2 crime scenes. We concluded that Nancy Normal was the only person who matched the DNA from crime scene 2, and Carleton Comet and Sam Sophomore matched the DNA from crime scene 1

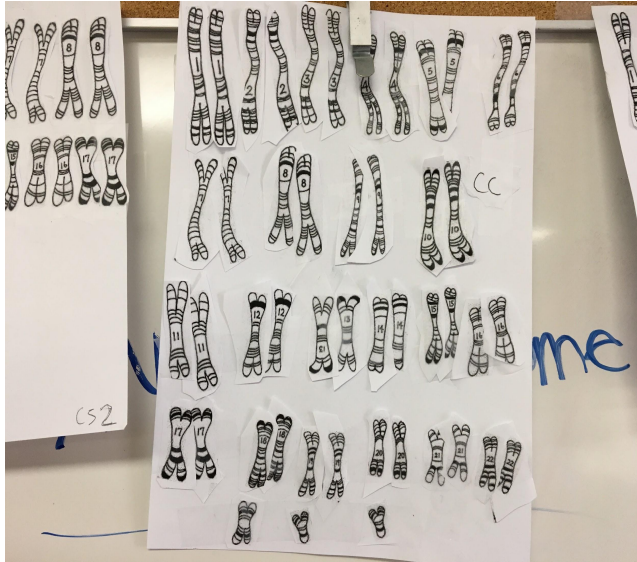
DNA Fingerprint Color

Name	Colors
Theresa Terra	Blue, Red
Fred Flimmer	Blue, Yellow
Glen Glee	Yellow
Sam Sophomore	Blue, Red, Yellow
Nancy Normal	Red, Yellow
Carleton Comet	Blue, Red, Yellow
Crime Scene 1	Blue, Red, Yellow
Crime Scene 2	Red, Yellow

Karyotype found at Crime Scene 1

A karyotype is a layout of one's chromosomes to determine see chromosomal disorders

Carleton Comet

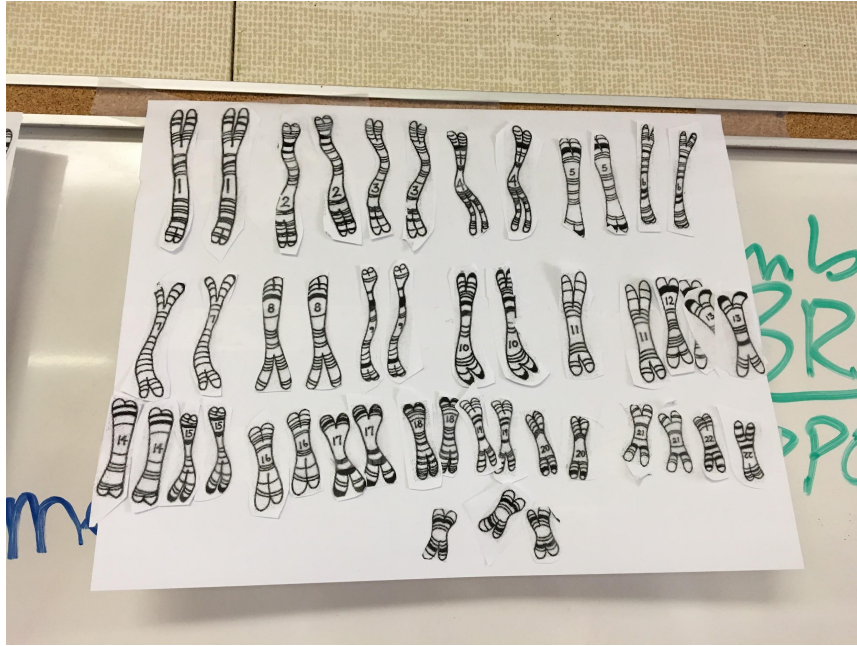


Crime Scene 1

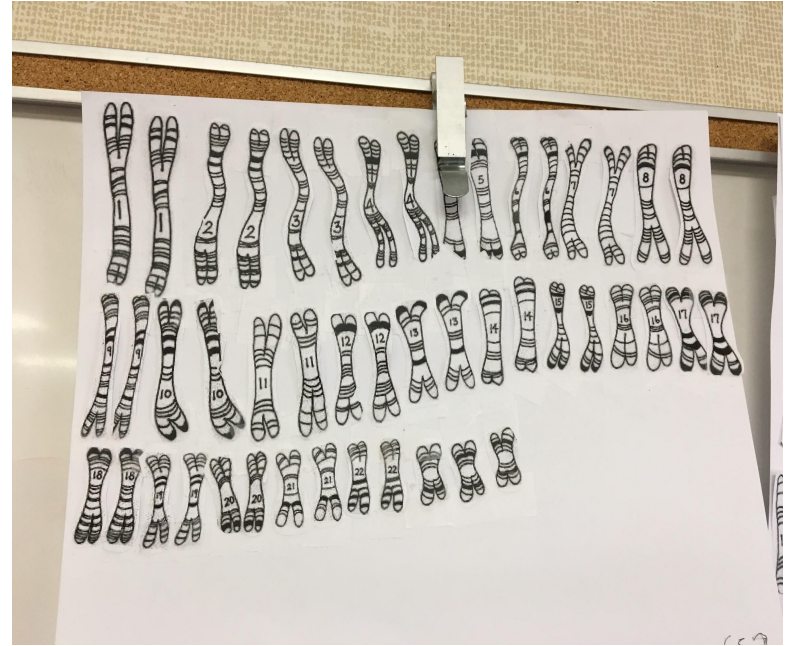


Karyotype at Crime Scene 2

Nancy Normal



Crime Scene 2



Motive

Thomas Sandstone changed his name to Carleton Comet after he got released from prison to start a new life. We know this because Carleton Comet had many children by many different women, which Thomas Sandstone also had. Thomas Sandstone murdered multiple people, so that is why he went to prison, and then changed his name to Carleton Comet. Nancy Normal, who is a jealous woman, wanted to get revenge for all of the things that Thomas Sandstone did to her family, which included kidnapping and murdering her cousin, Nadia. She also loves Fred Flimmer, so she also wanted to kill him because he killed Fred's sister, Peebles, and Fred's aunt, Joan. She would do this because she wanted to prove herself to Fred. Since she has XXX syndrome and Huntington's Disease, this would cause her to be unable to hold back her anger and lash out and want to kill Thomas Sandstone A.K.A Carleton Comet

How we Know

Carleton Comet was murdered right around the time that Nancy Normal cut herself on the glass. There were 2 types of blood on the knife that was used to kill Carleton Comet, one of the types of blood belonged to Carleton Comet. Considering Nancy Normal was the only one bleeding at the time of the murder, when she held the knife, her blood got on the knife, which is how there were multiple types of blood on the knife. With this evidence, the evidence that she wrote the note calling Carleton Comet a dead man, along with her motive, and her fingerprints being at the crime scene, we can prove that she had a plan to kill Carleton Comet A.K.A Thomas Sandstone which makes this 1st Degree Murder.