

BREAK & ENTER: FORENSIC INVESTIGATION

A BREAK-IN AT THE MUSEUM

Someone has broken into the Vancouver Police Museum & Archives!

Look at all the **evidence** and the **clues** to solve the crime.

Can you match each piece of evidence to the correct suspect?
Which suspect broke into the museum?

Good Luck!

VANCOUVER
**POLICE
MUSEUM**
& ARCHIVES

Before you arrive at the museum:

Use your own words to answer the questions:

What is a break & enter?

What do you think you will see at the Vancouver Police Museum?

Do you know what year Vancouver became a city?

Write 5 questions you would like to ask:

1.

2.

3.

4.

5.

The Suspects

These are the 6 suspects who could have committed the Break & Enter at the Museum. Each suspect has a letter:

A, B, C, D, E, F.

Look at the 6 Stations of evidence and follow the instructions.

When you find evidence that matches the letter of a suspect, write the evidence in the space beside that suspect below.



SUSPECT A: Detective Mary Alvarez

- Latina female, 5'6", 37 years old
- Has spent her career catching the city's worst criminals and is known as "the human lie-detector."
- Visits the museum often to see the photos of the fallen officers and Police Service Dogs.



SUSPECT B: Coroner Gerald Bolan

- White male, 6' ft, 49 years old
- Recently appointed as City Coroner after many years as a lawyer.
- He visited the museum for the first time a few days ago.



SUSPECT C: Dr. Amos Cornelio

- Latino male, 5'9", 42 years old
- He is excellent at his job as a pathologist and never misses a piece of evidence.
- He visits the museum regularly to chat with the curator about the forensics collection.

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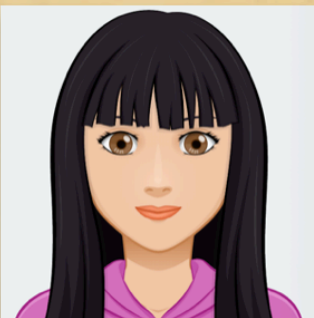
SUSPECT D: Mrs. Anne Dhillon

- South Asian female, 5'1", 60 years old
- Was married to a former forensic scientist who worked in the old City Analyst Lab.
- She visits the museum once a year on her late husband's birthday.
- She used to visit the Lab regularly when her husband worked there.



SUSPECT E: P.I. Walter Ettinger

- White male, 5'9", 43 years old
- A former police officer, became a private investigator 5 years ago.
- He liked to work alone, did not work well with other officers.
- Used to know the security guard who worked at the museum.



SUSPECT F: Alice Fong

- Asian female, 5'4", 25 years old
- She is the Mayor's youngest daughter and a graduate student in Chemistry at UBC.
- Recently visited the museum on a school field trip.

Station #1: Fingerprints

1. Look at the fingerprints from the 6 suspects
2. Compare the suspects' fingerprints to the 2 Crime Scene Fingerprints
3. Do the Crime Scene Fingerprints match any of the suspects?



Which suspect's fingerprints were found at the crime scene?

A B C D E F

Do both fingerprints belong to the same person?

YES NO

P.I. Ettinger visited his friend the security guard at the museum after hours. They would spend time looking at the firearms collection and would exit through the back door.

When **Alice Fong** visited the museum, she loved all the interactive materials and took a lot of photos with her camera.

Station #2: Witness Statements

Read the witness statements from each witness. Write down any information using **key words**.

Witness #1: A Neighbour	
Witness #2: The Janitor	
Witness #3: The Museum Curator	

Station #3: Chromatography

(Pronounced like crow-ma-tog-rah-fee)

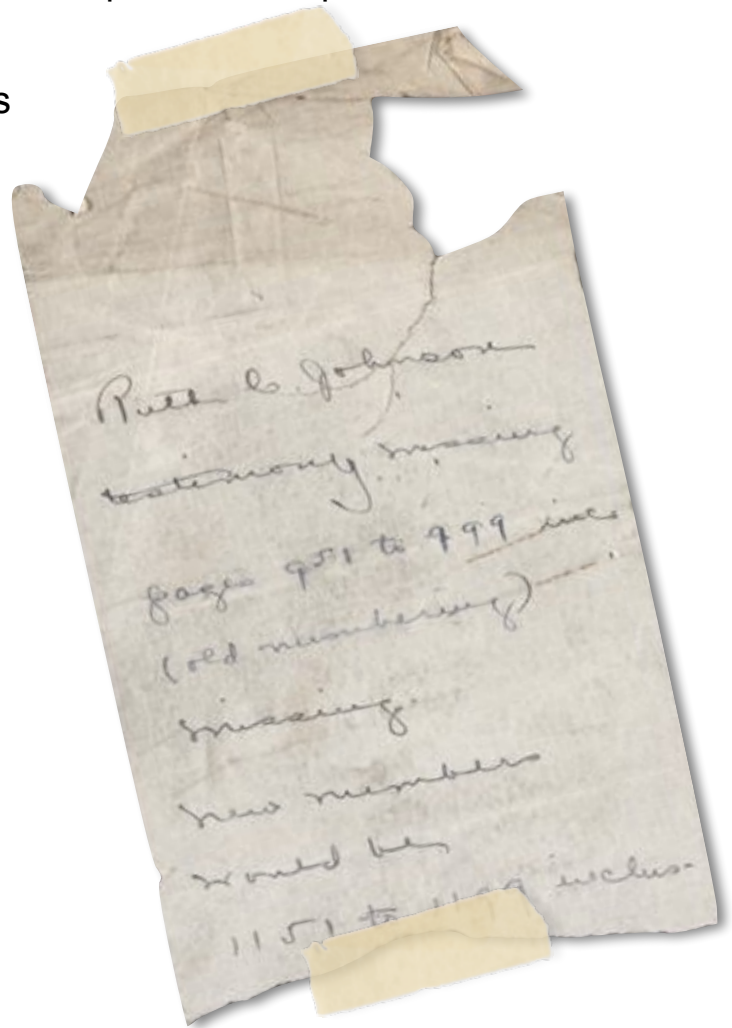
What is it?

Chromatography is a scientific process used to separate a mixture of chemicals into its different parts.

A black pen is actually made of multiple coloured inks, such as red, blue, green...the mixture of colours is unique to each pen, like a fingerprint!

Chromatography is used to find this "fingerprint" in the pen.

1. Look at the **Chromatography** results from the **6 suspects**.
2. Compare the suspect's results with the crime scene chromatography.
3. Is there a match?



Which suspect's pen Chromatography matches the ink from the crime scene?

A B C D E F

Station #4: Shoe Print

We found a **shoe print** at the crime scene by the back exit of the museum! Maybe it's a clue!

1. Examine the **shoe print** from the crime scene and **compare** it to the **prints** we collected from the shoes of the **6 suspects**.
2. If you find a **match** to one of the 6 suspects, write shoe print beside that suspect!

Prints? Impressions? What's the difference?

Footwear evidence can be found in 2 forms; **impressions** and **prints**.

An **impression** is a 3-dimensional impression left on a soft surface such as mud, sand, or plaster.

A **print** is made when the sole (bottom of the shoe) picks up material as a person walks across a solid, flat surface. Prints can be made by substances like paint, oil, ink, or even blood.

Station #5: Torn Photograph of PSD Justin

We found a photo of PSD Justin that was torn into pieces.
Why would someone tear up a photo of a former police dog?
Do you think they were trying to send a message?

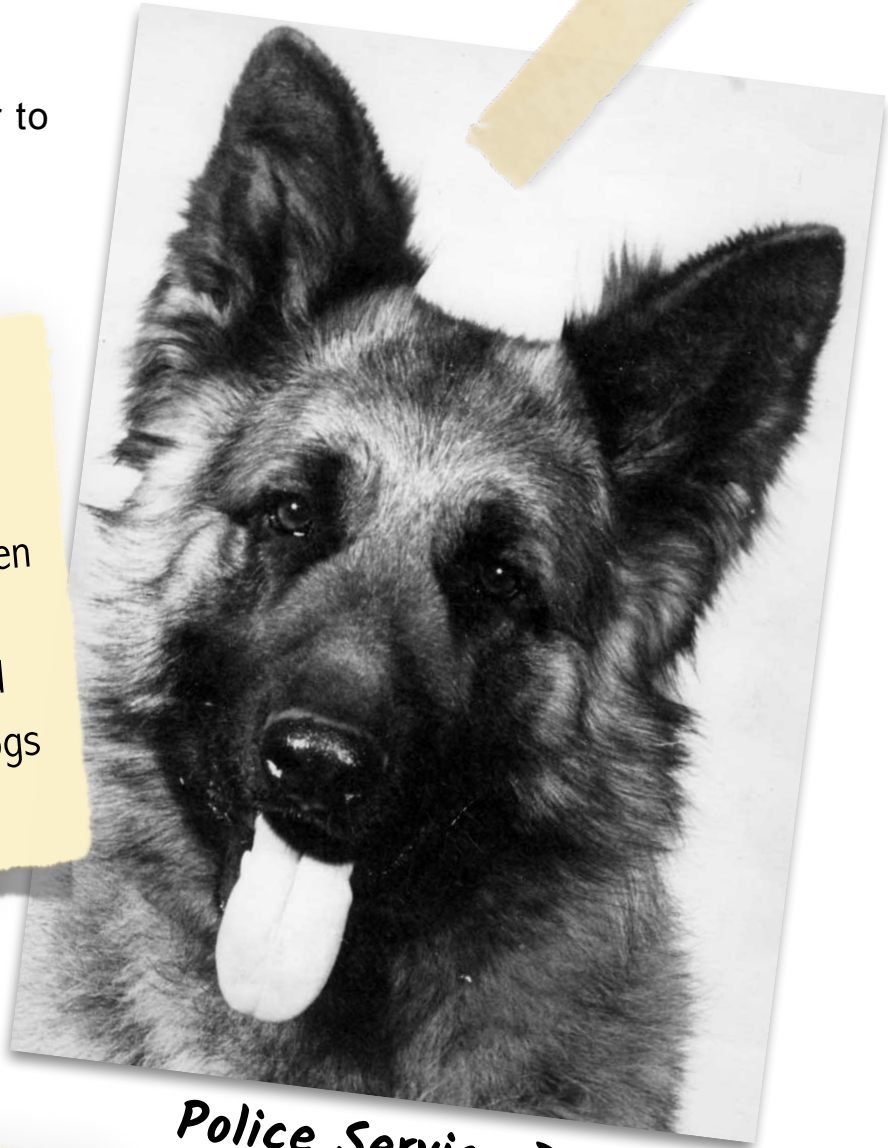
Instructions:

Put the pieces back together to fix the photo of Justin.

The museum's curator said **Detective Alvarez** likes to come visit the photos of the Police Service Dogs in the Fallen Officers exhibit.

Detective Alvarez has two dogs and comes to pay her respects to the dogs who bravely did their jobs.

Coroner Bolan was bitten by a dog when he was young, and has had **Cynophobia** (fear of dogs) ever since.



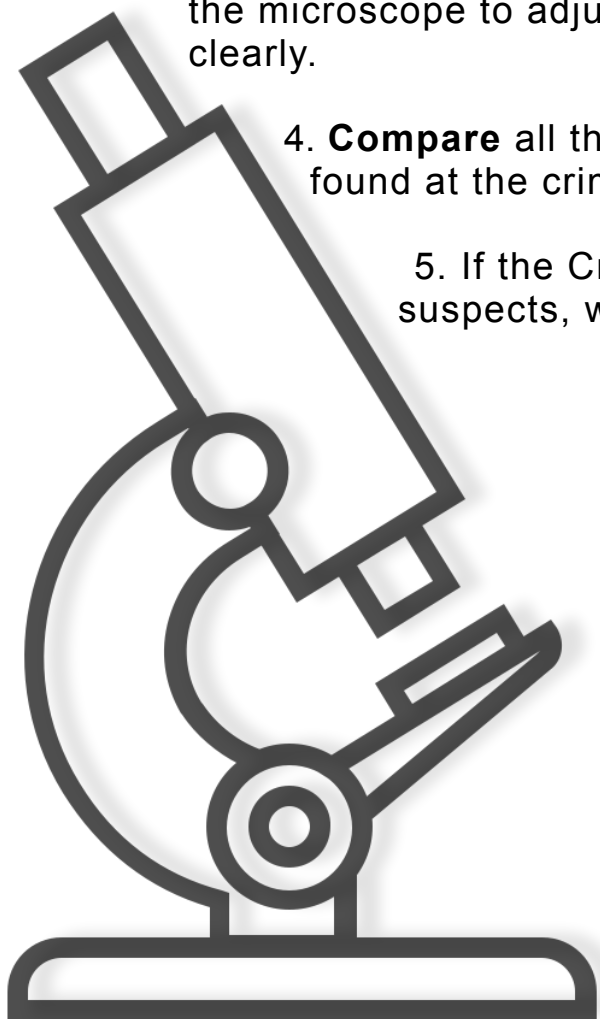
**Police Service Dog:
JUSTIN**

Station #6: Fibre Analysis

We collected 2 fibre samples from the crime scene. The fibres could tell us what the suspect was wearing on the night of the Break & Enter!

Instructions:

1. Turn **ON** the microscope lights using the dials on the base that say “BOTTOM LIGHT” and “TOP LIGHT.”
2. Examine **one** fibre sample at a time. Place the fibre samples under the lens of the microscope. Insert the slide under the two prongs so the fibre sample is above the bottom light.
3. Look through the eye piece and use the knobs on either side of the microscope to adjust the focus until you can see the fibres clearly.
4. **Compare** all the fibres from the suspects to the fibres found at the crime scene. Do any of them match?
5. If the Crime Scene Fibres match any of the suspects, write fibre analysis beside that suspect.



The museum's **janitor** cleaned the museum the day before the break-in, so we know the fibres are probably from the suspect.

Vocabulary

Chromatography	A scientific method used to separate and analyze chemicals in a liquid.
Coroner	A person who investigates a violent, sudden, or suspicious death in order to determine the cause and manner of death.
Curator	A person responsible for taking care of a museum's collection of objects.
Evidence	Anything that can prove that something, like a crime, happened.
Fibre	The smallest unit of a textile material. They can be woven or spun together to form fabric.
Forensic Science	The forms of science used to investigate crime by examining evidence (fingerprints, bullets, hair and fibres etc).
Janitor	A person who cleans and maintains a building.
Pathologist	A medical doctor who examines a body to find the cause of death.
Suspect	A person thought to be guilty of a crime.
Witness	A person who saw something or someone related to a crime.

After you visit the museum:

What was your favourite thing that you saw at the museum?

Do you remember what a Coroner does?

What did you enjoy about solving the Break and Enter Investigation?

Would you like to be a police investigator in real life?

Why or why not?
