

# CSI: CCSD



As a junior crime scene investigator, one of your duties is to assist your supervisor with estimating the time of death for a recent victim in the area. Your supervisor has left you with a copy of the police and medical examiners reports and requests that you use the documents and your knowledge of forensics science to determine the time of death. Once time of death is established, your supervisor would like your professional opinion on whether the victim's death was an accident or a murder. Take your time and conduct a comprehensive analysis.

## **Police Report:**

The body of John Doe was found at 145 Maple Avenue at around 6:00am on Friday, November 12.

*Appearance of the body:* The victim was lying face up at the bottom of the basement stairs and appears to have died of injuries sustained from a fall (massive contusion to the back of head and broken neck). The body temperature of the victim at 7:00am was approximately 32.6 degrees Celsius. His eyes were open and covered with a cloudy film. The victim had purple marks on the front of his neck and chest consistent with lividity.

*Appearance of surroundings:* A pizza box was found on the kitchen table from Pizza House along with a receipt saying that it was sent out for delivery Thursday, November 11, at 6:00pm. There was no evidence of forced entry, but the back door to the home was left unlocked.

*Supplemental information:* Michael Deer, a good friend of the victim, found the body of victim at 6:00am on November 12. He claimed to have come over to pick up the victim for work and entered through the back door when the victim did not come out to the car. Deer said that he had eaten pizza and watched football with the victim the night before, and the victim was still alive when Deer left the house at 11:00pm.

## **Medical examiner report:**

The male victim is approximately 177cm tall and weighs 67kg. The cause of death appears to be blunt force trauma to the back of the skull and a broken neck. Both of these injuries are consistent with a fall down stairs. There was pizza located in the victim's stomach, but none had entered the small intestine.

**Known forensic information:**

*Body temperature (algor mortis):* The body temperature drops about 0.4 degrees Celsius every hour after death. This is an average measurement and may be faster or slower depending on the victim's size, what the victim was wearing, and the environmental temperature where the victim was found.

*Ocular film:* If the victim dies with his or her eyes open, a thin cloudy film forms over the lenses in less than three hours.

*Skin tone (lividity):* After death, the blood stops flowing and settles to the lowest points of the body due to gravity. After about six hours, the skin will develop purple or red marks where the blood has pooled.

*Digestive system:* Food moves completely through the digestive tract in about 32 hours. After the food reaches the stomach, it takes about three hours before it moves to the small intestine. Once in the small intestine, it takes food about 5 hours before it reaches the large intestine.

**1. Construct a line graph showing the change in body temperature each hour after death (algor mortis).**

**2. Write a story summarizing the crime based upon the evidence that you read. Your story should focus on the following questions:**

- Based on the evidence, when do you think the victim died?
- How did the multiple forms of the evidence help to pinpoint the time of death of the victim? (Explain each in detail)
- Do you believe Mr. Deer's account that the victim was alive at 11:00pm?
- Was the body moved after the death? How would you know?
- Do you think that the victim's death was an accident or a murder? Why?
- If you believe that the victim was murdered, add a final paragraph explaining why Mr. Deer would want the victim dead. Use your imagination.