

Forensic Science Unit



Everybody loves a good mystery. Mysteries can lead us to explore our imaginations and take us to other places and times. Unfortunately, mysteries don't just happen in stories that we read or movies that we see, but they happen in real life, too. A **crime** is any act that is against the law. We hear about crimes in the news. **Forensic science** is the study of objects that relate to a crime. These objects are called **evidence**. Forensic scientists study evidence so that it can be used as proof in court. The term **forensic** means "suitable for a court of law."

When analyzing evidence, forensic scientists perform the same activities that all scientists do: They **observe, classify, compare, use numbers, measure, predict, interpret data**, and draw **inferences**, or reasonable **conclusions** based on evidence. Forensic science is active and restless. It leaves no stone unturned. Forensic scientists can be **police officers** or **detectives**, special police officers responsible for investigating serious crimes. They can also be members of a city, regional, or state forensic laboratory and work along with detectives and the police. Some forensic scientists have general background in **criminology**, the study of crime. Others specialize in the area of **pathology** (the study of the causes of death and disease), chemistry, biology, dentistry, psychiatry, psychology, or engineering.

Large police departments and national crime-fighting organizations, such as the **Federal Bureau of Investigation** (FBI), have their own forensic scientists. There are about 400 forensic laboratories in the United States, and about 40,000 forensic scientists and technicians. Most forensic scientists have university degrees in either **criminology** or a specialized field. At the scene of a typical crime, a **detective** takes notes, interviews witnesses, and sometimes collects evidence. **Forensic scientists** may also collect evidence. The evidence is then sent to the **forensic laboratory**, also called the **crime lab**, to be analyzed.

The **power of observation** is the best tool that a detective and a forensic scientist have. To observe is to **note carefully**, paying attention to **details**. When a detective collects data at a crime scene, observations are very important. Observations include everything from the objects found at the scene of a crime and statements from witnesses, to the time of day the crime took place and the temperature of the room where it occurred. A detective looks for **clues**, which are real, measurable, countable observations of the crime and the crime scene. A detective does not know what data or evidence will eventually prove to be important, so he or she observes everything. If clues are overlooked, the detective will get no second chance.

Homework page

Your mother has errands to run this afternoon and takes you along with her. She stops at the bank to make a deposit and the two of you stand in line, waiting for your mother to be helped. Suddenly, one of the teller yells, "We've been robbed!" What did you see while you were standing in line that might help with the investigation of the crime? Use your powers of observation to see what you remember!

Materials: timer, pencil, paper

Procedure:

1. Observe the picture on the next page for exactly 30 seconds. Look at everything that you think might be important.
2. After 30 seconds, cover the picture and answer the questions below. Write the answers on a sheet of paper.
3. How observant were you? Compare your answers to the picture.

Questions:

1. What time was it on the clock? _____
2. What was the date? _____
3. Describe the person at the front of the line. Was it a man or a woman? Was he or she wearing a hat? What kind of clothes was the person wearing? Could you tell how tall the person was? Did he or she have any distinguishing features? _____
4. Did you notice anything unusual about the picture? _____

Repeat the activity

Put the picture away overnight and try to answer the questions the next day. How good is your memory after 24 hours?

Explanation:

When you observe, you create in your mind images of what you see. But what you see also has to be sent to your brain and stored for later. There is a lot of room for mistakes to be made! When you first looked at the picture, maybe you didn't notice certain details. Or maybe you didn't think certain things were important. Much of what we observe is stored in our **short-term memory**, and we remember it only for a few hours, or maybe only a few minutes! If we store observations in our **long-term memory**, however, we may remember them for years. Repeating something over and over helps us remember it.

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