



## CSI

### Pre and Post Visit Materials

The goal of this program and its pre and post-visit activities is to learn about the different techniques used in forensic science.

#### Pre-Visit Activities

1. Go over new vocabulary words as a class. (some words may have multiple definitions but the ones pertaining to the program are listed)
  - Acid – a classification of chemicals which lets the chemist know the molecule has a high concentration of hydrogen ions
  - Adenin – one of the four chemicals that makes up DNA
  - Base – a classification of chemicals which lets the chemist know the substance has a high concentration of hydroxide molecules.
  - Chromotography – the study of different types of ink
  - Cytosine – one of the four chemicals that makes up DNA
  - DNA – deoxyribonucleic acid – the building blocks of human life.
  - Fingerprints – the unique markers on your finger tips, make up of folds of skin. Consists of ridges and whorls
  - Forensics – use of science to study a situation after the fact.
  - Guanine – one of the four chemicals that makes up DNA
  - Thymine – one of the four chemicals that makes up DNA
2. Chromatography test
  - Create a note written on paper towel using a felt tip pen.
  - Pass copies of the note out to each student
  - Each student should have one of each type of pen, paper towel, and beaker with about a centimeter of water in it.
  - Have students follow directions in worksheet. (see below)

## Post-Visit Activities

1. Have the students journal about their trip. The prompt should be, “What was your favorite part of the trip to the museum?” They can either write or draw their response.
2. Create a crime scene
  - Have students utilize the skills they learned at the museum to stage their own crime scene.

# Chromatography

1) Cut your paper towel into four strips. Place a dot on each with a different black pen or marker (leave about a cm between the dot and the bottom of the paper).

2) Which pen or marker do you think wrote the note?

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3) Place the bottom of the paper towel into the water; be careful not to get the ink into the water. Hold the paper in the water for a few minutes, the paper will begin to absorb the water and the ink will begin to separate and create a pattern unique to the pen. Take photos of each pattern. Notate here the order in which you take the photos.

4) Find a period on your copy of the note from the crime scene. Cut it out and repeat the experiment.

5) Which pen/marker do you now think created the note?

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