

**Cowley College**  
**Cowley Science Investigations (CSI) Competition**  
**CSI Contest**

Teams will identify the perpetrators of a crime or crimes by using paper chromatography, DNA profiling, fingerprinting, and analysis of unknown solids found at the scene of a crime. Teams will be given 30 minutes to complete the tasks.

Each team consisting of two members will have their own workstation. Each workstation has a set of fifteen unknown substances, including 3 mixtures, a dropper bottle of iodine, a dropper bottle of 0.1 M HCL, a magnifying glass, a spot plate, pH paper, bottle of distilled water, and solvent (alcohol) for paper chromatography. Safety lab precautions will be enforced and safety goggles will be provided.

The unknown substances can come from the following list.

**Liquids**

Rubbing Alcohol  
Lemon Juice  
Household Ammonia  
Water  
Vinegar  
Hydrogen Peroxide  
Hand Soap

**Metals**

Aluminum  
Iron  
Zinc  
Magnesium

**Solids**

Sodium Acetate  
Yeast  
Calcium Carbonate  
Salt  
Vitamin C  
Sugar  
Plaster of Paris  
Flour  
Powdered Alka- Seltzer  
Corn Starch  
Baking Soda  
Powdered Gelatin

Teams will be required to correctly identify the unknown substances, match fingerprints, DNA profiling, paper chromatography samples, and provide a written analysis of who committed the crime and how they came to that conclusion.

**Scoring:**

1. Safety goggles and procedures are followed (if not followed could lead to disqualification)
2. Number of correct responses (if tie at this point will use no.3)
3. Supporting Evidence in written analysis (if tie at this point will use no. 4)
4. The least amount of time required to complete the competition.

Prizes will be awarded.