Warm-up

- Turn in your safety contract if you haven’t already.
- Open ‘socrative student’ app
  - room code: mccallumscience
  - enter name: last, first
  - Please see me if you need a hard copy
Observations

Deductions and Inductions
Observation Review

- **observation** - what a person perceives using his or her senses.
- **perception** - interpreting information received from the senses.
- **opinion** - personal belief founded on judgement rather than on direct experience or knowledge.
- **eyewitness** - a person who has seen something or someone and can communicate the facts.
How To Be A Good Observer

1. Observe Systematically
2. Turn off filters
3. Collect information first, interpret data later
4. Document
Observations in Forensics

- Study situations
- Find clues in ordinary details
- Work backwards from the evidence to what led up to the crime.
What Forensic Scientists Do

1. Find and document evidence
2. Examine all evidence
3. Evaluate evidence
4. Provide expert testimony in court
   a. demonstrates command of the scientific knowledge
   b. thorough understanding of evidence admissibility standards
   c. discuss finding and conclusions with confidence
   d. must demonstrate scientific objectivity
   e. must have good communication skills
What Forensic Scientists Do

- Part of training for forensic scientists and police officers is learning to take in the entire scene before making a final assessment based on observations.
- They must avoid tunnel vision when they observe a crime scene.
What Forensic Scientists Do

- Forensic scientists are trained to not only observe but also to carefully analyze what they see.

- **Analytical skills** - the ability to identify a concept or problem, to isolate its component parts, to organize information for decision making, to establish criteria for evaluation, and to draw appropriate conclusions.
Deductive Vs. Inductive Reasoning

- **Inductive reasoning** - a logical process in which multiple premises, all believed true or found true most of the time, are combined to reach a conclusion about the evidence.
  - Tool for discussing probability
  - Used for circumstantial evidence
  - Example: Footprints found at the crime scene indicate that the suspect wore a size 10 shoe. The defendant also wears a size 10 so it is possible that the defendant left the footprints at the crime scene.
Deductive Vs. Inductive Reasoning

- **Deductive reasoning** - deriving the consequences from the facts using a series of logical steps.
  - If all of my premises are true then the conclusion must be true.
  - Used for concrete evidence
  - Example: A trail of bloody footprints left at the scene were a size 10. A size 10 pair of shoes were recovered from the defendant and had traces of blood matching blood from the scene. Therefore, the defendant can be placed at the scene of the crime.
Example of Deductive Reasoning

- A cat, a small dog, a goat and a horse are named Angel, Beauty, King, and Rover. Read the clues below to figure out each animal’s name.
  - King is smaller than both the dog and Rover.
  - The Horse is younger than Angel.
  - Beauty is the oldest and a good friend of the dog.