# BLOODSTAIN SCIENCE

Name _____

**1. BPA = _____ _____ _____**

**2. What can an investigator learn from the analysis of a blood spatter?**

- Type and velocity of _____
- Number of _____
- Handedness of assailant (_____or _____-handed)
- _____and _____of the victim and assailant during and after the attack
- Which _____were inflicted first
- Type of _____
- How long ago the _____was committed
- Whether _____was immediate or delayed

**3. What are several methods for detecting traces of blood at a crime scene?**

**4. Identify these terms associated with bloodstain pattern analysis.**

_____ – Bloodstains created from the application of force to the area where the blood originated.

_____ – The place from where the blood spatter came from or originated.

_____ – The angle at which a blood droplet strikes a surface.

_____ – The droplet from which a satellite spatter originates.

_____ – Small drops of blood that break off the parent spatter when the blood hits a surface.

_____ – The pointed edges of a stain that radiate out form the spatter; can help determine the direction from which the blood traveled.

**5. What are the basic types of bloodstain patterns?**

- **Passive Bloodstains**
  - Patterns created from the force of _____
  - Drop, series of drops, _____ patterns, blood _____, etc.
- **Projected Bloodstains**
  - Patterns that occur when a _____ is applied to the _____of the blood
  - Includes low, medium, or high _____ spatters, cast-off, _____ spurting, _____ blood blown out of the nose, mouth, or wound.
- **Transfer or Contact Bloodstains**
  - The pattern created when a wet, bloody object comes in _____ with a target surface; may be used to identify an _____ or body _____.
  - _____ pattern from an object moving through a bloodstain or _____ pattern from an object leaving a bloodstain.

**6. Watch the "Blood Spatter Science" movie from United Streaming to help you complete this section.**

- What kind of blood do the investigators use in their "crime scenes"? _____
- True or False? Blood evidence follows a definite pattern that can be applied to every crime scene.
- Complete this statement: What you can't _____, you can't _____.

**7. Blood Spatter Labs**

**Lab 1: Complete the *Single Drops* lab and answer the questions.**

What did you notice about the diameter of the parent droplets as you increased the height of the drop?

How do the spines compare from the different heights?

**Lab 2: Complete the *Multiple Drops* lab and answer the questions.**

What did you notice about the diameter of the parent droplets as you increased the height of the drop?

What do you notice about the diameter of the satellite spatter as you increased the height of the drop?

**Lab 3: Complete the *Motion Droplets* lab and answer the questions.**

Draw a sketch of the droplets showing the size, shape, and/or distance between them at each speed in the chart below.

| Walking Rate | Sketch |
|---|---|
| Slow | |
| Normal | |
| Fast | |

What did you notice about the shape of the droplets as you increased your walking speed?

What did you notice about the spines as you increased your walking speed?

What did you notice about the distance between the droplets as you increased your walking speed?

**Lab 4: Complete the *Angle of Impact* lab and answer the question.**

What did you notice about the shape of the droplets as you increased the angle of the paper?