

## Activity 1: Identifying Bloodstain Patterns

### Background

Blood is a colloidal fluid, a suspension of materials in a viscous liquid. Like other liquids, when blood is propelled through the air, either through gravity or by some impact force, it tends to form a symmetric spheroid shape. Interaction with a surface distorts a blood drop's shape in a characteristic way according to the force and angle of impact and the features of the surface. Analysis of the pattern formed on the struck surface helps in identifying the actions that initiated the flight of the blood.

We categorize blood patterns as spatter and non-spatter. Blood spatter is stains formed by free-flight droplets that have struck a surface. Non-spatter bloodstains are those made by blood from sources other than free-flight droplets. Both spatter and non-spatter patterns are divided into subcategories.

### Spatter Patterns



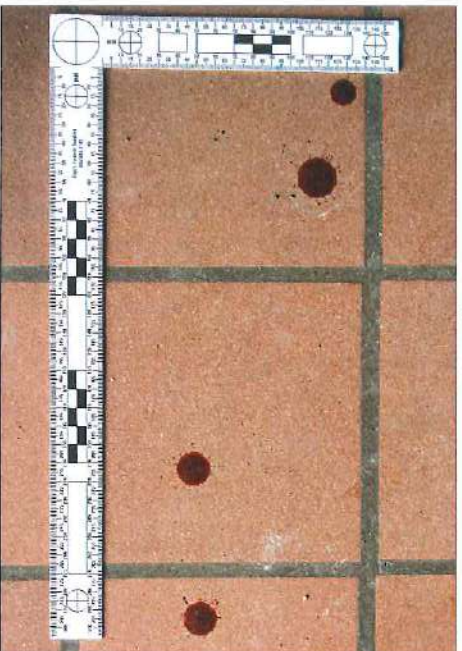
Spurt

Ejected under pressure, usually from an artery



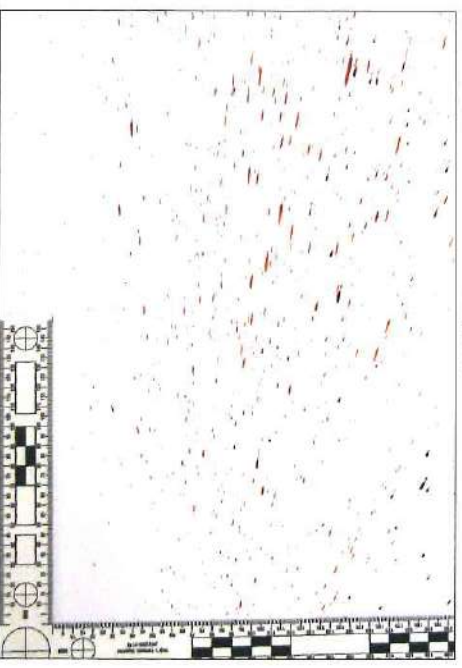
Cast-off

Flung from an object that is in motion or stops suddenly



Drip trail

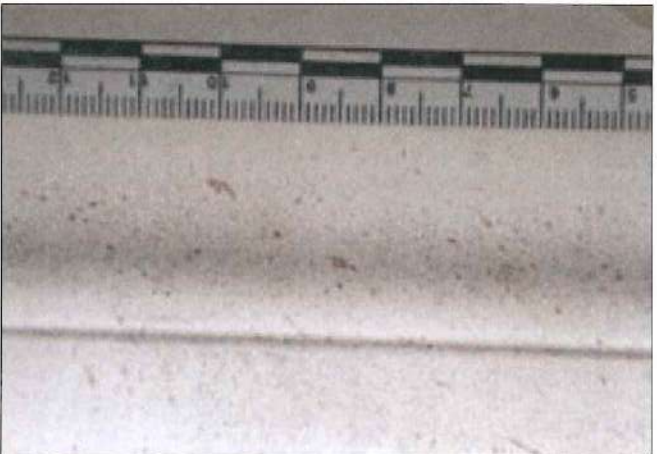
Blood drops from a moving object



Impact

A radial pattern caused by blood being broken up at a source by force

Expectorate/Mist



Blood forced from the mouth, nose, or respiratory system

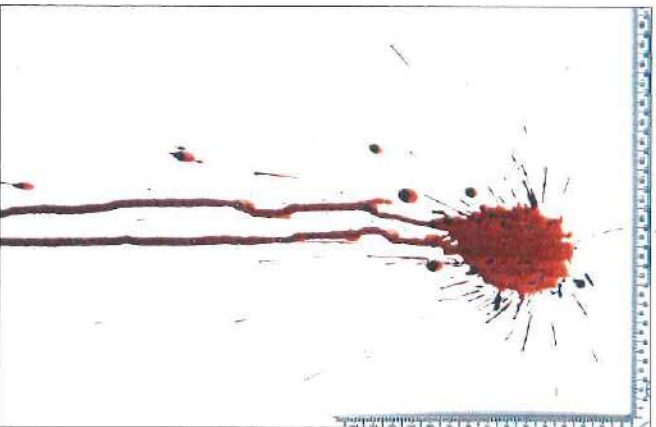
Drips



Blood drops from a stationary object

### Non-spatter Patterns

Gush/splash



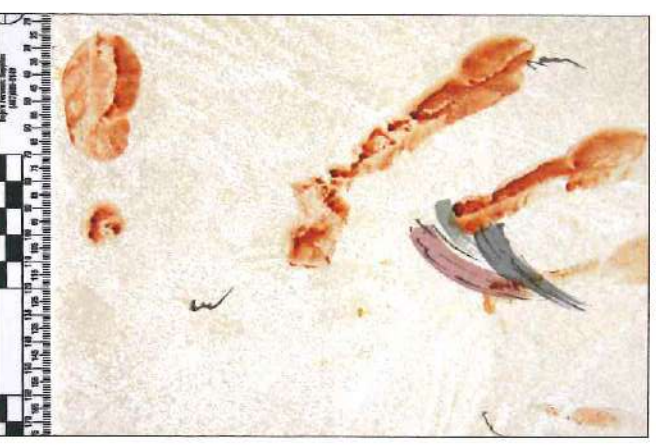
Blood is ejected in volume

Smear



Transfer from one object to another through contact and lateral movement

Pattern transfer



Transfer that imparts a recognizable characteristic



Blood in blood

Drips deposited into one another



Wipe

Made when an object moves through a pre-existing stain



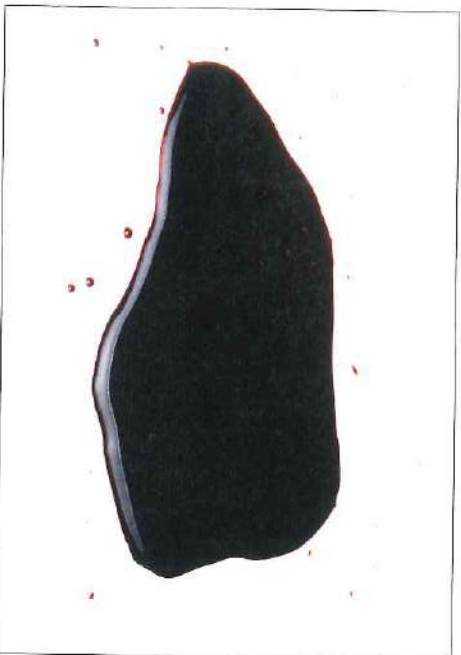
Swipe

Transfer from a bloody object to another through lateral motion



Saturation

Accumulation created by contact with an absorbent material



Pool

Accumulation of blood due to gravity



Flow

Movement of blood in mass due to gravity

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