

Casts and Impressions

I. Types of Impressions

People, vehicles and objects leave evidence of their presence at an accident or crime scene

Patent Impressions are _____

Latent Impressions are _____

Plastic Impressions are _____

Depending on how it is made, impression evidence may be either class evidence or individual evidence.

- A particular tread pattern in shoes or in tires may identify the _____ and _____, but it does not identify a specific individual or tire.
- Distinguishing characteristics, such as a split on a shoe sole or unusual wear on a car tire, can be used as _____ evidence.
- Dental impressions are typically considered _____ evidence and have a long history of use to identify individuals, especially during wartime to identify remains.

A. Shoe Prints

- Shoeprint size indicates the _____
- Depth of a foot or shoe impression indicates a _____
- Type of shoe can tell something of the person's _____ or _____

**Databases contain the names of specific manufactures and tread designs

1. Factors that personalize a person's footwear

a) Body Weight

b) Way a person walks

- _____

- _____

c) Surface on which the person walks

d) Unique _____, _____ and _____ embedded in the tread

2. Collection of Shoe Impression Evidence

- Take _____ as soon as possible with at least _____ different orientations
- Place an identifying label and a _____ in position with the impression
- Use _____ lighting when possible

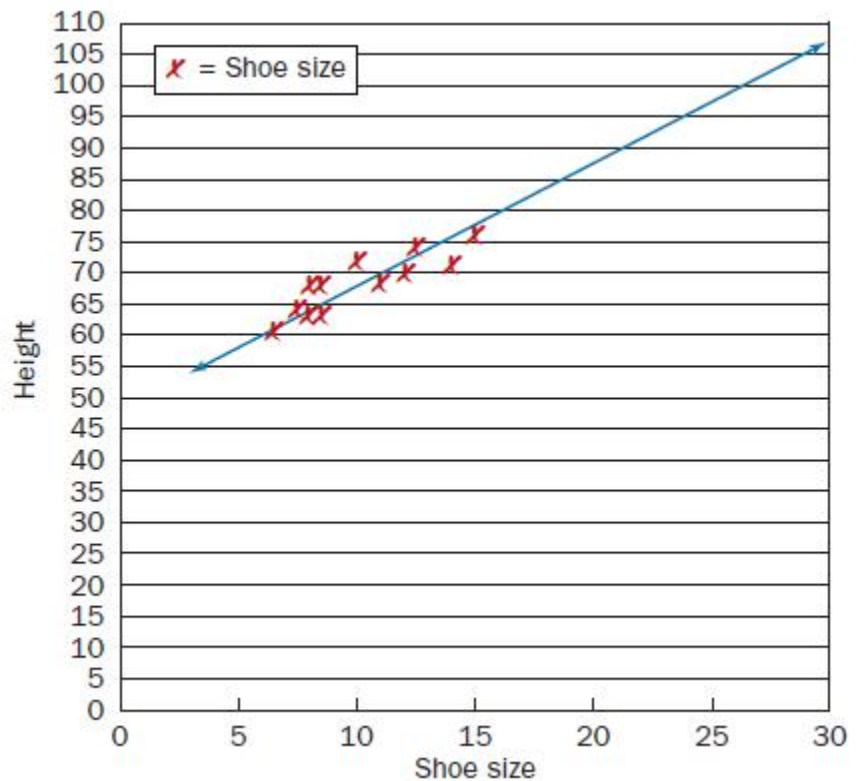
3. Lifting Latent Impressions

- _____ makes bloody footprints visible
- _____ the latent print reveals impressions
- _____ lifting and gel lifting capture hidden impressions

Reveals dust left with each step and creates an impression

Can lift impressions from:

Comparing Shoe Size and Height



B. Tire Treads

Tire treads: _____ and _____ channel water away and provide traction

- Patent tread patterns: impressions made after tire runs through a _____ material
- Latent tread patterns: impressions from _____ used to keep tires soft and pliable
- Plastic tread patterns: three dimensional impressions left in _____

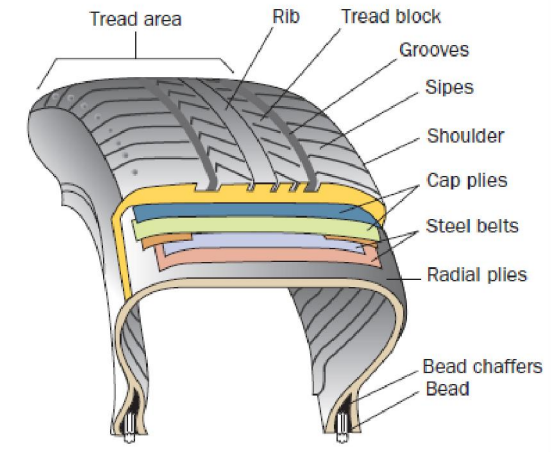
Tire tread patterns can indicate the _____ that left mark

- link a _____ or _____ to crime scene
- reveal _____ that took place at the scene

Anatomy of a tire

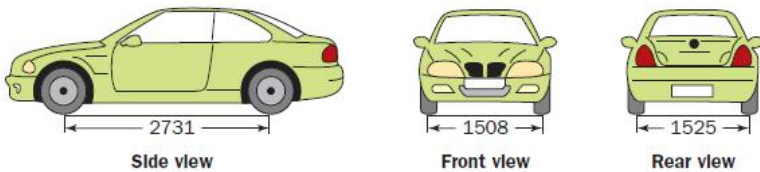
1. Recording Tread Impressions

- Count _____ and _____ across the tire width
- Note unique characteristics - _____ or _____ embedded in the grooves
- Create a _____ of the suspect's tire impressions through one revolution
- _____ impressions from the crime scene and suspect's tire

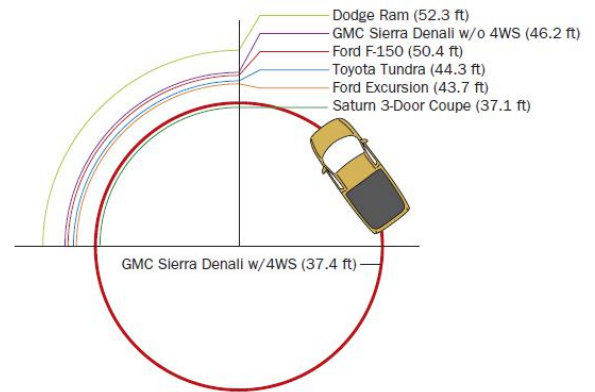


2. Identifying a vehicle

- Track widths – from _____ of tire to _____ of tire
- Wheelbase length – from center of _____ axle to center of _____ axle



Turning Diameter



3. Accident Reconstruction

- A. Drivers may not recall the exact series of events before, during, and after an accident
- o People, vehicles, and objects can leave evidence of their actions at the scene of an accident

o Debris patterns and tire marks can be clues to _____, _____, and _____ identification

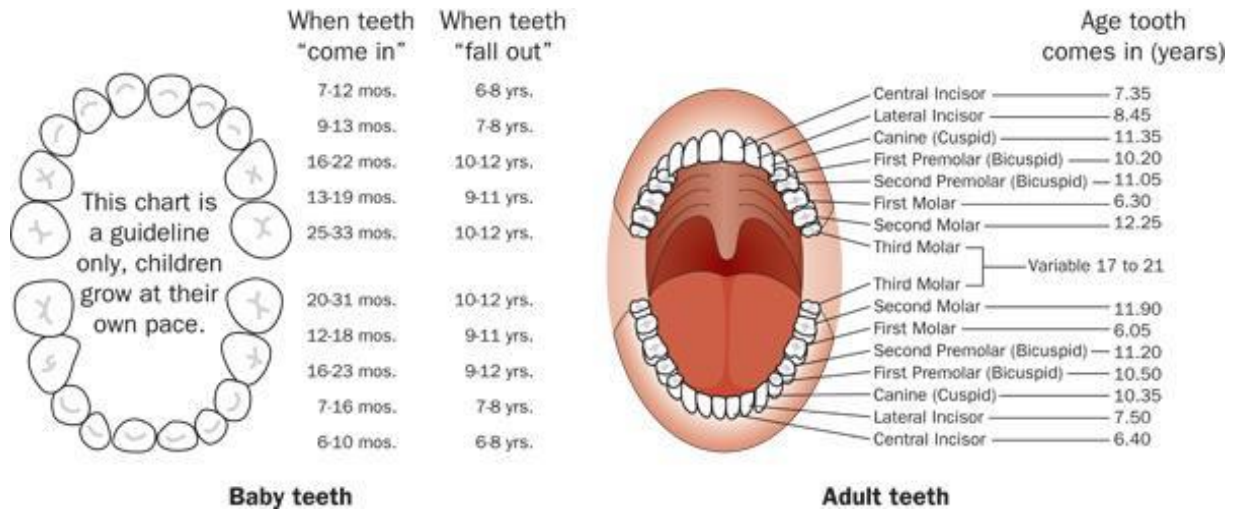
- B. There are three basic types of tire marks

- Skid marks—clues to the _____ after brakes are applied and the vehicle's speed
- Yaw marks—shows a _____ skid
- Tire scrub—determines the area of _____

C. Dental Impressions

- Occasionally a perpetrator will leave behind a bite mark—considered _____ evidence
- Factors that contribute to the individuality of our teeth include the number, size, coloration, alignment, unique fillings, crowns, caps, the distance between teeth, and the overall condition of our teeth.

1. Development of teeth



2. Purpose of Teeth

- a. Incisor: used to _____
- b. Canine: sharpest teeth and are used for _____
- c. Molar: used for _____

3. Dental Patterns and Forensic Investigations

- o The investigation consists of recognizing, documenting, collecting, and analyzing evidence
- o There are _____ points of comparison when comparing a suspect's dental patterns with bite marks left at a crime scene
- o If an assailant bites a victim, it is important that the bite marks be photographed while the impression is still visible
 - Photographs should include a _____
 - When an attacker bites a victim, _____ may be left on the victim's skin
 - _____ can be collected and analyzed