

Activity 2a

Student Page

Height Analysis

Objectives

- Determine the relationship between the length of the foot (stride, humerus, tibia, femur, radius) and the height of an individual.
- Use this relationship to determine the height of an unknown individual (victim, suspect) based on evidence from the crime scene.

Materials

- Flexible measuring tape (at least 2 m length)

Procedure

Record your data and conclusions in your *Forensic Investigation Lab Book*.

Part 1: Determining the Relationship between Foot Length and Height

1. Student “test subjects” place the heels of their left feet against a wall. Measure the length of the left foot (from where heel touches wall to tip of toe) in centimetres. Record measurements in a data table.
2. Measure the height of each individual in centimetres. Record measurements in another column in the data table.
3. Graph your data.
4. Divide the length of the foot by the height of each individual, and multiply by 100. Record in another column in your data table.

Relationship between Foot Length and Height			
Name of Individual	Foot Length (cm)	Height (cm)	Foot Length to Height Ratio X 100

Part 2: Determining the Height of an Individual Based on Foot Length

1. Using the data and conclusions from Part 1, determine the height of the victim and/or suspect based on his or her foot impression, shoe size, and/or foot bones.

Analysis

1. What conclusion(s) are you able to make about any relationship that may exist between height and foot length? For instance, what pattern do you see in the values that represent the ratio of foot length to height?

2. Test your conclusions further by measuring the length of a few more feet and predicting the height of those individuals.