The Science of Ridges

1. __________________ is the study of the uniqueness of friction ridge structures and their use for personal identification.

2. As we have learned in our first lesson, a fingerprint is made of a series of ___________ and ___________ on the surface of the finger. The uniqueness of a fingerprint can be determined by the ___________ of ridges and valleys as well as the ___________ points, which are points where the ridge structure changes.

3. When minutiae on two different prints match, these are called points of ___________ or points of ___________. At this point there is ______ international standard for the number of points of identification required for a match between two fingerprints. However, the United Kingdom requires a minimum ___________ points while Australia requires ___________.

4. AFIS = ____________ __________________ ________________ ________________

5. Ridge Characteristics - Draw the different ridge characteristics listed below.

Core  Ending Ridge  Short Ridge  Fork or Bifurcation
Delta  Dot or Island  Eye  Hook
Crossover  Bridge  Enclosures  Specialty
6. How many ridge characteristics can you identify in this fingerprint? Use a hand lens and highlighter to help you identify the characteristics and then label each one.

**Try It!** - Analyze the fingerprints on your “My Prints” worksheet to see how many ridge characteristics you can find.

Which ridge characteristics did you find in your fingerprints? List them below and mark the two most common ones with a star.