**Approaches to Structural Analysis:**

1. **GEOMETRIC:** - types of structures, locations, orientations, relationships, age sequence.

2. **KINEMATIC:** - having to do with the motions that occurred to produce the observed structures.

   *e.g.* fault slip; opening across a dike

3. **MECHANICS:** - the nature of the forces or stresses that produced the observed motions and feature types.

Accordingly, can develop different types of **CONCEPTUAL MODELS:**

**GEOMETRIC MODELS:** - *3D interpretations of the types and distributions of structures (e.g., geologic maps and cross sections)*

**KINEMATIC MODELS:** - *shows the history of events that led up to the current configuration*

**MECHANICAL MODELS:** - *based on the underlying physics behind continuum mechanics.*

*Read: The Scientific Method (Box 1-1; p. 4-7)*