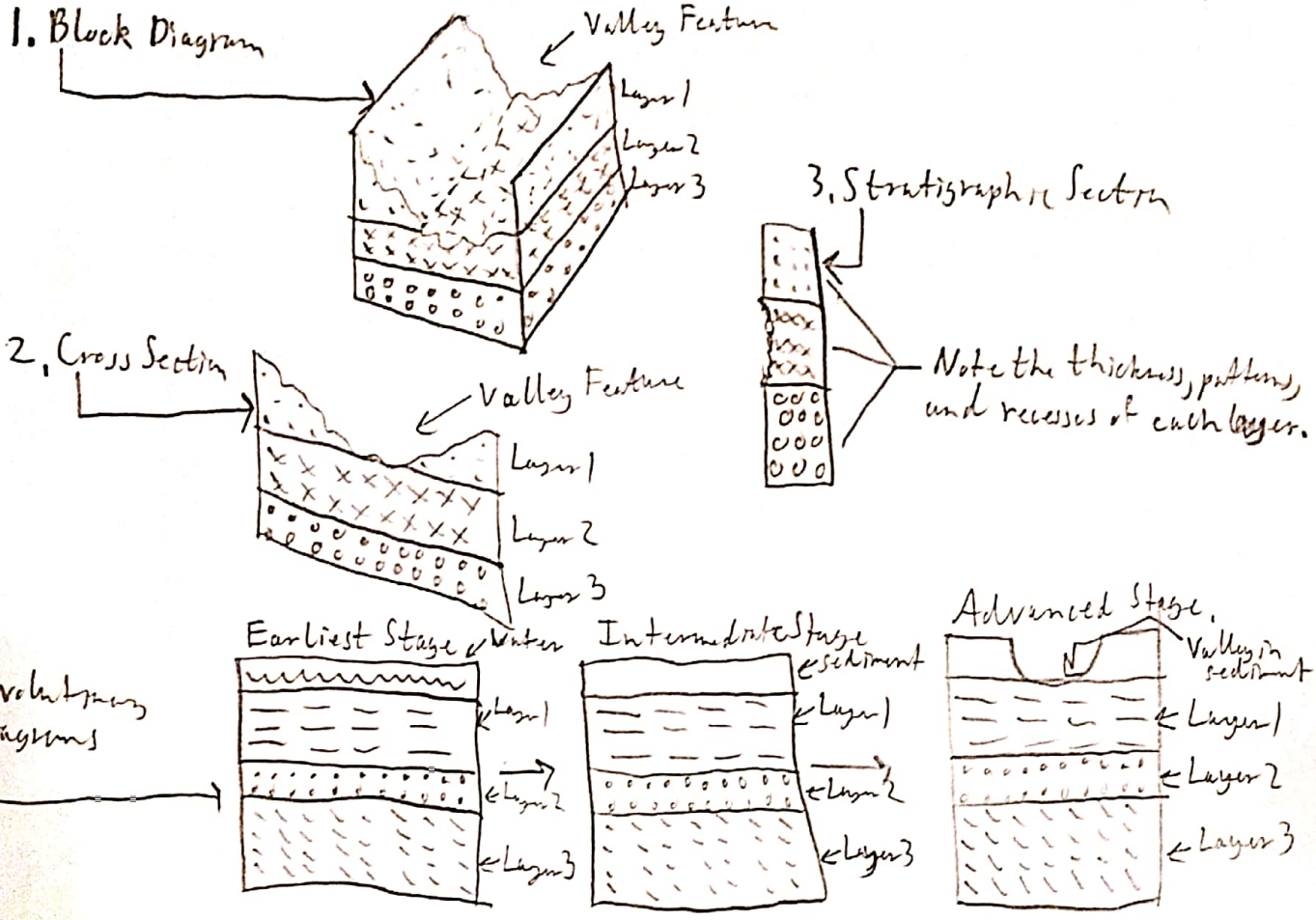
Question: Sketch, label, and describe the three types of diagrams geologists use to represent subsurface geology (block diagram, cross section, stratigraphic section). Also, sketch, label, and describe what is shown by a series of evolutionary diagrams.



1. Block Diagram: 3D display of shape of land section. It shows both the surface and rock layers beneath the surface, as well as features like faults, folds, etc.

2. Cross Section: 2D display of land section formed as if making a vertical slice in the area. Helpful in displaying various land features and rock units beneath the surface.

3. Stratigraphic Section: Display of stacks of rock units in a section of land. It takes care to indicate the thickness of each rock layer as well as the composition of each layer through the patterns in each rock layer. Recesses in certain layers help convey the ease at which some rock layers weather and erode.

4. Evolutionary Diagrams: Displays that show changes of a land area as a series of steps over time. These displays can be block diagrams, cross sections (as shown above), or maps. This series of steps starts with a layer of water that then deposits sediment on the second layer, forming a new rock layer. The series ends with the top layer being weathered and eroded away, forming a sort of valley.