



SANTA ANA COLLEGE

Student Learning Outcomes

Geology SLOs

By the end of the course, students will be able to:

Geology – ADT

1. Apply the scientific method.
2. Describe the role agents of erosion plays in shaping the earth's surface.
3. Explain the relative motion between tectonic plates at each of the three types of plate boundaries.
4. Identify rocks and minerals based on their physical properties.
5. Recognize the magnitude of the geologic time scale.
6. Recognize the role of constructive and destructive forces in the shaping of the earth's surface.
7. Use topographical maps to interpret the earth's surface.

GEOL100 – Natural History of Southern California

1. Identify major rock types observed during field trips.
2. Identify topographic and geologic features during field trips.
3. Show basic knowledge of geologic processes, structure, and history of field trip areas.
4. Relate plate tectonic processes to geology of field trip areas.



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5. Describe the major weathering and erosional processes operating in field trip areas.

GEOL101 – Physical Geology

1. Apply the terms stress, deformation or vulcanism, and plate boundary to describe the tectonic evolution of a specific mountain range (i.e. the Sierra Nevadas).
2. Compare and contrast the physical characteristics of each of the 3 types of stream channels.
3. Explain how specific agents of mechanical and chemical weathering can weaken and break-down.
4. Describe the differences between constructive and destructive geologic forces and provide a specific example of each.
5. Use physical properties (hardness, cleavage, streak, heft, etc.) to identify minerals.
6. Describe the relative movement of tectonic plates at each of the 3 types of plate boundaries.
7. Describe the eruptive and physical characteristics of the 3 types of volcanoes.
8. Use texture and composition to identify rocks.

GEOL102 – Physical Geology Lecture

1. Describe the eruptive and physical characteristics of the 3 main types of volcanoes.
2. Describe the differences between constructive and destructive geologic forces and provide a specific example of each.
3. Explain how specific agents of mechanical and chemical weathering can weaken and break-do.



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4. Compare and contrast the physical characteristics of each of the 3 types of stream channels.
5. Describe the relative movement of tectonic plates at each of the 3 types of plate boundaries.

GEOL102L – Physical Geology Laboratory

1. Use topographic maps as a tool to locate landmarks, interpret topographic and geologic erosional and depositional landforms.
2. Identify different forms of mass wasting and determine the trigger for the mass wasting.
3. Use physical properties (hardness, cleavage, streak, heft, etc.) to identify minerals.
4. Use texture and composition to identify rocks.
5. Locate the epicenter of an earthquake using seismogram records.

Source: [Cerritos College](#)