



## Lecture 12 Geology

- 1. What are the three major types of rock? Describe how they are formed, and provide named examples of each type of rock.*
- 2. Briefly discuss the difference between physical (mechanical) weathering and chemical weathering.*
- 3. Discuss how abiotic factors vary with slope position and slope aspect.*

## Lectures 13 and 14

- 1. What are the five factors that affect soil formation?*
- 2. Define soil texture? What are the three different size classes of particles that make up soils?*



*What factor largely determines the available water capacity (AWC) of soil? Why is this so? Name two additional factors that contribute to the AWC.*

*Describe two adaptation plants have evolved to increase their supply of Nitrogen when growing in Nitrogen deficient soils.*

### **Lecture 15 Physical Environment**

3.12. Describe the adaptations that allow plants to deal with the constraints of waterlogged soils.

3.13. Describe the constraints placed upon plant growth by too much soil salinity.

3.14. Describe the adaptations that allow halophytes to grow in saline soils. Use named examples of halophytes to support your answer.

## Lecture 16 Fire

Describe three strategies followed by perennial plants that allow them to live in fire prone environments. Name an example of a plant from each category.

What are 'fire cones' provide three named examples (common and scientific names) of trees that depend on fire for regeneration.

## Lecture 17 Pollination

Provide definitions for the following terms; monoecious, and, dioecious. Provide named examples of California native plants for each. Discuss the advantages and disadvantages of each mode of sexual reproduction.

Describe the process of sexual reproduction in an insect pollinated plant species. Name and describe the different floral structures and describe the role that each structure has in pollination.

Compare and contrast a typical wind pollinated flowers to typical animal pollinated flowers.

## Lecture 18 Plant Defenses

What are trichomes? Where are they located, describe how they defend the plant, and name a species of California plant that possesses trichomes

Compare and contrast thorns and spines in terms of their structure and their function .

Describe five physical and/or chemical adaptations that allow plants to defend themselves against animal herbivores.

What is the purpose of plant secondary compounds? Provide two examples of this type of compound.

What are tannins? Describe their location in plants, and how they function to defend plants against herbivores. Provide a named example of a plant with this type of defence.

What are terpenoids? Describe their location in plants, and how they function to defend plants against herbivores. Provide a named example of a plant with this type of defence.

## Lecture 19 Vegetation

Provide definitions for the terms vegetation and flora and vegetation type.

Provide two named examples of Vegetation Types that we have seen, or will see, on our field trips.

What are transitional boundaries. Provide an example.

## Lecture 20 Ecological Succession

Describe the general characteristics of an early Pioneer species

Describe the general characteristics of a Non-pioneer species

Provide two examples of situations where primary succession could be studied.

What was the first plant to colonize the ash fields of Mt St Helens?

Using specific examples for each explain the differences between primary and secondary succession.

Briefly describe two common causes of secondary succession.



Describe the observed sequence of ecological succession that occurs once a Glacier has retreated exposing bare sediments. Identify a type of plant that would be a pioneer, and describe it's characteristics. Identify a Non-pioneer plant and describe it's characteristics. What would be the end point of succession?