Study Guide for Natural History Exam 1

The exam will include: Identification, fill in the blank, matching, multiple choice, short answer, long answer, drawing diagrams

Natural History

- Definition of natural history and how to best learn about nature
- Background and major impacts of the 3 well known naturalists we discussed in class

What makes California so unique/special?

- Be prepared to give a detailed answer to this question.
- Highest & lowest points in continental US – where are they and what are the elevations?
- Where is the driest place in the US and the hottest place?
- Be able to discuss its complex geographic history.
- Why does Cali have such a great diversity of habitats?

Geology of California

Rocks and Minerals

- *Have a detailed understanding of the rock cycle and be able to make a detailed sketch of the rock cycle.
- What are minerals made up of?
- What are rocks made up of?
- Describe the different rock types, how they are made and be able to give multiple examples of each and where they might be found in California.
- Be able to identify the rocks you examined and sketched in class. Those rocks can be reviewed in the display case down the hall from our classroom.
- In what rock type are fossils usually found?
- What rock type is coal and how was it made?
- Be familiar with the following terms: lithification, sedimentation, cementation, crystallization, magma, lava, erosion, weathering, uplift.
- Be familiar with the major fossils we discussed in class.

Plate Tectonics and Faults

- Be familiar with the following: Plate tectonic theory, Pangaea, Ring of Fire, plate boundaries, transform plate boundaries, divergent plate boundaries, convergent plate boundaries (ocean-ocean, ocean-continental, continental-continental), rift valleys, faults, and subduction.
- Why are the plates moving?
- What are the 4 major plates of California? (hint - one of them has already fully subducted beneath one of the others)
- What is the San Andreas Fault and how was it created?
- What actually causes earthquakes?
- Know the difference between creep zones and locked zones.
- Know the difference between the 2 kinds of fault blocking – horsts and grabens

Volcanoes

- What role does the Ring of Fire play in the formation of volcanoes in California?
- What are the Cascades?
- Know the 4 volcano types, how they are formed, and examples of each type here in California.
- Know that within Lassan Volcanic National Park, examples of each type can be found – what are those examples?
- Mt. Tehama (Brokeoff Volcano) – what peaks make up the remnants of this volcano?
- What are lahars?

Sculpting California landscape

- How are sand dunes formed?
- What are some different ways water sculpts the landscape?
- What kind of valleys do rivers form? How about glaciers?
- Be familiar with the following: glaciers, moraines, glacial striations,
- How are glacial lakes formed?
- Know examples of locations in California that were shaped by glaciers during the Pleistocene.
- Where can you find glaciers in California today?
- Which glacier is the largest in California?
- Which is the longest in California?

***Be able to discuss and sketch the formation of California using what you learned from the geology section above. See the field notebook activity on this topic.**

<u>Atmosphere and Weather</u>

- Define atmosphere
- How is wind created?
- What role does wind play in the creation of the Earth's weather?
- What creates high pressure systems?
- What creates low pressure systems?
- Describe the Aleutian Low and the Pacific High and the roles they play in creating California weather.
- Describe the rain shadow effect and be able to sketch it.
- Why do we have seasons?
- How are clouds formed?
- Be able to describe and identify the different types of clouds we discussed in class.