

# San Francisco Coastal Geology Field Class

## PREPARATION HOMEWORK FOR 1st FIELD DAY PREQUIZ

Read Field Guide Review document and the following pages from the textbook:

Geology of the San Francisco Bay Region, Pgs. 1-17, 26-35, 48-63, 110-130, 134, 141-155, 180-183

**FIGURES OF NOTE:** Pg. 12: Plate 1, Pg. 14: Figure 2, Pg. 12: Figure 4, Pg. 30, Figure 9, Pg. 33: Map 4, Pg. 35, Figure 11, Pg. 54: Figure 17, Pgs. 112-115: Maps 11 and 12; Pg. 116, Figure 21, Pg. 119: Figure 23, Pg. 123: Map 13, Pg. 142: Figure 29, Pg. 143: Figure 30, Pg. 144, Figure 31

This activity will help you prepare for the online quiz, which is due by 6 am the Friday morning before the first field day.

1. The continental shelf extends offshore of San Francisco about 27 miles. The Farallon Islands mark the edge of this shelf. How deep is the water at the edge of the shelf?	
2. How deep is the water just a few miles further west of the Farallons, over the abyssal plains?	
3. What happens occasionally to the sediment that piles up on the continental shelf?	
4. What do the above carve out as a result?	
5. Describe the grain size and composition of sand that is <b>close</b> to its source.	Grain size: <span style="float: right;">Grain composition:</span>
6. What is the general direction of longshore current along the Pacific Coastline?	
7. What directions do tides move along the California Coast?	
8. What is the mean spring tide range (largest monthly difference in height between low and high tide) in San Francisco?	
9. Which of these rocks forms when magmas erupt on the bottom of the seafloor? (circle)	Mudstone   sandstone   conglomerate/breccia   chert   basalt   granite   serpentinite
10. Which of these minerals found on a beach is clear and glassy?	Quartz   Magnetite   Chert   Feldspar   Serpentinite   Black nonmagnetic   Shells

## PREPARATION HOMEWORK FOR 2nd FIELD DAY PREQUIZ

Review reading materials listed as preparation for the first field day.

This activity will help you prepare for the online quiz, which is due by 6 am the Friday morning before the first second day.

1. What is the age of the old wave-cut platform at Fort Funston?	
2. When was the end of the last ice age? (When did water first start to rise?)	
3. What is the age of the San Andreas Fault?	
4. What is the age of the granite that makes up Mt. Montara?	
5. What is happening to the portion of San Francisco Bay (including San Francisco and San Jose) that sits between the Hayward and San Andreas Faults?	
6. What is happening to the region that sits east of the Hayward Fault and west of the San Andreas Faults?	
7. Where does the San Andreas Fault leave the coastline?	
8. What is the name of the closest submarine canyon to Ocean Beach? And where does it sit? (offshore of what part of the coastline)?	
9. Where does the Sacramento River dump its sediment today?	
10. What was one of the main strategies used in Pacifica to manage coastal erosion at Pacifica State Beach?	