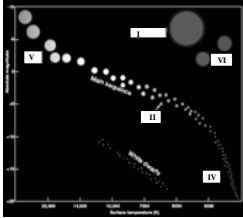
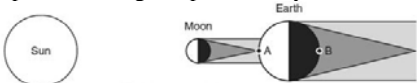
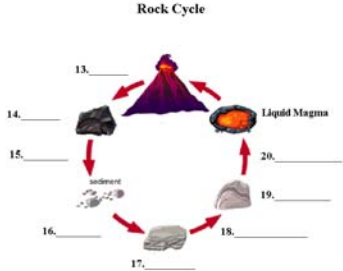
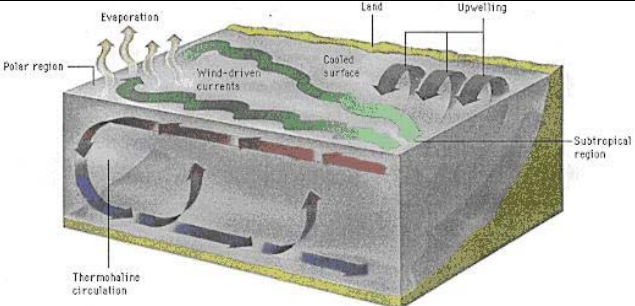


Essential Standards Chart

Grade: 9-12	Subject: CP Earth Science	Term: 1 and 2	Team Members: John Fuller JoAnne Cook Alex Uribe		
Standard Description	Example Rigor	Prerequisite Skills	Common Assessment	When Taught?	Extension Standards
What is the essential standard to be learned? Describe in student friendly language.	What does proficient student work look like? Provide an example and/or description	What prior knowledge, skills, and/or vocabulary are required for mastery of this standard?	What assessment(s) will be used to measure student mastery of this standard?	When will this standard be taught?	What will we do when a student has mastered this skill?
1. I am able to use the metric system for taking measurements and to be able to change between metric units in the study of mass, volume, and density.	If an object has a mass of 4.0 grams and a volume of 2.0 mL, what is the object's density?	Can multiply and divide using simple algebra. Know what a graduated cylinder and digital scale are. Be able to manipulate the Density equation: $D = M/V$	Science Skills Quiz	Week 1	
2. I know the composition, physical properties, and fusion process of the stars, including the sun and use the H-R diagram to determine the life cycle of stars.	On the H-R diagram above, The sun, is found at found at position _____. Small red dwarf stars with the low surface temperatures are found at position _____. 	Can read a graph and tell values on the X and Y axis. Know that stars come in a variety of colors, brightness's, and sizes based upon age and mass. Know vocab; Element Fusion Temperature Life cycle Gas Dwarf	Astronomy: Stars and Galaxy Quiz	Week 2	
3. I am able to describe the shape, structure, and categories of galaxies.	The Milky Way is a _____ galaxy.	Know basic terms for shapes- such as spiral or elliptical. Know the difference between solar system, galaxy, and universe.	Astronomy: Stars and Galaxy Quiz	Week 2	
4. I know how planets, their satellites and stars (solar systems) form together as described by the Solar Nebular Theory.	After the young Sun formed, the spinning disk of gas and dust formed _____. Which planets were formed from the rocky inner hot regions of the solar nebula?	Know what the solar system was like before the sun began to form. Know vocabulary terms; revolution rotation, Orbit, Disc, Density, Terrestrial Planet, Moon, Star	Astronomy: Big Bang and Solar Nebular Theory Quiz	Week 3	

<p>5. I can describe how and why we see moon phases, lunar and solar eclipses, and how the moon formed.</p>	<p>Explain the Large Impact Theory on the formation of the moon?</p>  <p>(Not drawn to scale)</p> <p>Using the diagram above describe which type eclipse is occurring and what location (A or B) will it be visible.</p>	<p>Understand the solar nebular theory and how bombardment can effect a planet. Know that the moon changes throughout the month and that objects cast a shadow if they block the light. Know vocab; Earth, moon Sun rotation revolution eclipse</p>	<p>Astronomy: Astronomy Unit Exam</p>	<p>Week 4</p>	
<p>6. I am able to use earthquakes and volcano locations and geologic features to identify plate boundaries location and type.</p>	<p>At a convergent boundary between two CONTINENTAL PLATES lithospheric plates_____.</p> <p>a. collide and build mountains tallest mountains (Himalayans) c. slide past one another b. split apart and create new ocean crust d. collide and sub-ducts underneath the other forming mountains, trenches.</p>	<p>Understand the theory of continental drift and the causes of plate movement. Know basic geographic terms to include; sub-ducts underneath the other Be able to read a graph with X and Y values.</p>	<p>Plate Tectonics Unit Exam/ Plate Tectonics Mapping Quiz</p>	<p>Week 6/7</p>	
<p>7. I know how rocks change between igneous, sedimentary, and metamorphic types.</p>	<p>Use the word bank below to complete the Rock Cycle Diagram Lava, Metamorphic Rock, Sedimentary Rock, Igneous Rock, Weathering, Deposition and Lithification, Heat and Pressure, Melt</p> 	<p>Know what temperature and pressure is. Know what erosion and weathering are. Know how magma can crystallize. Understand the concept of melting and freezing. Know the meaning of the term cycle.</p>	<p>Rock and Mineral Quiz</p>	<p>Week 8</p>	
<p>8. I know the difference between absolute and relative dating and be able to calculate the ages of rocks</p>	<p>1. On the geologic cross section map, you used what method to determine the ages of the rocks? a. relative dating b. absolute dating</p> <p>2. If the half-life of a rock is 300 million years, and it has 1/8 parent isotope and 7/8 daughter product, How old is the rock?</p> <p>3. List the events below in order from oldest to youngest.</p>	<p>Complete basic multiplying and dividing using algebra. Be able to read a diagram with a legend. Understand geologic time (present day to 4.5 billion years ago) Know vocab: Absolute and relative</p>	<p>Topo/ X-Sectional Mapping, CA Water Quiz</p>	<p>Week 11</p>	

	<p>Relative Ages of Rock Layers</p> <p>(Oldest)</p> <p>KEY</p> <p>Igneous Intrusion</p> <p>(Youngest)</p> <p>Sedimentary rocks</p> <p>Figure 3</p>				
<p>9. I know the composition, structure, and evolution of our atmosphere</p>	<p>1. What are the primary 4 layers of the atmosphere in the correct order from the Earth's surface into space?</p> <p>2. Which kind of bacteria were responsible for changing the earth's atmosphere from carbon dioxide to oxygen?</p>	<p>Know the basic names of common atmospheric gasses. Be able to graph data on a chart using X and Y values. Know that plants give off oxygen and take in carbon dioxide. Know that our atmosphere has changed composition over time.</p>	<p>Atmosphere Quiz</p>	<p>Week 12</p>	
<p>10. I can identify how absorption and reflection of light affects global and local weather patterns/climate</p>	<p>1. The city of San Francisco is surrounded by water on three sides how does this affect its temperature range throughout the year?</p>	<p>Understand how the Earth is mapped into sections called latitudes. Know that different substances absorb or reflect heat differently. Know that the earth is tilted. Know the terms revolution and rotation. Understand Direct vs. indirect sunlight</p>	<p>Atmosphere Quiz</p>	<p>Week 13/14</p>	
<p>11. I know what factors affect a regions climate</p>	<p>Base your answers to the next two questions on the map above, which represents an imaginary continent.</p> <p>1. Compared to the climate at location A, the climate at location B</p>	<p>Understand previous concepts of absorption vs. reflection Direct vs. indirect sunlight Uneven heating of the earth Troposphere cooling trend</p> <p>Vocab- Latitude Revolution Tropics insolation trade winds westerlies condensation</p>	<p>Weather and Climate Unit Exam</p>	<p>Week 16</p>	

	<p>would most likely be</p> <p>a. warmer and more humid b. cooler and more humid</p> <p>2. Location C most likely experiences</p> <p>a. low air pressure and low precipitation b. low air pressure and high precipitation</p>	<p>c. warmer and less humid d. cooler and less humid</p> <p>c. high pressure and low precipitation d. high air pressure and high precipitation</p>	<p>evaporation and less humid and less humid</p>		
12. I can identify greenhouse gases and how they affect climate change	Which greenhouse gas, that has been increasing over the last 150 years, is thought to be responsible for global warming?		Know basic atmospheric gasses and basics of insolation.	Atmosphere Unit Exam	Week 15
13. I can identify and describe ocean floor geologic features	Which sea-floor feature is not commonly found at active continental margins?	<p>a. deep-sea trench b. continental rise</p> <p>c. continental slope d. continental shelf</p>	<p>Know the theory of plate tectonics</p> <p>Know the following vocabulary; Magmatism Trench Slope Shelf Continent</p>	Oceanography Quiz	Week 5
14. I can explain the difference between surface and deep ocean currents and what causes each to form	 <p>The diagram illustrates ocean circulation. On the left, the 'Polar region' shows 'Evaporation' and 'Cooled surface' water sinking, labeled as 'Thermohaline circulation'. On the right, the 'Subtropical region' shows 'Land' and 'Upwelling' where 'Wind-driven currents' move water back to the surface.</p> <p>1. In the diagram above, the cooler water from the polar region sinks to the bottom of the ocean. Why does this occur?</p> <p>a. the ocean currents have hit land masses that deflect the water b. colder water is more dense than warm water c. colder water is less dense than warm water d. wind currents force the colder water to circulate in the bottom of the ocean</p> <p>2. Surface currents in the ocean are primarily driven by _____?</p>	<p>c. colder water is less dense than warm water d. wind currents force the colder water to circulate in the bottom of the ocean</p>	<p>Know how temperature affects the density of substances. Know how gravity affects substances of different densities. Know the terms; Density Current Temperature</p>	Oceanography Unit Exam	Week 17/18

15. I can identify the natural hazards (volcanoes, earthquakes, landslides, floods, fires, coastal erosion, tsunamis) in California and the geologic basis of those hazards.

The largest threat to the Great Valley province in California is _____.

- Earthquakes
- Volcanoes
- Flooding
- Fire

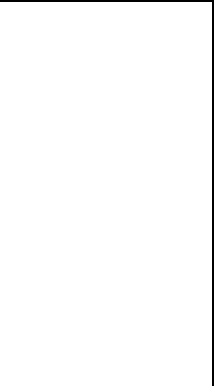
Have a basic understanding of California Geography

Know the vocabulary terms;

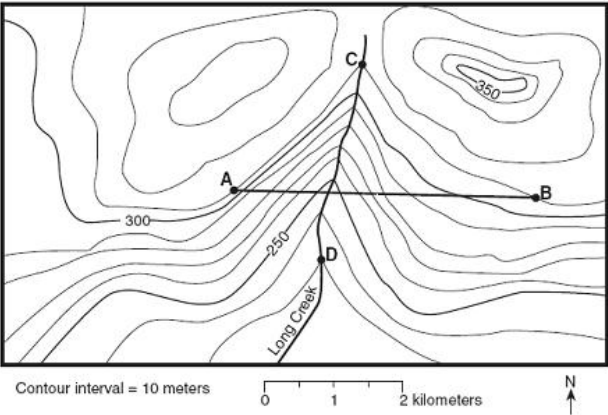
- Volcano
- Earthquake
- Flood
- Coastal erosion
- Tsunami
- Landslide
- Tectonic plates
- Fault line
- Fault block
- Transform
- Subduction

CA Hazards Quiz

Week 9/10



16. I can read physical maps to understand topographic features, latitude, and longitude



At what contour interval is point A located?

Know the difference between an overhead map and cross sectional map.

Know the terms;

- Elevation
- Peak
- Valley
- Ridge
- Profile
- Legend
- Contour

Topo/ X-Sectional Mapping, CA Water Quiz

Week 11

