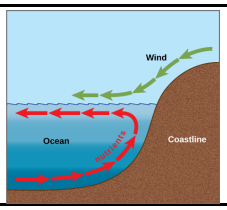
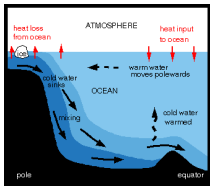
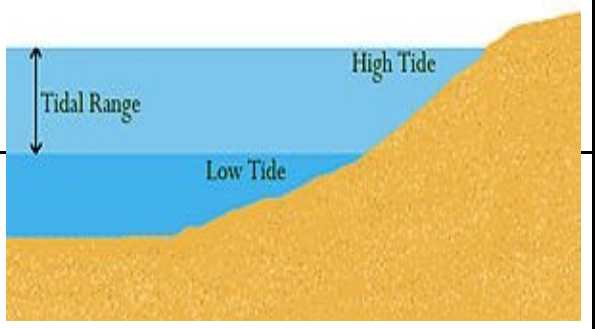
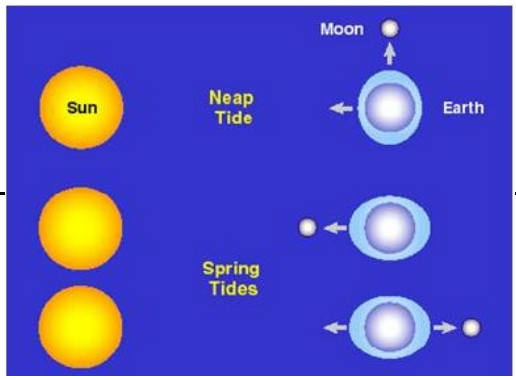
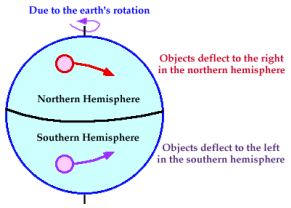
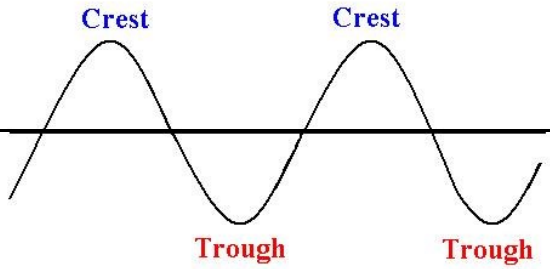
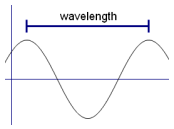
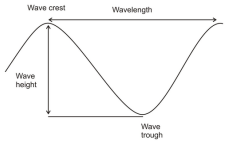
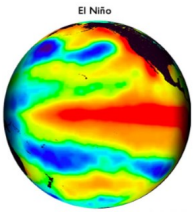
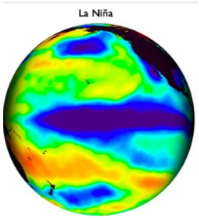
Currents, Waves, Tides

S6E3. Obtain, evaluate, and communicate information to recognize the significant role of water in Earth processes.
D. Analyze and interpret data to create graphic representations of the causes and effects of waves,

Term	Info	Picture
Surface currents	Currents caused by wind and located on the surface of the oceans.	
Deep ocean currents	Currents that are deep in the ocean and are caused by differences in demsotu caused by salinity and temperature	
Waves	The movement of energy through water. They have crests, troughs, wavelengths and amplitudes	
High tide	When the ocean is higher up on the beach. There are two high tides per day.	
Low tide	When the ocean is at it's lowest point.	
Neap tide	When there is only a small difference between the low tide and high tide. It happens when there is a first or third quarter moon (half moon)	
Spring tide	When there is a higher than normal high tide. Happens during a new moon or a full moon.	
Tsunami	A large wave caused by an underwater earthquake or other tectonic activity.	

Term	Info	Picture
Coriolis effect	The rotation of the Earth causes a phenomena that causes objects in the Northern hemisphere to be deflected to the left, and objects in the Southern Hemisphere t o be deflected to the right.	
Crest	The highest point of a wave. Also known as peak.	
trough	The lowest point of a wave.	
wavelength	The distance from crest to crest or trough to trough.	
Wave height	The distance from crest to trough.	
El Nino	A warmer than normal surface temperature of the Pacific ocean along the equator. creating stormy winters in the Northeast and mild weather in the Northwest.	
La Nina	A cooling of the water of the Pacific ocean along the equator. Happens at irregular intervals and creates widespread weather changes.	

Learning Targets:

1. I can describe the cause of waves.
2. I can compare and contrast surface and deep currents, and describe the causes.
3. I can relate the tide to the position of the moon and use moon phases to predict tide behavior.
4. I can explain that ocean currents and tides have predictable patterns.
5. I can identify the sun as the major source of energy for winds, ocean currents, and waves.
6. I can explore what makes water density increase and what makes water density decrease.
7. I can describe the relationship between water density and currents.
8. I can explain how waves transfer energy but do not transfer matter.
9. I can graph the high and low tides for an area (24-hours) and calculate the shape of the graph.

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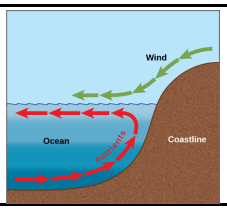
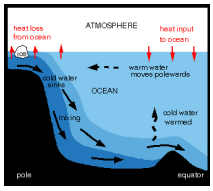
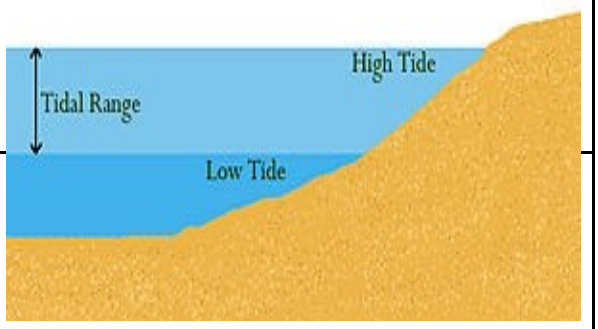
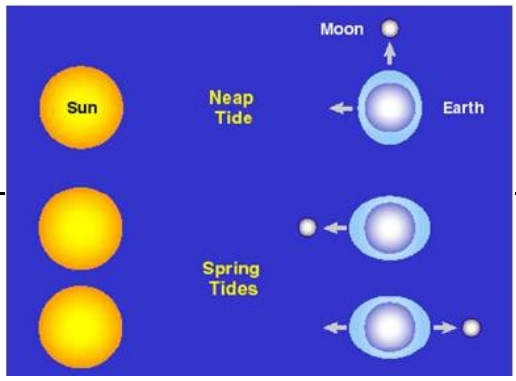
Surface currents		
Deep ocean currents		
Waves		
High tide		
Low tide		
Neap tide		
Spring tide		
Tsunami		

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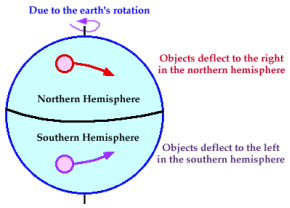
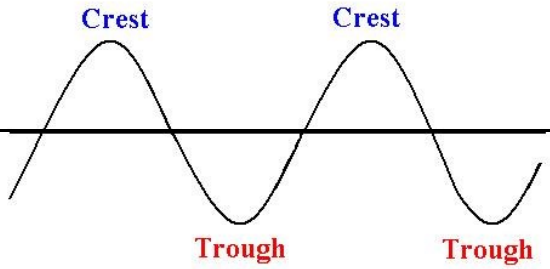
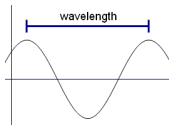
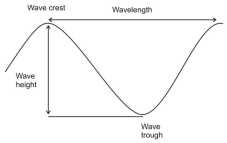
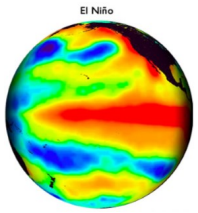
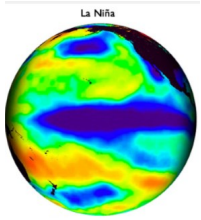
Coriolis effect		
Crest		
trough		
wavelength		
Wave height		
El Nino		
La Nina		

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