

Guiding questions for SST & Chl a data images

What information is displayed in the graphs? [answer: SST = sea surface temperature OR CHLA= chlorophyll A]

What is sea surface temperature (SST)? [the temperature of the ocean surface right at the surface only - satellites cannot see below the surface of the ocean.]

What is chlorophyll A (CHL-A)? [phytoplankton contain it so it is a proxy for the concentration of phytoplankton in the water]

What part of the coastline is displayed in the graphs/maps? [southern CA bight - including all channel islands]

When was the data collected? [March 2002 - and each graph is...?]

What does the scale bar in each set of graphs tell you? [range of temp in Celcius, 11 to 15degC OR range of chl a concentrations, 0 to 4 what units?]

What are the white/blank spots? [cloud cover prevents the satellite from "seeing" the surface of the ocean, so there is no data/no information for the white/blank spots]

Look at the chla graphs - is there change over time? How would you describe this? What do you think is going on?

Look at the sst graphs - is there change over time? How would you describe this? What do you think is going on?

What are conditions like in this region in March? What direction are the prevailing coastal winds from? (typically from the north and northwest)

How might winds affect surface currents? (winds can drive surface currents in the same direction)

How might winds affect the structure of the water column? (Winds cause mixing, and with the Coriolis effect may drive upwelling)

How might precipitation be related to the conditions and processes in the images?

(precipitation delivers nutrients to coastal areas via rivers and runoff; nutrients are needed for phytoplankton to bloom)

Is there ever/always a relationship between sea surface temperature and chlorophyll A concentrations?

Describe why you think this and state which graphs support your ideas.