

Temperature Data from Sarita Hole

You will need the temperature graph for Sarita Hole and the Lighthouse Comparison graphs.

1. Take a look at the data plots of the temperature from Sarita Hole. What do the different coloured lines represent? What does the red line represent?
2. How does temperature change with depth in this specific area?
3. What is influencing the temperature of the water in the area?
4. If you sampled more towards Port Alberni (more upstream) how do you think the temperature would differ? How would this change with seasons?
5. The temperature of the oceans stays relatively constant throughout the year compared with lakes that freeze over in the winter and are warm enough to swim in during the summer. Why does this happen?
6. Take a look at the Lighthouse Comparison data plot. How do the temperature patterns differ?
7. What causes the two areas to be slightly different in temperature? Hint: look at the chart and find Amphitrite Point where the lighthouse is located.

Salinity Time Series Data from Sarita Hole

You will need the Salinity graph and the Lighthouse Comparison graphs for this station.

1. What does the orange line represent on the graph?
2. How does salinity change with seasons at Sarita Hole?
3. What influences the salinity at the surface? Mid-way down? At the bottom?
4. How does salinity affect the organisms that live in the water column?
5. What does the bottom profile of the graph represent in comparison with the top of the graph?
6. As you move towards the open ocean, how would you expect the salinity to change? Why?
7. Compare the salinity at Sarita Hole to the data from the Amphitrite Point lighthouse. How does the data differ? Why do these two locations have different salinities?

Dissolved Oxygen Time Series Data from Sarita Hole

You will need the Dissolved oxygen graph and the Chlorophyll graph for this station.

1. What is the general pattern of dissolved oxygen in the water column?
2. How does dissolved oxygen differ with depth?
3. What is causing the rises and dips in the dissolved oxygen content in the water?
4. What level has the most dissolved oxygen? Why? How does this determine the distribution of marine life?
5. What is affecting the dissolved oxygen content in the water?
6. Examine the chlorophyll plot as well. How are these two sets of information related to each other?
7. Looking at the patterns of dissolved oxygen content in the water throughout the year when do you think the water would have the most marine life? Why?