**Worksheet) Measuring Abiotic Factors**

The diagram below shows data collected by a group of students on a field trip.



1. Copy and complete the table below. *Hint:* Take the middle of each rock pool as the distance from the low water mark.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Location** | **Distance from low water mark (m)** | **Salinity (g/L)** | **Temperature (°C)** | **Oxygen concentration (% saturation)** |
| **A** | 15.4 | 41 | 26 | 19 |
| **B** |  |  |  |  |
| **C** |  |  |  |  |
| **D** |  |  |  |  |
| **E** |  |  |  |  |
| **F** | 0 |  |  |  |

1. **Construct** the following graphs, either on graph paper or using Excel.
2. A line graph showing distance from the low water mark on the *x*-axis and salinity on the *y*-axis.
3. A line graph showing distance from the low water mark on the *x*-axis and temperature on the *y*-axis.
4. A line graph showing temperature on the *x*-axis and oxygen concentration on the *y*-axis.
5. **Describe** the trend shown in each graph.

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1. The measurements were taken on a sunny spring day. **Explain** why the water in the pool that is furthest from the low tide mark contains water that is saltier and warmer than the pool closest to the low tide mark.

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1. **Explain** why many of the animals living in location F could not survive in location A.

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