

Littoral (or Intertidal) Zone Lesson

A) Bay of Fundy
(Canada;
N end of
Gulf of Maine)



B) Chiswick
Eyot
(London,
England)



Littoral (or Intertidal) Zone Lesson

- *Intertidal Zone - the area that is exposed to the air at low tide and is underwater at high tide*
- *Abiotic Factors - non-living components of an organism's environment, such as temperature, light, moisture, air currents, salinity, etc*
- *Biotic Factors - living components that shape an ecosystem or affect another organism, such as access to food and avoidance of predation*
- *Desiccation - drying*
- *Physical Factors - waves, currents, tides*
- *Tidal Range - the difference in height between the high and low tides*

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Know

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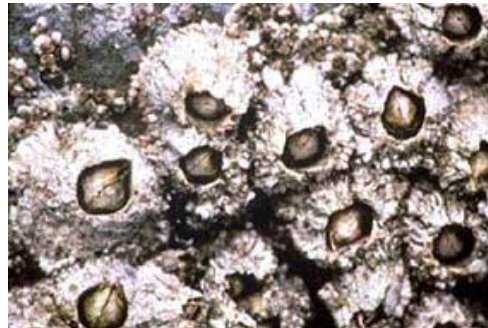
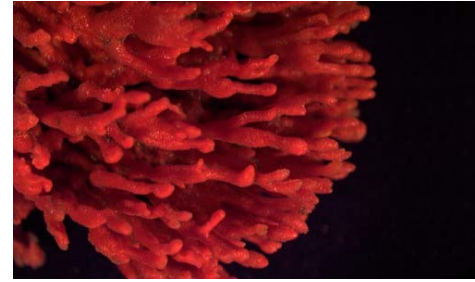
Learn

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Where and how do these animals live?

Think about ...

- *What/how does it eat?*
- *Does it stay submerged?*
- *How could it prevent dessication?*
- *Does it require much space?*



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FACTORS AFFECTING WHERE AN ANIMAL MIGHT LIVE ON A PILING

<i>Stay Moist</i>	<i>Reduce Stress</i>	<i>Maintain Temp</i>	<i>Breathe</i>	<i>Salinity Change</i>
<ul style="list-style-type: none"> • Seek shelter in crevices • Live in large groups • Use shells to protect body from drying at low tide • Close off gills in a protected cavity so they stay moist. • Close the shell to conserve water 	<ul style="list-style-type: none"> • Burrow deep into ground very quickly; attach tightly to a surface • Streamlined shapes; protect from currents • Have strong muscles, foot or threads to hold on to hard surface 	<ul style="list-style-type: none"> • Minimize the body tissue contact with piling or rocks • Have light colored shells to reflect heat or dark to absorb heat in winter 	<ul style="list-style-type: none"> • Become inactive to conserve oxygen 	<ul style="list-style-type: none"> • Adaptations, such as osmoregulation, closing shells

Abiotic and Biotic factors that influence ecosystems

Abiotic

- Air (O₂, CO₂, N₂, etc)
- Water
- Light
- Wind
- Soil
- pH
- Temperature
- Salinity
- Humidity
- Inorganic nutrients (N, P)
- Etc.

Biotic

- Other organisms, so:
- Competition
- Predation
- Symbiosis
 - Mutualism
 - Parasitism
- Disease agents

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YOUR EXIT TICKET

What might be two biotic and abiotic factors affecting one of the organisms we studied today along the piling?

That's a total of four items:

Pick a creature and name two biotic and then two abiotic factors.