Name: _____ Packet Due Date: _____

Science

Module 5	**Population Changes and Resources**
Chapter 3	**Competition and Abiotic Effects in Ecosystems** (Standards: Scientific Practices SP.7 & SP.8)

Lessons & Objectives

Lesson 1: Competition and Abiotic Factors

- ❑ **I can…** describe competition among organisms and determine the importance of abiotic factors in an ecosystem

Lesson 2: Research Day

- ❑ **I can…** utilize quality sources to investigate how an aquatic ecosystem functions.

Lesson 3: Research Day

- ❑ **I can…** utilize quality sources to investigate how an aquatic ecosystem functions.

Lesson 4: Research Day

- ❑ **I can…** utilize quality sources to investigate how an aquatic ecosystem functions.

Packet Completion Rubric

4	3	2	1	0
Nothing in packet is missing. Responses consistently meet ALL of the criteria for high quality work. Exemplary effort is evident throughout entire packet.	Packet is 75-100% complete/accurate. Work/effort misses the criterion for high quality consistently.	Packet is 50-75% complete/accurate. Work/effort has evidence of quality but not consistently.	More than 50% of the packet is incomplete or incorrect. Work does not meet the expected level of quality.	Packet is entirely incomplete or not turned in.

Grading Breakdown: 0 - 1.9 = F 2 - 2.4 = D 2.5 - 2.9 = C 3 - 3.4 = B 3.5 - 4 = A

Lesson 1: Competition and Abiotic Factors

I can... describe competition among organisms and determine the importance of abiotic factors to an ecosystem

Lesson 1 Do Now

Using what you know about coral reefs, respond to the question below:

What would happen if each of the following ***abiotic*** factors ***increased or decreased***?

1) Sunlight
2) Water Salinity (amount of salt in the water)
3) Temperature

1) _____
_____

2) _____
_____

3) _____
_____

Competition

Competition- when _____ organisms are interacting and trying to obtain the same _____

Competition can happen between two or more organisms of the _____, or two or more organisms of _____

Competition may be for:

- _____
- _____
- _____

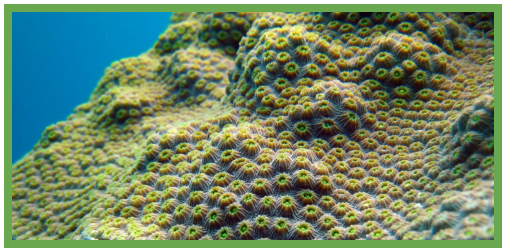
Abiotic factors: Sunlight

Think, Pair, Share:

Why might sunlight be important to the reef if *coral does not need* to perform photosynthesis…?

_____
_____
_____

Corals' main _____ are _____ and _____!
Both require _____ to perform _____!



Coral and algae have a _____.

Coral:	Algae:
- Provides algae with carbon dioxide, and shelter to produce food	- Provides coral with food (sugar), and oxygen. - helps remove waste from the coral.

Video Notes:

_____
_____
_____
_____
_____
_____

Abiotic Factors: Water Temperature

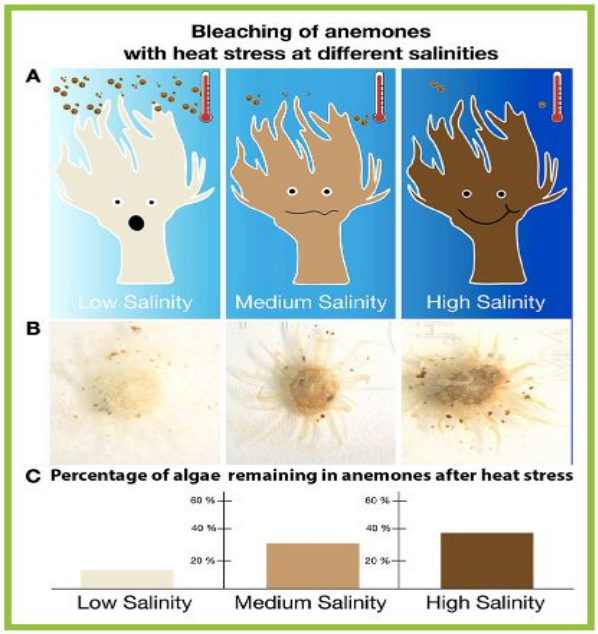
Heat stress causes _____

If the water gets too warm, it causes the coral to _____ the _____ that lives inside it.

Without the algae _____ for the coral, the coral _____.

Abiotic Factors: Water Salinity

Research has shown that "having a _____ can help corals stay alive, even if the water temperature is _____!"



Having a Consistent amount of salt in the water is important for corals and fish to survive.

Salt concentrations can be measured as: _____

Lesson 1 Exit Slip

Watch the video and list the primary causes of coral bleaching.

_____
_____
_____
_____
_____
_____