

Amplify, our digital curriculum that we have used all year, will be utilized to complete all science lessons while on home instruction. Lessons will be posted in the Microsoft office science notebook. Activities will be posted for a specific day and are expected to be completed and turned in for that day. Work will not be accepted late unless there is a valid reason (illness, etc.). I will be available via email for questions.

Amplify: Populations and Resources unit: chapter 2

Monday 3/16/2020

1. **Lesson 2.6 tab 1- complete the Warm-Up and submit-** Students consider how ecologists use information about what populations eat to better understand ecosystems and changes in population size.
2. **Lesson 2.6 tab 2 -Population Puzzle** -Using evidence from Glacier Sea, students investigate why a population's size has changed. Complete the electronic form and submit. You will need the information below to complete the last 2 questions.

PURPLE GROUP

Evidence A Purple Group

- Caribou reproduction requires a lot of energy. If caribou don't have enough energy, then they won't reproduce.
- To get energy, caribou eat lichen which contain energy storage molecules.
- Between 2009 and 2010, ecologists saw less lichen.

Evidence B Purple Group

- Wolves get energy storage molecules from eating caribou.
- Ecologists have noticed more wolves in the area.
- Sometimes caribou have to dig through ice and snow to get to lichen.
- There has been extreme weather in the Glacier Sea area, leading to a lot of snow and ice.

GREEN GROUP

Evidence A Green Group

- Orca reproduction requires a lot of energy. If orcas don't have enough energy, then they won't reproduce.
- To get energy, orcas eat seals which contain energy storage molecules.
- The number of seals has decreased.

Evidence B Green Group

- Seals have thick layers of fat on their bodies. This is where they have most of their energy storage molecules.
- The normal average weight of a Glacier Sea seal is 250 pounds.
- During the summer of 2007, the average weight of a Glacier Sea seal was 175 pounds

BLUE GROUP

Evidence A Blue Group

- Ticks are parasites, or organisms that feed on parts of other organisms, usually without killing them.
- Ticks suck blood from larger animals to get energy storage molecules. Each tick only sucks a small amount of blood from a larger animal.
- Ten years ago, there were very few ticks around Glacier Sea and now there are more, based on samples ecologists collected.
- This year, ecologists found a moose in the Glacier Sea area with 100,000 ticks on its body.

Evidence B Blue Group

- When a tick sucks another animal's blood, that animal has to make new blood to replace what it has lost.
- Animals use energy storage molecules to release energy and replace blood.
- Ticks survive best in warm weather.

Tuesday 3/17/2020 Amplify: Populations and Resources unit: chapter 2

1. **Lesson 2.7 tab 1 Warm-Up – complete and submit- Students** look at the Glacier Sea food web in order to reflect on why the moon jelly population increased in size.
2. Go to the “Lesson Brief” which is the opening page for the lesson. On the right side access the “Digital resources”- go to the 4th tab down – “Glacier Sea Ecosystem Evidence Cards copymaster” and review the evidence cards: A,B, C, D. Evidence A provides the strongest evidence and evidence card D is the weakest evidence. You will use this evidence to complete tab 4 below.
3. **Lesson 2.7 tab 4: Homework tab-** Write a BRIEF argument about what could have caused the moon jelly population increase using either claim 1 or 2. Follow the guidelines in #3 in tab 4. Your 1st sentence should be either claim 1 or 2, whichever you believe most and then use the evidence to support the claim.

Wednesday 3/18/2020 Amplify: Populations and Resources unit: chapter 2

Lesson 2.2 tab 5 homework (but its not HW) Students watch a video showing an experiment in which the effects of different amounts of sugar on the number of eggs a group of crickets lay is tested. This video gives additional evidence about the effect of more or less energy molecules on the number of births in a population. Watch the *Crickets and Energy Storage Molecules* video found in the “Digital Resources” on the left side of the “lesson brief.” Answer the 2 questions in tab 5 and submit

Thursday 3/19/2020 Amplify: Populations and Resources unit: chapter 2

Lesson 2.2 tab 3 Active Reading: Reproduction and Energy- Finish reading the article about “fireflies and elephant seal.” Read an excerpt from the short article we started reading to learn that organisms need to release energy molecules in order to reproduce and that they get these energy storage molecules from their resource population (food).

Complete the text questions listed in the notebook and submit via email. Remember to include your name and full heading.

"Reproduction and Energy"

READ: From "Amplify's" library, read the article titled, "Reproduction and energy." You can also access it using lesson 2.2 tab 3 in the Unit Populations and resources.

complete the following questions after reading the article. Answers should be **brief**, you do not have to restate

Use a complete heading that includes name, per, date in the top left corner.

Use a title as seen above.

Skip lines between questions

Email to me as an attachment

Friday 3/20/2020 Amplify: Populations and Resources unit: **chapter 3.1**

Lesson 3.1 tab 1- Warm-Up complete and submit

Students record initial ideas about whether a population that is not the moon jellies' resource or consumer population could have caused the moon jelly population to increase in size.

Lesson 3.1 tab 2 -Active Reading: “Jelly Population Explosion”

Students practice the Active Reading approach while learning about competition between populations in an ecosystem.

Monday 3/23/2020 Amplify: Populations and Resources unit: **chapter 3.2**

Lesson 3.2 tab 1 Warm-Up – complete and submit. Students make a prediction about how a population might be affected by other populations in the same ecosystem.

Lesson 3.2 tab 2 Rereading “Jelly Population Explosion”- complete the question under the article on page one. You do not have to annotate but you can highlight if you'd like. Read to examine how a change to one population can indirectly affect another population

Lesson 3.2 tab 3 Competition in the Sim- use the sim and complete the digital worksheet and then “hand in.” Students find two populations in the Sim that compete for the same resource. Then take on a mission, changing one competing population to try to increase the other.

Lesson 3.2 tab 4: Thinking About Indirect Effects

Students have an opportunity to think about how indirect effects might impact a population.

Tuesday 3/24/2020 Amplify: Populations and Resources unit: **chapter 3.2 & 3.3**

Lesson 3.2 tab 5: Homework- use the sim and complete the digital worksheet and “hand in.”

Students change one competing population to try to decrease the other in the Sim.

Lesson 3.3 tab 1 Warm-Up – complete and submit. Review the Glacier Sea food web in order to find populations that may be indirectly affecting the jelly population.

Lesson 3.3 tab 2- Indirect Effects in the Sim-use the sim, follow the directions and complete the digital worksheet and “hand in”

Students are challenged to change the size of a population without changing its resource or consumer populations, in order to understand how populations can indirectly affect one another in an ecosystem.

Wednesday 3/25/2020 Amplify: Populations and Resources unit: **chapter 3.3 & 3.4**

Lesson 3.3 tab 4: Homework- read the article and answer the questions on that page and submit.

Students read a article about how ants and acacia trees help each other survive, to give them more background about other kinds of relationships within ecosystems.

Lesson 3.4 tab 1 1: Warm-Up- complete and submit. Students think about what evidence they would need to determine which populations might have affected the jelly population.