

Marine Biology Final Project - Tying it All Together (100 points + bonus)

Objective:

Students will provide a comprehensive accounting of key aspects of the 8 different marine habitats on Earth, inclusive of habitat information, representative species, and human impact(s). Each habitat will serve as a different “chapter” in Volume I of Mr. F’s Biology Habitat Log.

How habitats will be assigned:

As there are 8 chapters, one for each habitat type, the class will need to self-divide so that each habitat has an equal number of students working on it. Habitats will be randomly selected by a representative from each group.

The habitats:

- | | |
|---------------------------------|------------------------------------|
| (1) Littoral zone (A#) | (2) Soft sediment communities (B#) |
| (3) Subtidal zone (C#) | (4) Kelp beds (D#) |
| (5) Seagrass (E#) | (6) Arctic (F#) |
| (7) Tropical & coral reefs (G#) | (8) Deep sea communities (H#) |

Formatting:

By Thursday, 11 January 2018, you will need to share the Google Doc original with Mr. F (Lucas.Fatsy@naugatuck.k12.ct.us) as well as a PDF of the final version of your chapter. The ideal format would be to choose a template in either Google slides or docs. This SHOULD NOT read like a textbook chapter!! It should be a cross between a textbook chapter and infographic with a dash of graphic novel tossed in. If you have a format other than Google drive-based ones you’d like to try, lobby your idea to Mr. F and as long as there can be a PDF generated, then you could be on to something cool!

*All diagrams, charts, graphs, or data tables must have a CAPTION (tables are numbered and titled above the table, all other graphics are given “Figure #” and explanations below the figure).

*All graphics and tables MUST be mentioned in the body of the chapter, they MUST NOT be simply jammed within the chapter without any mention in the text.

*The use of text boxes may be useful for ease of movement of parts of your chapter so you can accomplish the infographic element.

*Assure all text can wrap around graphics and there are no large blank areas in your chapters

*Page numbers are formatted as seen in the “habitats” section above (Example: A1, A2...for littoral).

*Correct citations, both in-text and references cited.

*Include a title page with author names, title of habitat, and a photo (if desired)

Content Requirements:

For the habitat you randomly picked, you must adequately describe the following:

(1) Where your habitat physically occurs in nature? Note any specific topographical (Earth terrain) anomalies that are unique to this habitat to help us locate it. It would behoove you to add some sort of diagram to show any depth characteristics, etc. (5)

(2) Where geographically can your habitat be found? If your habitat is found in many geographic locations, you should choose locations that have a unique, biodiversity/complexity, or human impact component that give it greater prominence. (5)

(3) What is your habitat known most for? Why is it most known for this? You can include interesting facts here as well. (5)

(4) How does your habitat function, meaning, what are the food chain dynamics? What is the apex predator (is there one)? Is there a keystone species (look this up, it's important!)? (5)

(5) What are the seasonal changes your habitat experiences over the course of a day, season, and year? What adaptations do organisms need to have in order to survive in such environmental change? (5)

(6) Complete a full assessment of the human impact on your habitat? How do humans use your habitat, and are there concerns with overuse, overharvesting, exploitation, misuse, etc...? How can/are any negative impacts be reduced? Is there anything in place legally (treaties, laws...etc.) that protects your habitat from this behavior? (20)

(7) How has global warming impacted your habitat? What is predicted in the future as to the fate of your habitat should global warming not slow down? How can this be lessened? (5)

(8) Do a comprehensive species accounting of your habitat: (30)

(a) you need to do a full classification from domain down to species name, and species history for two species from each of the major phyla we covered (Porifera, Cnidaria, Echinodermata, Arthropoda, Mollusca, and Chordata).

(b) a range map of where they are found on Earth.

(c) a photo of male, female, and juvenile with according captions

(d) discussion of what their niche is in the habitat (what role does that species play?)

(e) predator-prey relations. What does the species eat (what is its prey)? What is the species prey to?

(g) what are the global numbers of that species and how many are present in any specific geographic habitat?

Grading:

Formatting – 20 points

Content – 80 points

Bonus – 10 points – If you include an infographic (look up what one is) right behind the title page, and before your first page of content, that is a “Protect our habitat” poster, you can earn up to 10 points. Here is a starting point to research: <https://www.customermagnetism.com/infographics/what-is-an-infographic/>