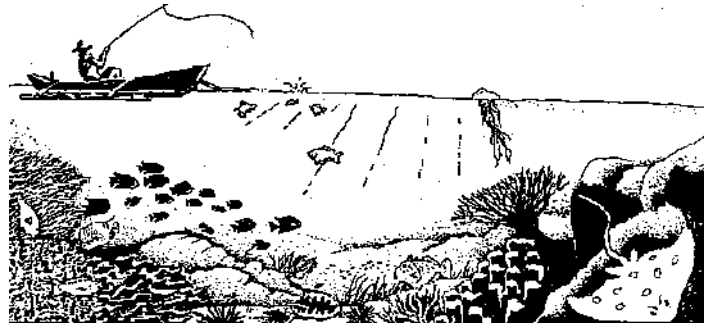


Design a Marine Ecosystem Project (100 points)

For this project you will be designing your own ecosystem, including the living and nonliving components.

Overall Requirements:

- **Draw and describe an ecosystem** that contains several species. (10 points)
- Be sure to include a **description** of each species niche and habitat. This needs to be typed!
- A food web also needs to be included for your ecosystem. (15 points)
- Also include at least one of the following relationships: parasitism, commensalism, mutualism, predator/prey



Make sure to include the following in your ecosystem

1. Location: Your ecosystem can be anywhere in the world. Skim through your textbook at the different types of marine ecosystems (pages 244-382). Types of ecosystems include Intertidal, Estuaries, Subtidal Zones, Coral Reef, Epipelagic, Mesopelagic, Deep Ocean Floor, etc...
2. Biological Community: (35 points)
Include **at least**:
 - 3 Producers
 - 4 Primary consumers (herbivores)
 - 2 Secondary and higher level consumers (2 carnivores OR 2 omnivores OR 1 carnivore & 1 omnivore)
 - 1 Decomposer, Scavenger, or DetritivoreFor **EACH** species include its:
 - Habitat (where within the ecosystem does it live)
 - What it eats (in other words, how does it get it's nutrients, energy, etc...)
 - What eats it
 - Reproductive behavior (how many offspring, time of year they reproduce)
 - Special adaptations or behaviors
3. Physical Components including substrate, thermal vents, salinity variation, temperature, amount of sunlight penetration, currents, tides, zones, etc. NOTE: Not all ecosystems will have all of these characteristics. (8 points)
4. Describe an example of either parasitism, mutualism, commensalism, predator/prey within your ecosystem (5 points)
5. Include positive and negative effects that humans have on your ecosystem (e.g. fishing, pollution, invasive species, etc...(7 Points)

Other requirements (20 points)

1. Write paper in your own words. Plagiarism will result in a 0 for the project.
2. Must be typed using size 12 font
3. Use complete sentences and check for grammar
4. Neatness and creativity

DESIGN AN ECOSYSTEM RUBRIC

| Criteria | Points Possible | Points Earned | Comments |
|--|-----------------|---------------|----------|
| <i>Drawing and Description of ecosystem.</i> -Type of Ecosystem -Best effort in drawing, labeled organisms -Color | 10 | | |
| <i>Food Web</i> - Label 3 producers, 4 primary consumers, 2 secondary consumers, decomposer - Include a diagram of the food web | 15 | | |
| <i>Biological Community</i> -Include at least: 3 Producers, 4 Primary consumers (herbivores), 2 Secondary and higher level consumers (2 carnivores OR 2 omnivores OR 1 carnivore & 1 omnivore), 1 Decomposer -Included for <u>EACH</u> species: Habitat, What it eats , What eats it, Reproductive behavior, Special adaptations/behaviors | 35 | | |
| <i>Physical Components</i> -including substrate, thermal vents, salinity variation, temperature, amount of sunlight penetration, currents, tides, zones, etc. | 5 | | |
| <i>Symbiosis within Ecosystem</i> Describe an example of either parasitism, mutualism, commensalism, predator/prey within your ecosystem (5 points) | 5 | | |
| <i>Human Influence</i> Included description of positive and negative effects that humans have on your ecosystem (e.g. fishing, pollution, invasive species, etc... | 10 | | |
| <i>Formatting</i> -Write paper in own words. Plagiarism = 0 - Must be typed using size 12 font -Use complete sentences and check for grammar -Neatness and creativity | 20 | | |
| TOTAL | 100 | | |