

Name _____ Date _____

Imaginary Marine Ecosystem Instructions and Organism Descriptions

Create at least eight different organisms to inhabit your imaginary ecosystem. Six must be real marine organisms and live in the same real-world ecosystem; two must be ones that you invent. To make sure that your ecosystem is balanced, your species must be spread across the various trophic levels, with each level containing at least two species. One example from a terrestrial ecosystem has been provided for you.

Your group must complete the following steps:

1. Identify your ecosystem's organisms and fill in the organism descriptions (below).
2. On butcher paper, draw an illustration of your imaginary ecosystem. Include all eight organisms and the important abiotic components of your ecosystem, including water, sediment, rock, energy source, and other habitat features such as ocean floor features.
3. On butcher paper, create a food web for your imaginary ecosystem. Label each organism by name and trophic level and use different colored arrows to represent each trophic level. Mark the invented organisms with an asterisk. Answer the questions on the Imaginary Marine Ecosystem Analysis worksheet and be prepared to present your ecosystem to the class.

Example:

Organism Name and Type: *Lion, Mammal, Large Cat*

Trophic Level: *Tertiary (3rd level) consumer; carnivore; predator; heterotroph*

Predators: *Humans are only main threat. Hyenas will kill lion cubs on occasion since they are rivals for hunting.*

Prey: *Gazelles, zebra, and other hoofed African plain animals.*

Preferred Habitat: *African plains*

Adaptations: *Large canine teeth for tearing prey; fur that allows camouflage in grasslands; whiskers for sensing the environment*

Symbiotic Relationship: *Commensalism with hyenas: hyenas eat lion scraps and lions are unharmed. Hyenas and lions do have violent relationship as they compete for food; this relationship can be parasitic when hyenas steal food from lions.*



education 

natgeoed.org

Imaginary Marine Ecosystem Instructions and Organism Descriptions, continued

Organism 1 Name and Type: _____

Trophic Level: _____

Predators: _____

Prey: _____

Preferred Habitat: _____

Adaptations: _____

Symbiotic Relationship: _____

Organism 2 Name and Type: _____

Trophic Level: _____

Predators: _____

Prey: _____

Preferred Habitat: _____

Adaptations: _____

Symbiotic Relationship: _____

Imaginary Marine Ecosystem Instructions and Organism Descriptions, continued

Organism 3 Name and Type: _____

Trophic Level: _____

Predators: _____

Prey: _____

Preferred Habitat: _____

Adaptations: _____

Symbiotic Relationship: _____

Organism 4 Name and Type: _____

Trophic Level: _____

Predators: _____

Prey: _____

Preferred Habitat: _____

Adaptations: _____

Symbiotic Relationship: _____

Imaginary Marine Ecosystem Instructions and Organism Descriptions, continued

Organism 5 Name and Type: _____
Trophic Level: _____
Predators: _____
Prey: _____
Preferred Habitat: _____
Adaptations: _____
Symbiotic Relationship: _____

Organism 6 Name and Type: _____
Trophic Level: _____
Predators: _____
Prey: _____
Preferred Habitat: _____
Adaptations: _____
Symbiotic Relationship: _____

Imaginary Marine Ecosystem Instructions and Organism Descriptions, continued

Organism 7 Name and Type: _____

Trophic Level: _____

Predators: _____

Prey: _____

Preferred Habitat: _____

Adaptations: _____

Symbiotic Relationship: _____

Organism 8 Name and Type: _____

Trophic Level: _____

Predators: _____

Prey: _____

Preferred Habitat: _____

Adaptations: _____

Symbiotic Relationship: _____