Taxonomy Project

(taken from biologycorner.com)

IN THE YEAR 2525

Humans, after hundreds of years of constant effort, have successfully polluted all bodies of water on Earth. As a result, almost all previously known species of plant, animal, and other life have become extinct. Through natural selection, genetic engineering, and selective breeding programs, a portion of the Earth has been successfully repopulated. The following organisms are all that remain:

1. Photosynthetic sun-basking sharks. Their green fins have chlorophyll to convert sunlight to energy (autotrophs)
2. Chemosynthetic goldfish that convert pollution to food (autotrophs)
3. Aquatic humanoids whose main diet is aqua-wheat and basking sharks. They have fins instead of legs (heterotrophs)
4. Aqua-wheat: one of the few plants that remain, it is similar to algae.
5. Terrestrial Humanoids with 4 arms, their diet consists of butter-roaches and fuzzy hamsters.
6. Tentacled aqua humanoids, they only feed on aqua-wheat and have tentacles for arms and legs.
7. Cockroaches that feed on humanoid waste.
8. Giant Aqua-spiders that live in water and feed on goldfish and basking sharks.
9. Green-haired rats that are photosynthetic.
10. Parasitic mosquitoes that feed off any humanoid
11. Ten-legged fleas that live on the photosynthetic rats and drink blood.
12. Poison Grass - this plant is a hybrid between grass and poison ivy. The plants are toxic to almost everything (autotrophs)
13. Fuzzy hamsters with green hair that use the sunlight to make their food, thought to be related to the rats.
14. Butter-roaches: genetic engineering created these butterfly-like creatures from cockroaches. Butter-roaches eat poison grass.

YOUR ASSIGNMENT

1. As an alien taxonomist, it is your responsibility to classify these existing organism types.

a. Create a taxonomic scheme using only kingdom, phylum, genus, and species. The intermediate categories have been eliminated since the total number of species has been drastically reduced. (Two Kingdoms are recommended). Use the numbers of each organism to identify where they are placed on your chart.

b. Create Latin-sounding names for each organism. Remember, these will be scientific names and will include the genus and species classification. Written in this form: *Genus species*. In brackets, put the common name next to the Latin name.

2. Illustrate your interpretation of each organism's appearance. Write the number and the name (from 1b) next to the drawing.
3. Prepare a dichotomous key for these organisms so that your fellow aliens can identify them when they come to Earth for their summer vacations. Remember that a dichotomous key is based on APPEARANCE of the organisms. Use your drawings to make the key
4. Diagram a food web using the organisms - at least four organisms should be used in your diagram.

How you will be marked:

Is not complete	Doesn't meet expectation	Minimally meets expectations	Partially meets expectations	Fully meets expectation	Beyond expectation

1. Classification:
    a. Must be clear, cohesive and consistent.
    b. You may choose to do a chart or a tree

    Naming:
    c. Naming can be creative but must be consistent with binomial nomenclature

2. Illustrations:
    a. Drawings must be consistent with their description and their taxonomy. They do not have to be realistic or artistic (could do stick figures) but must be clear and neat.
    b. Bonus marks for illustrations worthy of classroom decorations

3. Dichotomous Key:
    a. Must be consistent with organisms' description and illustration. Must be clear and easy to follow. Organisms should fall into clear categories.

4. Food web should be easy to follow and neat.