**Taxonomy Project**

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. (Below is an **example only** of how you might start the organization of your species)

Kingdom 2 (list organism #s)

Kingdom 1 (list organism #s)

2. 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

3. Illustrate in color your interpretation of each organism's appearance. Write the number and the name 2 next to the drawing.

4. 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

5. Diagram a food web using the organisms.

Rubric –

1. Taxonomic Scheme = 14 points (point for organization of each species)
2. Latin Sound names = 14 points (point for each species named correctly)
3. Illustration = 14 points (point for each species attempted (this means you tried even though your drawings are not perfect) in color
4. Dichotomous Key = 14 points (point for each species correctly included)
5. Food Web = 14 points (point for each species correctly included)

Total = 70 points

Write your own dichotomous key

Collect 6 items from your backpacks. List the 6 items and their scientific name. Create a dichotomous key.

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Steps

1a.

1b.

1. Luminescent moth – genetically engineered to glow; eats poison weed
2. Curly-haired coyote – has green photosynthetic hair unique that it creates food storage in fat cells; thought to be related to wild dingo
3. Poison Weed – a hybrid between the cheat grass weed and poisonous camas root plant; the plants are toxic to almost all autotrophs
4. 12 legged tick that lives on photosynthetic wild dingoes
5. Parasitic flies that feed on any humanoid
6. Green-haired wild dingoes that have photosynthetic has green photosynthetic hair unique that it creates food storage in fat cells; thought to be related to curly-haired coyote
7. Mega-Aqua Plankton; feed on cod and sunfish
8. Cockroaches – can survive anything; scavengers feed on anything including waste
9. Gilled aquatic humanoids with webbing on hands and feet; vegan
10. Multi-lensed eyeball antennae humans; feed on insects and animals
11. Aquatic lettuce; unique symbiotic relationship between romaine lettuce and brown sea kelp
12. aquatic humanoid with flipper like arms and fused legs; omnivorous
13. Chemosynthetic cod – photosynthetic and chemosynthetic – help consume pollutants contaminating waters
14. Photosynthetic sunfish – float at the top of water soaking up the sun’s rays
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