Biological Classification Worksheet

Five-Kingdom System

Animal Kingdom - Invertebrates (without backbones) and vertebrates (with backbones), multicellular, no cell walls, obtain energy through respiration.

Plant Kingdom - multicellular, have cell walls, obtain energy through photosynthesis. Ex. mosses, ferns, flowering and seed plants.

Fungi Kingdom - cells with cell walls but not green and do not carry out photosynthesis, break down other organic materials to obtain food. Ex. mushrooms, molds, and yeasts.

Protist Kingdom - come in a wide variety of forms, some are animal-like, such as amoeba, paramecium and protozoan. Some are plant-like such as algae and others are fungi-like. Many are single-celled and others are multicellular.

Monera Kingdom - some photosynthesize while others respire. The nucleus of Moneran cells are not bounded by nuclear membranes like cells in the other kingdoms. Ex. bacteria and blue-green algae.

The classification of humans – Homo sapiens

The two part naming system is called Binomial nomenclature (consists of genus and species.).

Kingdom: Animalia
   Phylum: Chordata
      Class: Mammalia
         Order: Primata
            Family: Hominidae
               Genus: Homo
                  Species: sapiens (note: species is not capitalized.)

Using the information above, answer the following questions.

1. What is the next smallest classification group after Order? ______________

2. What is the smallest classification group? ______________
3. Every living organism has what classification groups as its name? _________ and ________

4. The first letter of every genus name is ________________.

5. The first letter of every species name is ________________.

6. What is binomial nomenclature? _______________________________________.

7. Give one example of how you classification is used at school.

8. Why is the understanding of classification an important life skill?
A Tale of Two Elephants

1. What organisms are shown?

2. Do they look the same?

3. Do the pictures show the same species?

4. How are they elephants similar?

5. How are they different?
Scientists place things in categories based on their external structures. Determining how to group things is called classification. Below are photographs of some non-living things.

In the box below, identify which objects are hard and soft.

<table>
<thead>
<tr>
<th>Soft Objects</th>
<th>Hard Objects</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>
Besides hard and soft, list two other ways that could be used to divide non-living things into two groups.

a. 

b. 

**Yes, But is it Alive?**

Scientists divide or classify things into three major groups. These groups are: living, nonliving, and once living. Living things are objects that can pass on genetic information through reproduction. The term once-living is a term that refers to things that were at one point part of a living thing.

See how well you understand this. Your goal will be to identify correctly the correct group for each of the following photographs.

<table>
<thead>
<tr>
<th>Object</th>
<th>Living, Non-Living, or Once Living</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Bear" /></td>
<td></td>
</tr>
<tr>
<td><img src="image2.png" alt="Waterfall" /></td>
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</tr>
<tr>
<td><img src="image3.png" alt="Flower" /></td>
<td></td>
</tr>
<tr>
<td><img src="image4.png" alt="Forest" /></td>
<td></td>
</tr>
<tr>
<td><img src="image5.png" alt="Tree" /></td>
<td></td>
</tr>
</tbody>
</table>
Uncle Fester’s CDs

Congratulations, your Uncle Fester has just willed you his CD collection!!! Using what you know about classification, see if you can arrange these CDs into similar groups to make them easier for your customers to find. Make a list of four groups that these CDs can be classified into.

<table>
<thead>
<tr>
<th>Leann Rhimes</th>
<th>Sara Evans</th>
<th>The Beatles</th>
<th>Enigma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mozart</td>
<td>Bach</td>
<td>Beyoncé</td>
<td>Tim McGraw</td>
</tr>
<tr>
<td>Rolling Stones</td>
<td>Elvis Presley</td>
<td>Paula DeAnda</td>
<td>Beach Boys</td>
</tr>
<tr>
<td>Beethoven</td>
<td>Strauss</td>
<td>Carrie Underwood</td>
<td>Robin Thicke</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
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I KEEP FORGETTING...

ARE WE FLORA OR FAUNA?

WE'RE TOADS!
Classification Practice – Animals

Part A

In the exercises that follow, arrange the items listed into different groups. Give each group a title indicating what the members of that group have in common.

1. German Shepherd, Great Dane, parrot, Irish setter, canary, husky, robin, pigeon

   Title _____________________    Title ______________________
   ______________________
   ______________________
   ______________________
   ______________________
   ______________________

2. Apples, peas, orange, banana, carrot, lettuce, turnip, pear, grape, potato

   Title _____________________    Title ______________________
   ______________________
   ______________________
   ______________________
   ______________________
   ______________________
   ______________________

3. Steak, football, sausage, chair, table, bacon, sofa, baseball bat, cleats, ham, bookcase

   Title _____________________    Title ______________________
   ______________________
   ______________________
   ______________________
   ______________________
   ______________________
   ______________________
Part B Study the following list of living things:

Mare, trout, parrot, quarterhorse, woodpecker, spaniel, goldfish, Great Dane, eagle, bass, beagle, hawk, stallion, Dalmatian, shark

1. Classify them into two groups (give each group a name).

   Group 1 ____________________  Group 2 ____________________

2. Using the same list of living things show how they could be classified into three groups.

   Group 1 ____________________  Group 2 ____________________  Group 3 ____________________

3. Using the same list, show how they could be classified into four groups.

   Group 1 ____________________  
   Group 2 ____________________  
   Group 3 ____________________  
   Group 4 ____________________

The most exciting phrase to hear in science, the one that heralds new discoveries, is not Eureka! (I found it!) but rather, "hmm.... that's funny...."

   -Isaac Asimov

Touch a scientist and you touch a child.

   -Ray Bradbury