# Diversity of Living Things!

Define the following words related to the Diversity of Living Things.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiversity</td>
<td></td>
</tr>
<tr>
<td>Kingdom</td>
<td></td>
</tr>
<tr>
<td>Species</td>
<td></td>
</tr>
<tr>
<td>Classification</td>
<td></td>
</tr>
<tr>
<td>Characteristic</td>
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</tr>
</tbody>
</table>
Classification

- “Classify” means: “put items into a group or category based on similar features”

  - A “Classification System” is a way of organizing a very large group of things into smaller categories

  - So…we take living things and sort them based on things they have in common with each other

- Both LIVING and NON-LIVING things can be classified in many different ways

- In our world, we sort LIVING things into categories based on 2 things:

  - **Form**: the visible shape or arrangement of something (size, height, shape, etc.)
  - **Function**: the natural activity of a living thing (flying, swimming, etc.)

- Every living thing is placed in to one of 5 categories called “Kingdoms”

- “Classification Charts” show how every living thing gets sorted, from the biggest category (Kingdom), all the way down to the smallest category (Species)
Earth is home to millions of living things. To help make sense of the world, we organize things and information according to an agreed upon system called a classification system. In the spaces below, complete the chart by writing down the “agreed upon” method that is used to classify the items; that is, the most common way the item is classified:

<table>
<thead>
<tr>
<th>Item(s)</th>
<th>How we classify them</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recipes in a Recipe Book</td>
<td></td>
</tr>
<tr>
<td>Books in a library</td>
<td></td>
</tr>
<tr>
<td>Groceries in a supermarket</td>
<td></td>
</tr>
<tr>
<td>Seats for a concert/hockey game at the MTS Centre</td>
<td></td>
</tr>
<tr>
<td>Items for sale at Canadian Tire</td>
<td></td>
</tr>
<tr>
<td>Movies for rent at a video store</td>
<td></td>
</tr>
<tr>
<td>Menu items at a restaurant</td>
<td></td>
</tr>
</tbody>
</table>
In Part B, you are going to think of 2 additional ways in which each item from Part A can be classified.

<table>
<thead>
<tr>
<th>Item(s)</th>
<th>2 New ways they can be classified...</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recipes in a recipe book</td>
<td>1.</td>
</tr>
<tr>
<td></td>
<td>2.</td>
</tr>
<tr>
<td>Books in a library</td>
<td>1.</td>
</tr>
<tr>
<td></td>
<td>2.</td>
</tr>
<tr>
<td>Groceries in a supermarket</td>
<td>1.</td>
</tr>
<tr>
<td></td>
<td>2.</td>
</tr>
<tr>
<td>Seats at a concert or hockey game at the MTS Centre</td>
<td>1.</td>
</tr>
<tr>
<td></td>
<td>2.</td>
</tr>
<tr>
<td>Items for sale at Canadian Tire</td>
<td>1.</td>
</tr>
<tr>
<td></td>
<td>2.</td>
</tr>
<tr>
<td>Movies for rent at a video store</td>
<td>1.</td>
</tr>
<tr>
<td></td>
<td>2.</td>
</tr>
<tr>
<td>Menu items at a restaurant</td>
<td>1.</td>
</tr>
<tr>
<td></td>
<td>2.</td>
</tr>
</tbody>
</table>
Classifying Non-Living Things

Write a category name for each group of words.
1. asparagus bean pepper
2. turtle tortoise lizard
3. valleys plateaus mountains
4. sequoia redwood pine
5. rockweed sea-lettuce kelp
6. frog toad salamander
7. winter summer fall
8. falcon eagle buzzard
9. sponge jellyfish crab
10. sage thyme rosemary

Read each group of words then write the word that does not belong on the line.
1. brother grandmother father uncle
2. onion garlic carrot spinach
3. Velociraptor Diplodocus Tyrannosaurus Megalosaurus
4. boxer beagle Siamese terrier
5. building house skyscraper cottage
6. gold copper bronze lead
7. viola violin cello oboe
8. bee spider beetle locust
9. river stream pond ocean
10. moon Mars Earth Jupiter

Sort the given objects as much as you can (coins, blocks, candy, movies, writing utensils, books)
**Schoolyard Search:**

1. In groups of 3 or 4, search the schoolyard for as many different Living & Non-Living things as you can!

2. Design your own System of Classification…Group things that have LIKE characteristics and separate things that have UNLIKE characteristics.

3. Use this page to **Draw** your **Sorted** objects, and then label your **Categories**.
The 5 Kingdoms

<table>
<thead>
<tr>
<th>Monera</th>
<th>Protist</th>
<th>Plant</th>
<th>Animal</th>
<th>Fungi</th>
</tr>
</thead>
</table>

In each of the boxes below, identify TWO examples of organisms in that Kingdom.

1.  
2.  
1.  
2.  
1.  
2.  
1.  
2.  
1.  
2.  

The 5 Kingdoms

The Moneran Kingdom
- All organisms are microscopic (some are so small they need to be magnified 10,000 times to be seen)
- All have one cell; tough cell wall allows them to survive
  - Cells have no nucleus (n. contains genetic material)
- All grow practically everywhere, including in your mouth and digestive tract
- All reproduce by simply splitting in two

The Protist Kingdom
- Most are single-celled organisms; all have a nucleus
- All can be seen only with the help of a microscope
- They live mainly in the water or in the tissues of other organisms
- The cells of all Protista are formed by bacterial symbiosis

The Plant Kingdom
- All plants can be found on land or in water
- All plants are made up of tiny cells that contain green-colored chloroplasts
- All Rooted to the ground
- Photosynthesis (feed themselves); don’t need to move

The Animal Kingdom
- Heterotrophs - Depend on plants or animals for food
  - Therefore, they need to be able to move around
- Layers of tissues (muscle, nerve, etc.)

The Fungi Kingdom
- All Fungi can be found in soil, air, water, and on or in plants and animals.
- They feed off of dead organic material
  - They are not rooted to the ground, but they also can’t move around
  - They can’t feed themselves either

Most pepperoni pizzas are fantastic
Diversity of Living Things!
Define the following words related to Animal Diversity.

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertebrate</td>
<td></td>
</tr>
<tr>
<td>Invertebrate</td>
<td></td>
</tr>
<tr>
<td>Adaptation (Charles Darwin)</td>
<td></td>
</tr>
<tr>
<td>Habitat</td>
<td></td>
</tr>
<tr>
<td>Predator &amp; Prey</td>
<td></td>
</tr>
</tbody>
</table>
Three Diversity Projects

1. BIODIVERSITY SCRAPBOOK
***A 4 week take-home assignment

Instructions:
   a) Look through the daily papers (online?) for 2 weeks and cut out/link to any articles you find pertaining to animals/the environment.

   b) Paste the articles in a scrapbook/publisher file.

   c) Summarize TWO of the articles (in your own words) what the 2 articles say. Your summary should be ONE brief paragraph (use 5 words or 5 Ws).

   d) Your SECOND paragraph should be a critical analysis explaining your view and whether you are for or against the issue at hand & why?

2. ANIMALS PRESENTATION
***A small group assignment. It’s your choice how you present.

Instructions:
   a) Each group will be given ONE of the NINE animal groups, along with an information package.

   b) Use the information package and/or the internet to gather important details about your animal group.

   c) Put together a fun & interactive presentation to share with the rest of the class. Presentation options include: Video, Skit, Puppet Show, or Song.

SPECIES RESEARCH
***An individual research project about any species of your choosing.

Instructions:
   a) Each student will select an interesting species in which to study.

   b) Follow the research plan (gather/sort info, 5 words, rough copy, revise)

   c) Create a 3-5 paragraph magazine page.

   d) Some things to consider: Habitat, defense, adaptations, home, community, food, predators, reproduction, physical appearance, communication, etc…
Vertebrate Animals:
(Identify 5 important facts/characteristics and 2 examples for each)

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish</td>
<td></td>
</tr>
<tr>
<td>Birds</td>
<td></td>
</tr>
<tr>
<td>Mammals</td>
<td></td>
</tr>
<tr>
<td>Amphibians</td>
<td></td>
</tr>
<tr>
<td>Reptiles</td>
<td></td>
</tr>
</tbody>
</table>
**Invertebrate Animals:**
(Identify 5 important facts/characteristics and 2 examples for each)

<table>
<thead>
<tr>
<th>SPONGES</th>
<th>Examples:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>WORMS</td>
<td>Examples:</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>ARTHROPODS</td>
<td>Examples:</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>MOLLUSCS</td>
<td>Examples:</td>
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<td></td>
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</tr>
</tbody>
</table>