

Wizard Notebook for Herbology

Part One Taxonomy *Sorting your plants and looking for patterns*

Group 1

Common names of plants you put in this group

Reason why you put these plants together

Group 2

Common names of plants you put in this group

Reason why you put these plants together

Group 3

Common names of plants you put in this group

Reason why you put these plants together

Group 4

Common names of the plants you put in this group

Reason why you put these plants together

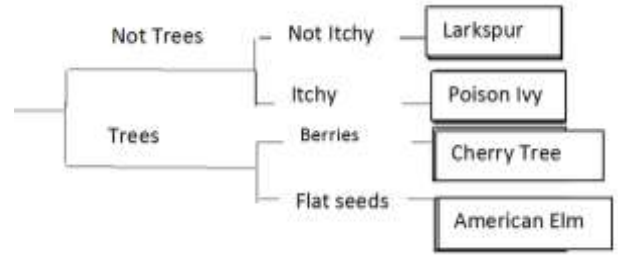
After you share your results of your group's sorting. Please jot down some of your reasons why everyone's groups could be different

Analysis Questions - Part I

Name: _____

On separate sheet of paper please your finished taxonomic tree. Remember this tree should have several branches and each branch should terminate on one species a piece.

An example of the final branch of a tree is available at the right. You may NOT use this tree but it may help guide your thinking. Do your best to use actual physical traits when constructing your trees and not terms that may be perceived differently by others. For example, using descriptors like "tall" or "short" can be difficult to distinguish so stick with reliable traits that can be trusted when differentiating one group from another.



1. What method(s) could be done in your class in order to get everyone's trees to look the same?
2. Why is classifying based on how an organism looks not always the most reliable way to classify organisms?
3. Professor Sprout has charged you with collecting certain plants for her Greenhouse II class. You have been walking through the British countryside and you stumble upon a plant you find interesting but don't recognize. This plant seems to be closely related to the organisms in your Group #2 from the beginning of the activity. Create a new identification card below for this plant based on the format for the cards with which you have already used.

<p>Common name: _____</p> <p><i>Scientific name:</i> _____</p> <p>⚠ <i>Height:</i> _____</p> <p>⚠ <i>Leaves:</i> _____</p> <p>⚠ <i>Other trait:</i> _____</p> <p>⚠ <i>Other trait:</i> _____</p> <p>⚠ <i>Other trait:</i> _____</p> <p>⚠ <i>Other trait:</i> _____</p>	<p><i>Drawing</i></p>
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4. How did the traits for this new plant species lead you to believe it was part of Group #2? Explain your reasoning.

Phylogeny – The Magic That Muggles Possess

Copy and paste your final tree into the box below.

(Not working on an electronic form? Draw your tree below in pencil with a straight edge.)



Analysis questions

1. What does RBCL stand for? Why do all plants need it?
2. When you put in your nucleotide data in the phylogenetic tree-making website, the program showed that it was MUSCLE data. Look up what MUSCLE is when doing a phylogenetic tree and explain why we use it here.
3. Compare your phylogenetic tree to your taxonomic tree. Write as many things that are the similar and as many things that are different between the two trees.
4. You are searching the herbarium archives at Hogwarts to identify some species you just found. The two plants look very similar. Both are vine plants, have purple flowers, thorns, and toxic chemicals, but when you run a phylogenetic tree analysis they are super different. Please discuss with your group why has this has come to be. Make sure you justify why you came to this understanding.