PLANT KINGDOM

Classification of Vascular, Nonvascular, Monocot & Dicot Plants

Plants: Vascular and Nonvascular Roper Mountain

[i]Plants may not seem like the most interesting things around, but they are definitely useful. In this lesson, we will explore the basic classification of plants and the unique characteristics of each group.



1. **Watch the video, classify these statements about vascular and nonvascular plants:**

a	They use tissue to transport water and nutrients throughout a plant	
b	They are all small because there is no transport system to move required food and nutrients around in the plant.	
c	Xylem transports water and dissolved minerals, while phloem transports food	
d	These plants do not have roots but instead have rhizoids, which are little hairs that help anchor the plant	
e	These plants are small, simple and less advanced than most plants	
f	Common examples are trees, grasses and shrubs	
g	These plants can grow to be incredibly large as nutrients and water are moved from the roots to the leaves and anywhere else in the plan	
h	Mosses, liverworts and hornworts are the three main groups of nonvascular plants	

2. **Read the next paragraphs and find synonyms for the following words, write them down each word**

Classification p.I	**Generate** p.I	**Complex** p.II	**Categories** p.II	**Samples** p.II

Gymnosperm versus Angiosperm



[ii]There are several ways to classify vascular plants. The first grouping is based on the presence or absence of flowers. **Gymnosperms** were the first plants with seeds. They are vascular plants and do not produce flowers. However, the seed is beneficial because it provides protection and food for the plant embryo. Examples of gymnosperms include conifers - or evergreens - and ginkgoes. (ginkgo) DILOVA

Angiosperms are plants with flowers. They are more advanced than gymnosperms because of the presence of flowers. The flower is useful because it attracts organisms such as bees, bats and beetles to pollinate the flower, allowing the seed to be fertilized. Examples of angiosperms include roses, apple trees and magnolias. Just like there were different types of vascular plants, there are also different types of angiosperms.

Flower puns (joke based on the interplay of homophones — words with the same pronunciation but different meanings)

Just wanted to say aloe! I never want you to leaf me.

Our tulips should kiss. I will seed you later I really lilac you

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3. The following sentences appear in the text, add them to their correct paragraph.

(A) A flowering plant is either considered to be a **monocot** or a **dicot**.

(B) Their flower petals are always in groups of four or five and they have complex leaves with veins.

(C) The term that scientists use is **cotyledon**.

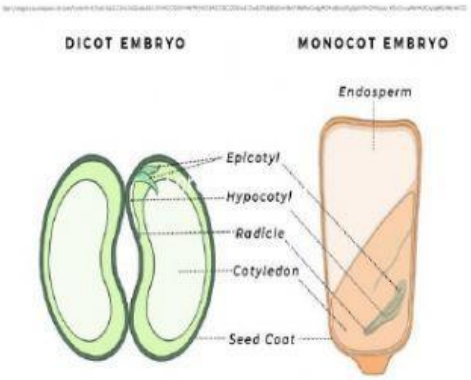
Monocot versus Dicot[iii]

There are two categories of flowering plants based on the number of seed leaves. To refer to seed leaf ____ This seed leaf is found in the seed and is the first leaf to grow on the new plant.

Angiosperms are categorized based on the number of cotyledons present. ____

Monocot is short for 'monocotyledon,' meaning 'one seed leaf.' These plants are simple flowering plants such as grasses, corn and palm trees. Their flower petals are always in groups of three and their leaves are long.

The other type of angiosperm is a dicot, which is short for 'dicotyledon,' meaning 'two seed leaves.' These plants are what we generally think of when we think of flowering plants. Examples of dicots include roses, sunflowers, cacti and apple trees. ____



4. Match or drag each word with the correct definition:

Vascular **phloem** **nonvascular** **xylem** **gymnosperms** **monocots** **dicots** **plants**

_____ can create chemical energy from light energy through the process of photosynthesis.

_____ water-carrying tubes

_____food-carrying tubes

_____ what you generally think of when you think of plants, they have xylem and phloem.

_____ simple plants such as mosses with no vascular system.

_____ plants that have seeds but no flowers, such as pine trees or conifers.

_____ have only one seed leaf, flower petals in threes and long leaves.

_____ have two seed leaves, flower petals in fours or fives and complex leaves with veins.

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[i] Photo 1 T2.ev.ltmcdn.com. 2021. [online] Available at: <https://t2.ev.ltmcdn.com/es/posts/6/5/9/ejemplos_de_plantas_no_vasculares_2956_2_600.jpg> [Accessed 18 September 2021].

[ii] Photo 2 Biodifferences.com. 2021. [online] Available at: <https://biodifferences.com/wp-content/uploads/2017/06/Angiosperms_Vs_gymnosperms_img.jpg> [Accessed 18 September 2021].

[iii]Photo 3 Images.squarespace-cdn.com. 2021. [online] Available at: <https://images.squarespace-cdn.com/content/v1/5edb16a2c33b4c7e56cc6e86/1591440076204-MWTWJ1B3I6WG7C8C22C9/ke17ZwdGBTodd8pDm48kA709dAlwCwdgJMEMndBmp97gQa3H78H3Y0txjaiv_0fDoOvxcdMmMKkDsyUqMSsMWxHk725yiiHCCLfrh8O1z5QPOohDIaIeljMHgDF5CVlOqpeNLcJ80NK65_fV751UZfREsQPE3jzcj_Exnij0hvSfiqr1xBKovhp0GqL57R7ocZopapzX5FBgJHmNnS1cw/seed-monocot-vs-dicot.jpg?format=1000w> [Accessed 18 September 2021].

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