



## Plant Identification

There are many types of plants – shrubs, trees, vines, grasses, annuals, perennials etc. – and being able to identify what a plant is by sight, by common name and by its botanical name is very important.

There are also strategies that you can use to determine what a plant is. What shape leaves does it have? What kind of flower does it produce? Where does it grow?

Plants can be sorted, or classified, into categories in different ways. Three main ways are by how long the plant lives, if it has woody or soft herbaceous stems, and what kind of seeds it produces.

- 1) How long it lives
  - Annual – plant grows, flowers, disperses seeds and dies all in one year.
  - Biennial – plant grows for two years, flowering and dispersing seeds in the second year.
  - Perennial – plant grows continuously for many years, flowering and dispersing seeds every year
  
- 2) Stem types
  - a. Woody stem
    - i. Tree
    - ii. Shrub
    - iii. Vines
  - b. Herbaceous
    - i. Grass
    - ii. Flowering plant (upright and vines)
    - iii. Fern
  
- 3) Type of seeds
  - a. Gymnosperm – woody plants that produce “naked” seeds. Conifers like pine and fir trees are gymnosperms.
  - b. Angiosperm – flowering plants with seeds covered by an ovary (fruiting structure) Fruit trees and roses are examples of angiosperms.
  - c. Spore producer – produces spores instead of seeds – ferns are spore producers



Over the centuries, people have given names to plants according to what they look like or what medicinal or other uses they have or their colour, or any number of identifying characteristics. For example, the white birch, named for its white bark, found in many Canadian forests is also called a paper birch, because its bark can be peeled off in thin layers and used for writing on. Still others call it a shining birch. And these are just the common names used in English.

As you can see, there can be many common names for one plant, and it isn't always easy to know if two people are talking about the same plant. Therefore, we use a scientific naming system, or nomenclature, to clearly identify each plant. [The scientific naming system for animals and plants](#) was developed by the 18th-century Swedish naturalist Carl von Linné, better known as Carl Linnaeus. He created the hierarchical system of grouping animals and plants and used Latin and Greek names for the groups because these were the international languages of science at the time. Latin is still used because it is not a spoken language anymore – it never changes and is a universal language.

The full system uses a hierarchy that groups plants first by broad similarities and then by more specific similarities until it narrows down to the specific plant. A chart showing this breakdown from Class down to Cultivar can be found at <http://theseedsite.co.uk/class.html>

Most of the time, people are most concerned with the Family, Genus, Species and Cultivar information about a plant.

The system uses binomial nomenclature (2 names) for each plant. *Betula Alba* is the scientific name for white birch. *Betula* is the genus and *alba* is the species. So, whether we call it a white or paper or shining birch, if we use the scientific name, *Betula alba*, we all know which tree we are talking about. *Betula alba* belongs to the family *Betulaceae*, which also includes alders, hazels, and hornbeams.

Plant Classification is an easy, helpful PowerPoint presentation about the classification system that you can download.

### Tips and Strategies for Learning Plant Names

There is no getting around it – learning plant names requires a lot of memorization. For anyone seeking a career in horticulture, landscaping, or floriculture it is essential that you be able to identify most commonly used plants. You will not be taken seriously as a professional if you cannot identify common plants in the landscape, greenhouse or nursery, or if you recommend a sun-loving perennial for a shady location.

You can help cement things in your brain if you also find ways to use the information regularly and review it in different ways.

#### A. Common Names

- a. One of the best ways to learn to identify plants on your own is to use field guides and seed/plant catalogues that have colour photos or illustrations of the plants they list. Seed/plant catalogues sometimes also give more information about specific plants that help you to remember them. They are usually divided into sections with similar plants – try focusing on one section at a time to become familiar with common plants used in landscaping and gardening.



### b. Flash cards

Make flash cards with a plant photo on one side and its common name on the other. You can use the photos in those seed/plant catalogues. Practice on your own or get a friend to show you the photos while you identify the plant. Alternatively, you could write the names down in order as you see the photos, and then check your answers.

You might want to keep the flash cards with you, so you can review them at odd times throughout the day.

### c. Use apps

There are a number of inexpensive apps that allow you to create your own content for revision. By working with your classmates, you can take turns to create lists that you can share and practice with. [Quizlet](#) is one worth trying out.

### d. Match games

Try the match games in this Toolkit at <https://interacty.me/projects/a27df2e5208fa0f0>

## B. Scientific names

### a. Flash cards and apps

Use these as mentioned above but use the scientific names instead of the common names with the photos. You might consider making flashcards or games using common names with scientific names.

b. Make sure you copy the scientific names correctly. It's a bit like learning a new language, so make sure you start with the correct spellings.

c. Break the words up into sound bites so they are easier to learn. "[Small Green Things](#)" recommends making stories from the sound bites to remember the name and spelling (similar to remembering the names of new people).

d. Look up the meanings of scientific names. Botanical names are mainly Latin or Greek based and there are parts of words that are worth knowing because they will come up frequently. It also makes studying more interesting. It's helpful to have a reference book or e-book but you can search online for meanings. For example:

- *edulis* means 'edible'
- *toxicarius* means 'poisonous'
- *albus* means 'white'



- *rubrum* means 'red'
- *orientalis* means 'relating to the Orient'
- *scandens* means 'climbing'
- *pendulus* means 'hanging'
- *glabrous* means 'smooth'

### [Botanical Nomenclature Guide: The Meaning Of Latin Plant Names](#)

- e. Focus on one plant genus at a time.  
Focus on learning the most commonly used plants first and go genus by genus. For example, all the birches (*Betula*), then all the maples (*Acer*), then pines (*Pinus*), etc.
- f. Say the names phonetically to help remember spelling.  
This helps some people. For example, when learning how to spell a word with silent letters, say the sounds for those letters when you write them down. "knee" becomes /ku - nee/

### For more strategies, check out these websites:

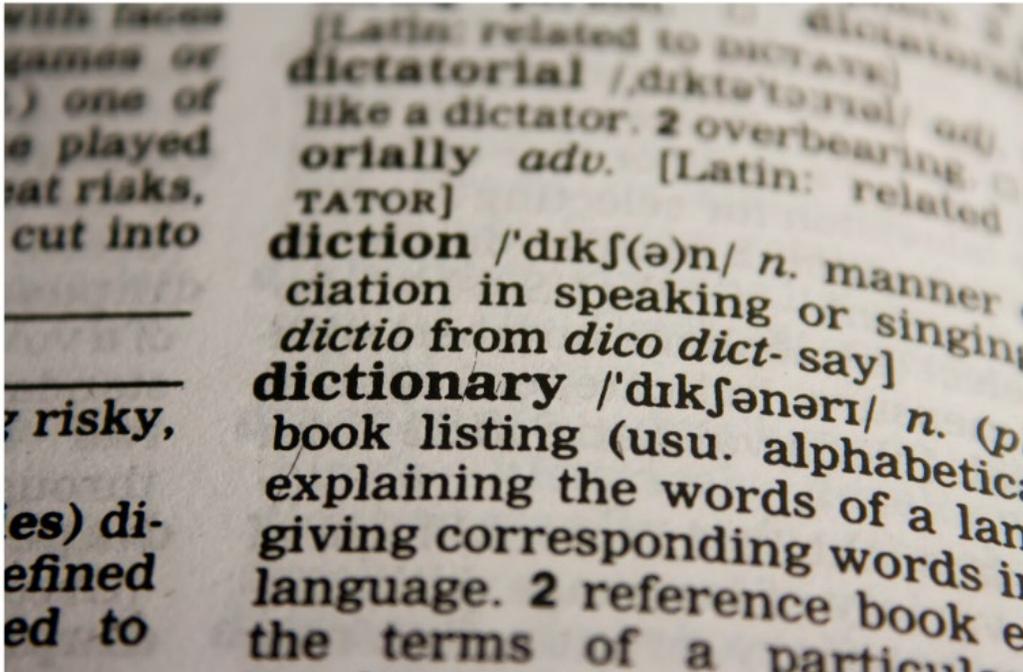
- [How to understand botanical names for beginners](#)
- [How to learn botanical Latin plant names](#)
- [10 Tips for Learning the Botanical Names of Plants](#)
- [How to Understand Plant Names](#)
- [Botanical Nomenclature Guide: The Meaning Of Latin Plant Names](#)  
<https://www.gardenersworld.com/plants/gardening-for-beginners-latin-plant-names/> more meanings of Latin names

## Learning Plant Names

It is impossible for anyone to learn all of the different plants and plant materials that exist. It would be like trying to learn every word in the world's biggest dictionary. When faced with a difficult problem, like learning a lot of new information, it is easier if you break the task down into smaller parts. One way of breaking a task down is to narrow your focus.

Let's say you meet a new group of people for the first time. You are introduced and you know there is an expectation for you to remember their names. This is a big task. You must break this task into smaller parts. Instead of trying to name individuals randomly, you may devise a system to group people. Perhaps there is the red group (each is wearing the colour red). This is what they have in common. Another grouping may have short hair; another grouping may all be tall people. Through grouping, you have eliminated all the unimportant factors about each person. It is easier to remember Joe, John and Mary because they have become the Reds. David, Sam and Anne are easier to remember because they are now the Talls.

We can also narrow our focus when reading. In other words, it is possible to improve your comprehension of reading passages by learning a common grouping of words. These are called sight words.



**Did You Know?**

In the English language, one hundred simple words make up half of all reading.

It may seem impossible, but it is true. These words are used so often, that you probably don't think about them when you are reading.

**Box A - These 12 words = 1 / 4 of all reading.**

Box A		
a	in	that
and	is	the



Box B has 20 words. Box A + Box B = 1 / 3 of all reading.

Box B		
all	be	have
on	they	are
but	him	one
as	for	we

Box C has 68 words. Box A + B + C = 1 / 2 of reading (Total = 100 words)

Box C				
about	come	could	other	their
were	an	her	me	here
or	them	what	back	did
much	if	then	when	been
do	into	our	must	there
where	before	down	my	just
out	this	which	big	by
first	like	new	over	two
who	from	little	right	no
up	will	call	get	now

*As you can see, you do not have to know every English word in order to read most materials.*

*The good news is that the same is true with plant names*



## Did You Know?

There are over 230, 000 known plants in the world.

Canada has over 5,000 different plants.

*(Source: Redpath Biodiversity Project)*

To do your job well as a horticultural technician you do not need to know the names of all the plants in the world. You do not need to know the names of all the plants in your hardiness zone. But you do need to know the names of all the plants on your site.

When you are on a site, your supervisor and/or your co-workers will use plant names when they are giving you work instructions. You may be told to “move the Dahlias into the shed”. To do your job correctly, you must know which plants are the Dahlias.



## Plant Names

There are thousands and thousands of different plants in the world. Plant names can be difficult to read and difficult to remember. Many of their names will be unfamiliar to you, and some of them will be difficult for you to pronounce. It is almost like learning a new language.

When learning a new language, you usually start by learning **basic** vocabulary words first. You learn the words that name people, places and things. These words are called **nouns**. Examples of nouns include sister, house and dog. Next, you may learn the words that describe these nouns such as, **big** sister, new house and **good** dog. These descriptive words are called **adjectives**.