

What's in a Name? Teacher Resources

In this activity your students will have the opportunity to learn about plant names through a scavenger hunt in our greenhouses. The scavenger hunt focuses on plants with animal names in their common names, but will have students looking for scientific names and drawing plants as well. We are trying to teach students about scientific nomenclature and taxonomy in a creative and exploratory way.

Goals & Standards:

1. To engage with the plant collection at the Garfield Park Conservatory in a fun way
2. To learn the difference between common names and scientific names
3. To better understand binomial nomenclature and why scientists use it

Next Generation Science Standards: 2-LS4-1

Common Core Standards: CCSS.ELA-LITERACY.RH.6-8.7

Vocabulary:

Binomial nomenclature – the two part naming system used to assign scientific names to all living things; contains a genus and a species

Taxonomy – the scientific classification system used to sort organisms and name them

Phylogeny – a branch of biology that studies the genetic relationships and evolution of organisms

Genus/genera – an important taxonomic category that is after family but before species

Species – the primary taxonomic category, which is unique to an organism; members of the same species can exchange genes and reproduce successfully

Common name – a non-scientific way of naming an animal or plant, these are used in everyday language

Talking points during your trip:

- Why do living things have scientific names as well as common names? Sometimes different species share the same common name. Other times one organism will have multiple common names. For example, the fish-like organism in our Children's Garden is known as an axolotl, the Mexican salamander, or the Mexican walking fish! Using a genus and a species allows scientists to be very specific.
- Scientific names are always italicized or underlined, and the genus is capitalized but



not the species. This makes it easy to figure out that something is a scientific name.

- Sometimes a genus is named after a person rather than a Greek or Latin word for something descriptive about the plant. When a scientist discovers a new species, they get to decide what its species name will be.
- Sometimes plants get a new scientific name when researchers do genetic research and determine a new relationship between plants that were previously in different genera.
- Taxonomic classification is like a road map of where a species sits among all the other organisms in the world. You can talk about kingdoms, phylum, class, order, family, genus, species and how these all relate to each other.
- It's not just plants that have scientific names—you can mention some of the animals living in our greenhouses. The koi in our ponds are a type of Amur carp (*Cyprinus rubrofuscus*). Our axolotls are *Ambystoma mexicanum*.

Back in the classroom:

- Have students pick one plant from the Conservatory and follow its scientific nomenclature all the way to its kingdom.
- Students could come up with their own plant with an animal in its common name. They can draw their imagined plant and explain why it has that common name. Then have them make up a genus and species.
- If students discovered a new kind of plant, what would they name the species? Explain that they aren't allowed to name it after themselves. What would they pick then?

If you want to further talk about taxonomy, here's an example of our axolotl's taxonomic classification:

Kingdom: Animalia

Phylum: Chordata

Class: Amphibia

Order: Urodela

Family: Ambystomatidae

Genus: *Ambystoma*

Species: *A. mexicanum*



What's in a name?

A name-based scavenger hunt for Garfield Park Conservatory

Background: Did you know that scientists name living things in a special way? All living things, like plants, have a scientific name *and* a common name. The scientific name is always in the language of latin or greek, and has two parts: a *genus* and a *species*. The common name is what we use everyday to talk about living things around us. Some common names even have animals in them!

For example: look at the sign for our bunny ears cactus below. The scientific name is *Opuntia microdasys*. As you can see, the common name is usually very different from the scientific name! On our tags you can also find the plant's native region & family. Plants in the same genus are related like siblings, and plants in the same family are more like cousins.

Directions: On the page below we have some of the animal names you can find in common names of plants inside each of our houses. See how many you can find!

- For each room or set of rooms, pick one plant you find with an animal name.
- Write down its scientific name and common name.
- Draw that plant in the space provided.
- Finally, briefly explain why you think it has this name!



- common name
- scientific name
- plant family
- native region

Fern House

- bird
- caterpillar
- rabbit
- bear
- fish
- crocodile
- squirrel
- peacock
- stag
- hare

Common name:

Scientific name:

Why do you think it has this common name?

Palm House

- bird
- lobster
- spider
- elephant
- oyster
- shrimp
- horse
- zebra
- parrot
- parakeet
- bear
- peacock

Common name:

Scientific name:

Why do you think it has this common name?

Children's Garden, Sugar from the Sun, & Aroid House

- ant
- dragon
- guppy
- bird
- elephant
- pig
- bird

Common name:

Scientific name:

Why do you think it has this common name?

Desert House

- octopus
- elephant
- fowl
- panda
- snake
- bunny
- ox
- bear
- goat
- horse
- zebra
- sea urchin
- cub
- hedgehog
- cat

Common name:

Scientific name:

Why do you think it has this common name?

1. What plant's name were you most surprised by? What surprised you?

2. Why do you think so many plants have animals in their names?

3. What did you notice about the scientific names for the plants you found?

4. Why do you think some rooms have have lots of plants with animals in their name but some rooms only have a few?