



name

scientific

Classification

Insects are found everywhere. They are found from the tropic rain forests to the Arctic tundra, in water, wood, plains, soil, and even inside the bodies of other animals. Over a million different species have been identified. No one knows how many more are left to be classified. The great number of insects is not the only condition to cause problems. Many insects are known by common names in certain parts of the world; however, they may be known by other names in different parts or regions of the world. How do scientists know what kind of insect we are talking about? The answer to that is that all discovered plants and animals are given scientific names. This helps us all when we are trying to identify a certain species of insect.

Species

Scientific names are part of the system of classification which is used all over the world by scientists. This classification system enables scientists to show how different plants and animals are related to each other. Animals that are similar are grouped together and given the same scientific name. We say that they belong to the same species. Human beings are a species and have been given the scientific name *Homo sapiens*. An animal's name is made up of two words in Latin or Greek. The differential grasshopper, found throughout the United States, is a shiny brownish yellow. Its length is 23-44 mm (1-1/4"). Its hind tibiae (legs) are yellow with black toothlike spines. Its scientific name is *Melanoplus differentialis*. The red-legged locust is a dark brown to greenish yellow, or red-brown. Its hind tibiae are bright red to yellowish with black spines. Its length is 18-25mm (3/4-1"). It is found from the Atlantic Coast to Florida, west to Arizona, and north to Alberta. Its name is *Melanoplus femur-rubrum*. Both of these grasshoppers are short-horned grasshoppers.

Genus

The next larger group in scientific classification is the *genus*. A genus is made of more than one species. Animals that belong to the same genus are closely related but are not as much alike as the members of the same species. The black bear belongs to the genus *Ursus*. Its species name is *Ursus americanus*. There are other types of bears that belong to the same genus. The grizzly bear species name is *Ursus arctos*. For many years it was classed as *Ursus horribilis*, but most authorities now use that term to classify the difference between grizzlies *Ursus arctos horribilis* and the Kodiak bear *Ursus arctos middendorffi*. These types of classifications are called subspecies. The polar bear is known as *Ursus maritimus* among scientists. The giant panda bear is known as *Ailuropoda melanoleuca*. What might that tell you about the giant panda bear?

Family

Just as a genus is made up of several species, a "family" is made up of more than one genus. They are similar with some important differences. Lions, leopards, tigers, and domestic cats belong to the family *Felidae*. Dogs, foxes, coyotes, and wolves belong to the family *Canidae*. Bears belong to the family *Ursidae*. All short-horned grasshoppers belong to the family *Acrididae*.

standards S2a, S4a, S6d, S7c

our goal is to understand how objects are grouped/sorted/classified in nature.

sally

class

team

seat

date

Why do we need to classify animals plants and other things?

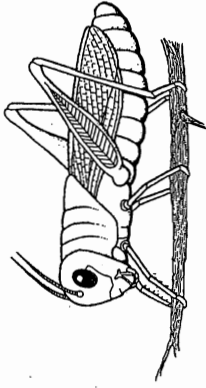
in my head question

Order, Class, Phylum, Kingdom

Families of animals are parts of even larger groups in the system of classification. In the 18th century, a Swede by the name of Carolus Linnaeus developed a structured form of biological classification. Below is an example of a short-horned grasshopper and how it fits into this system.

Short-horned Grasshopper

- KINGDOM: Animalia
- PHYLUM: Arthropoda
- CLASS: Insecta
- ORDER: Orthoptera
- FAMILY: Acrididae
- GENUS: *Melanoplus*
- SPECIFIC NAME: *Differentialis*



This system is a useful tool both for scientists and for people who want to learn about the world of nature. The majority of insects lack common names. Since there are more than a million different kinds, many are only known by their scientific names.

Why do scientists use this system?

in my head question

Now is a species different from a family?

What is a genus?



these are right there sally questions

read pages 226-228 of your textbook/NY Science - Grade 6 - Chapter 8 - section 2

