

# Why Classify?

- **Answering Questions** The classification of living things makes it easier for biologist to answer many important questions such as:
  1. How many known species are there?
  2. What are the defining characteristics of each species?
  3. What are the relationships between these species?



## Section 1

# Levels of Classification







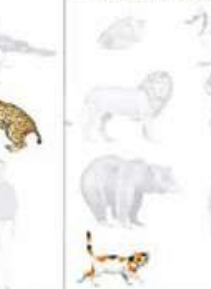
- **Kingdoms and Beyond**

1. Domain	Dumb
2. Kingdom	King
3. Phylum	Phillip
4. Class	came
5. Order	over
6. Family	for
7. Genus	grape
8. Species	spinach





### Levels of Classification

Kingdom Animalia	Phylum Chordata	Class Mammalia	Order Carnivora	Family Felidae	Genus <i>Felis</i>	Species <i>Felis domesticus</i>
All animals are in the kingdom <b>Animalia</b> .	All animals in the phylum <b>Chordata</b> have a hollow nerve cord. Most have a backbone.	Animals in the class <b>Mammalia</b> have a backbone. They also nurse their young.	Animals in the order <b>Carnivora</b> have a backbone and nurse their young. They also have special teeth for tearing meat.	Animals in the family <b>Felidae</b> are cats. They have a backbone, nurse their young, have special teeth for tearing meat, and have retractable claws.	Animals in the genus <b><i>Felis</i></b> have traits of other animals in the same family. However, these cats cannot roar; they can only purr.	The species <b><i>Felis domesticus</i></b> is the common house cat. The house cat shares traits with all of the organisms in the levels above the species level, but it also has unique traits.
						



# Scientific Names

- **One Species, One Name** A scientific name is always the same for a specific kind of organism no matter how many common names there might be.
- **Two-Part Names** The first part of a species's name is the genus name. It is always capitalized. The second part of the name is the species name.



# Dichotomous Keys

- **What Is a Dichotomous Key?** A dichotomous key is a tool for identifying organisms that uses a series of paired descriptive statements. Two part
- **Two-Part Names**



## Section 1

# A Growing System

- Still Discoveries to Make
- Discovery Unique Organisms



# Objectives

- Explain
- Describe
- Describe



## Section 2

# What Is It?

- What Is Used to Classify Organisms?
- Adding New Classification Categories





## Section 2

# The Two Kingdoms of Bacteria

- **The Domain Archaea** Archaea are one of two kinds of prokaryotes. *Prokaryotes*  
Most are known to live in extreme environments.
- **The Domain Bacteria** Bacteria are another kind of prokaryote. Bacteria can be found in soil, water, and even on and inside the human body.



## Section 2

# The Domain Eukarya

- **The Kingdom Protista** Today members of the kingdom **Protista** commonly called *protists*, are single-celled or simple multicellular organisms.
- Protista contains many kinds of organisms, including protozoans, algae, and euglenoids.



## Section 2

# The Domain Eukarya, *continued*

- The Kingdom Fungi

complex, multicellular

- 

fungi absorb nutrients from substances in their surroundings.



## Section 2

# The Kingdom Plantae

- **Plants**  
organisms that are eukaryotic, have cell walls, and make food through photosynthesis.
- **Examples of Plantae** Sequoia trees, roses, grasses, ferns, and more



# The Kingdom Animalia

- **Animals**  
complex, multicellular organisms that don't have cell walls, are usually able to move around, and have specialized sense organs.
- **Examples of Animalia** Ants, beetles, lizards, fish, birds, apes, elephants, and more are all examples of members of the kingdom Animalia.
- **Simple Animals** Most animals are able to move, but sponges, a simple animal, cannot move

