

## VOCABULARY

**Carolus Linnaeus** – Swedish scientist who developed a classification system

**Taxonomy** – the science of naming and classifying living things

**Classification System** – largest to smallest groups

**Domains** – largest classification group; Archaea, Bacteria, and Eukarya

**Kingdom** – second largest classification group; Archaeobacteria, Eubacteria, Protista, Fungi, Plantae, Animalia

**Prokaryotes** – cells do NOT have a nucleus

**Eukaryotes** – cells DO have nucleus

**Dichotomous Key** – dichotomous means “divided into two parts”  
- a key for the identification of organisms based on a series of choices between alternative characteristics  
- dichotomous keys always give TWO choices in each step

# QUIZ 3 NOTES

## SCIENTIFIC NAMES

**Latin** is the language used to write scientific names. Latin is a dead language.

**Why is Latin perfect for Scientific Names?**

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**To write Scientific Names, scientists follow THREE Rules:**

1. Genus name is capitalized
2. species is lower case
3. in *italics* or underlined – not both

- **Example:** *Homo sapiens* or Homo sapiens = human

**Using your Last name as the Genus name and your first name as the species name, what would your scientific name look like:** <type here>

## CLASSIFICATION OF ORGANISMS

### CLASSIFICATION CHARACTERISTICS

(fill-in-the-blanks)

1. **Cell type**

a. \_\_ (lacks a nucleus)

**OR**

b. \_\_ (has a nucleus)

2. **Cell Structures**

a. \_\_ – provide support for the cell (present/absent, composition)

b. \_\_ – where photosynthesis takes place (present/absent)

3. **Body type** –

a. \_\_ (one cell)

**OR**

b. \_\_ (body has many cells)

4. **Nutrition** – how the organism gets sugars/food:

a. \_\_ (makes own food)

**OR**

b. \_\_ (does not make food, must consume food)

# CHARACTERISTICS OF EACH KINGDOM

(fill-in-the-blanks)

- Archaeobacteria: simple prokaryotes, unicellular, autotrophs or heterotrophs; have cell walls, found in extreme environments

**Example:**

- Eubacteria: simple prokaryotes, unicellular, autotrophs or heterotrophs; have cell walls, found everywhere, some helpful, some harmful

**Example:**

- Protista: mostly unicellular, some multicellular, autotrophs or heterotrophs; cell walls, some have chloroplasts, simple eukaryotes

**Example:**

- Fungi: some unicellular, most multicellular; more complex eukaryotes, heterotrophs, have cell walls

**Example:**

- Plantae: multicellular, eukaryotes, autotrophs, have cell walls and chloroplasts

**Example:**

- Animalia: multicellular, eukaryotes, heterotrophs; most complex organisms

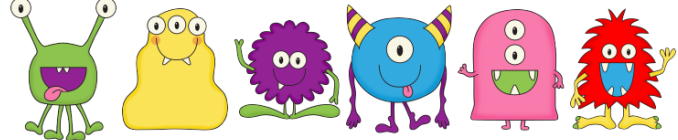
**Example:**

# DICHOTOMOUS KEY USE

Use the key to identify the scientific name of each Alien.

## Identifying Aliens with a Dichotomous Key

Look carefully at the aliens pictured below. Use the dichotomous key to find the scientific name for each one.



- 1 a. Mouth open ..... go to 2  
b. Mouth not open ..... go to 4
- 2 a. Arms ..... go to 3  
b. No Arms ..... *Alienus quadlegicus*
- 3 a. Hairy ..... *Alienus hairicus*  
b. Not hairy ..... *Alienus tritoothicus*
- 4 a. No horns ..... go to 5  
b. Horns ..... *Alienus stripicus*
- 5 a. No legs ..... *Alienus blobicus*  
b. Legs ..... *Alienus fuzzius*

The Aliens are A through F (left to right or green to red)

- A.
- B.
- C.
- D.
- E.
- F.