# March 22nd

- **On your blue warm-up sheet identify each of the following as lytic or lysogenic**

1. Symptoms within 3-days
2. Example is HIV
3. Viral DNA is incorporated into cell's DNA
4. Virus DNA hijacks the cell to build new viruses
5. Virus is activated by a signal
6. Cell will burst and release viruses
7. Example is common cold

- **Get your projects out and ready to turn in, you will have a quiz over the information!**

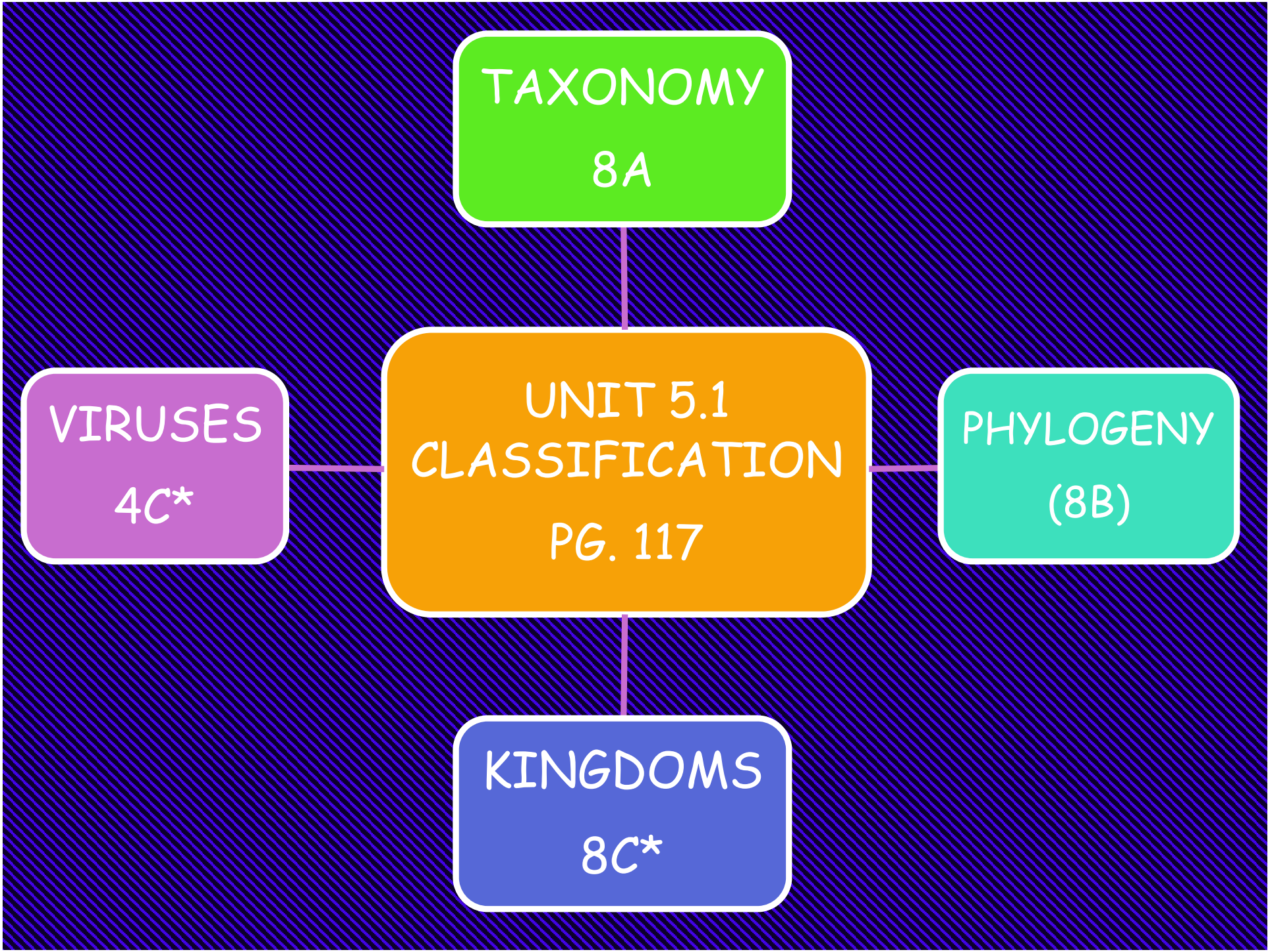
# Class Classification

- We will be making a flow chart for identifying the class based on traits
- You will record the flow chart as we make it in your notebook.
- Lets start by splitting the class into two easy groups
- Each group will then continue splitting their group until everyone is alone.
- You have 5 minutes to split yourselves

# Humans

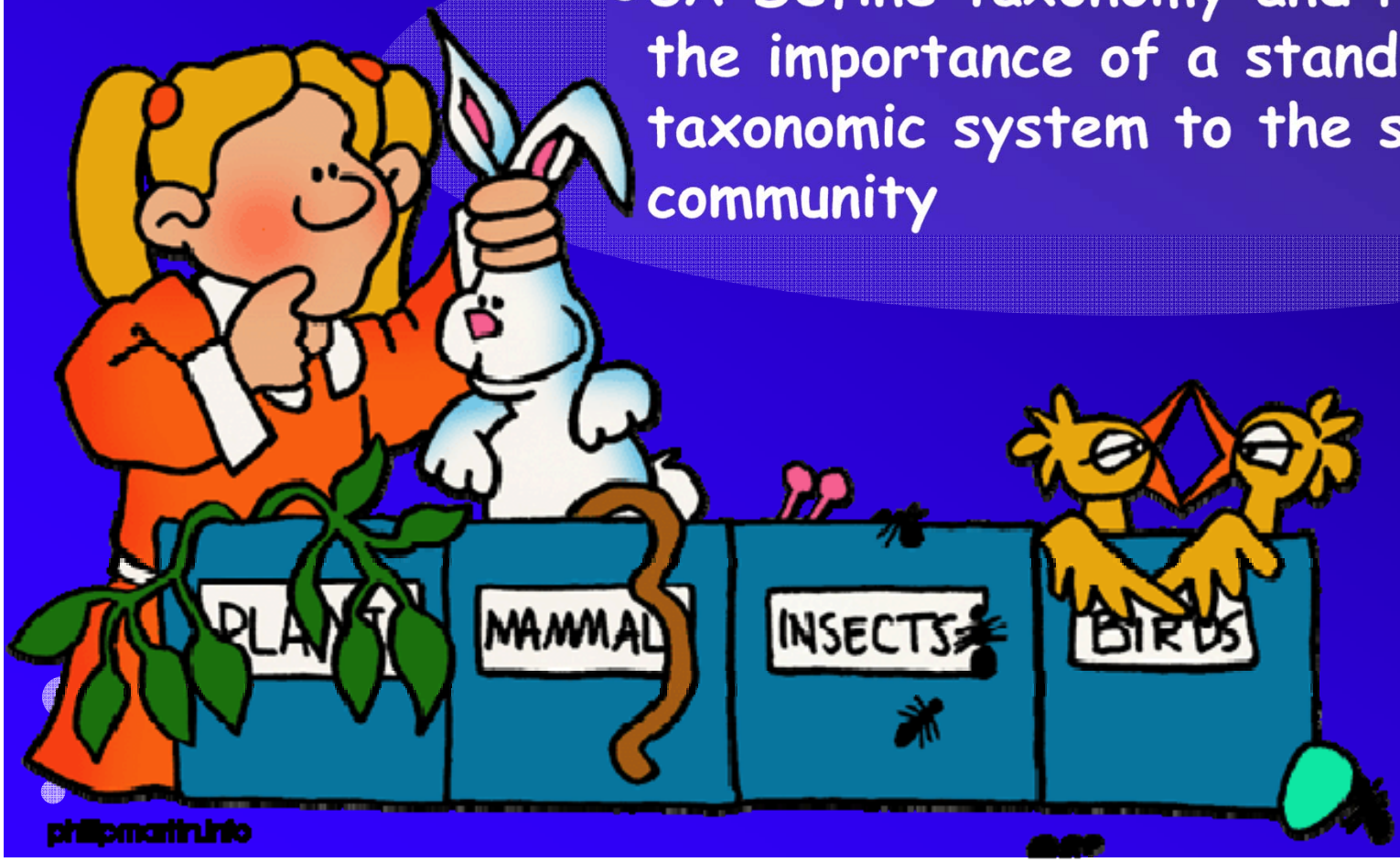
## Boys

- Wearing Jeans
- Traveled for Spring Break


TAXONOMY
8A
VIRUSES
4C*
UNIT 5.1
CLASSIFICATION
PG. 117
PHYLOGENY
(8B)
KINGDOMS
8C*

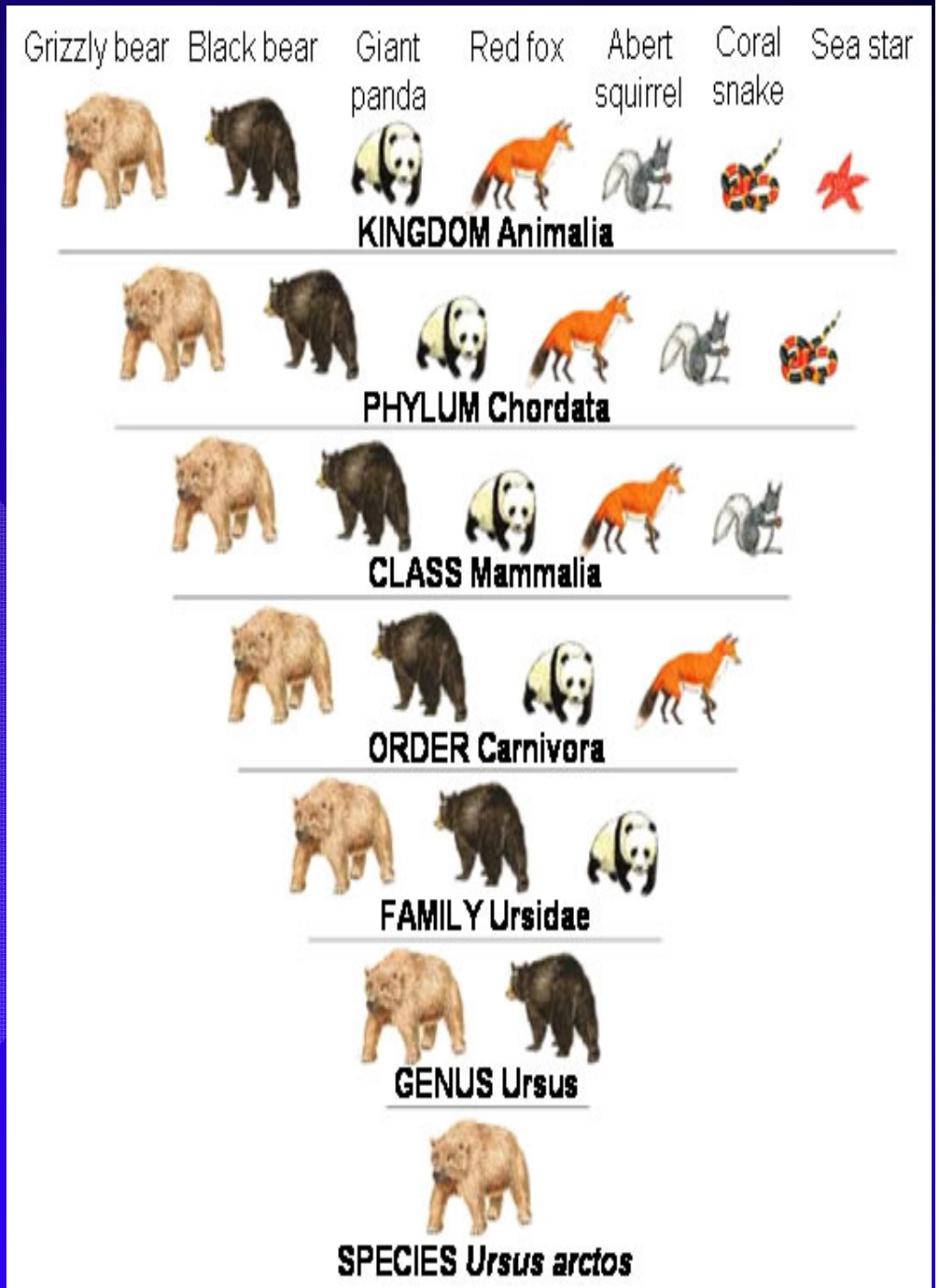
# TAXONOMY NOTES (PG. 119)

- 8A Define taxonomy and recognize the importance of a standardized taxonomic system to the scientific community



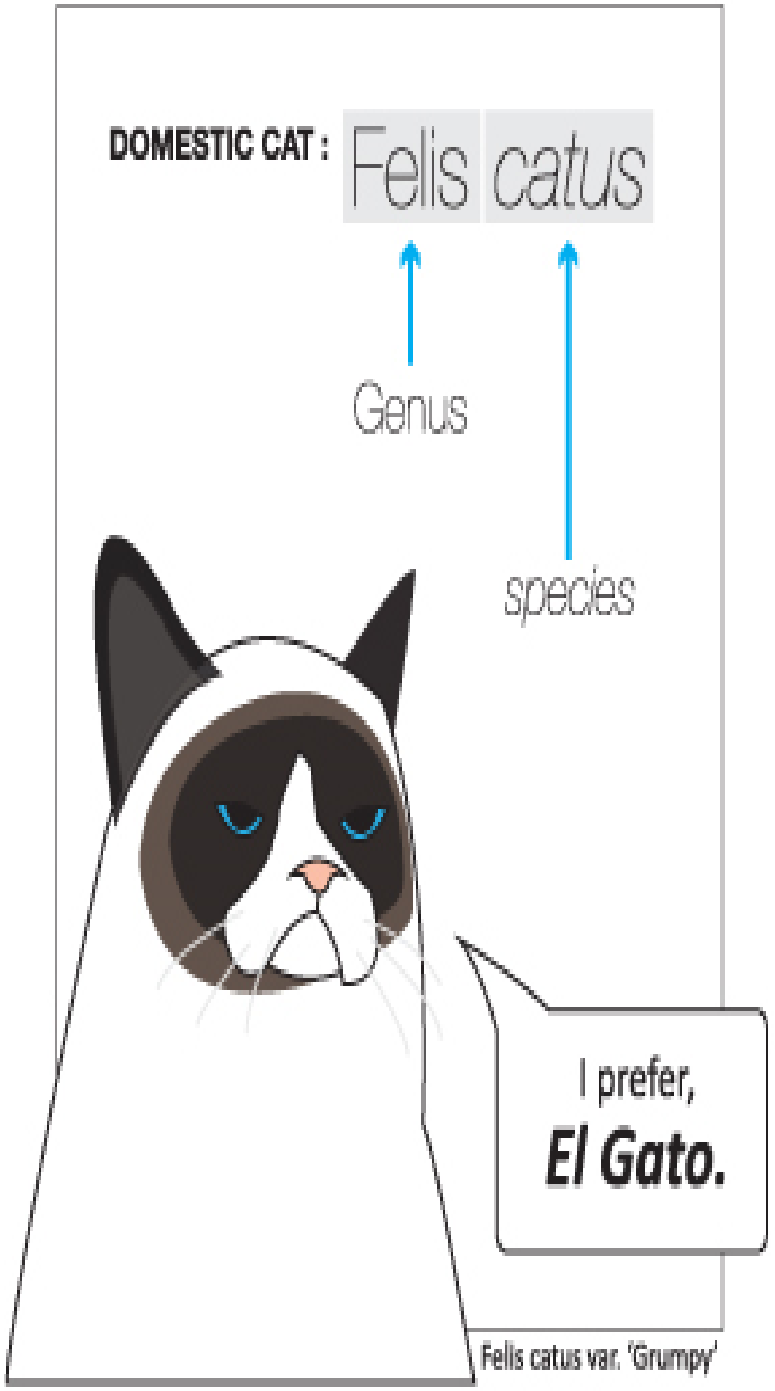
# Taxonomy

- Taxonomy- the science of grouping organisms based on their similarities and assigning them a universal scientific name
- Taxon- a group or level of organization

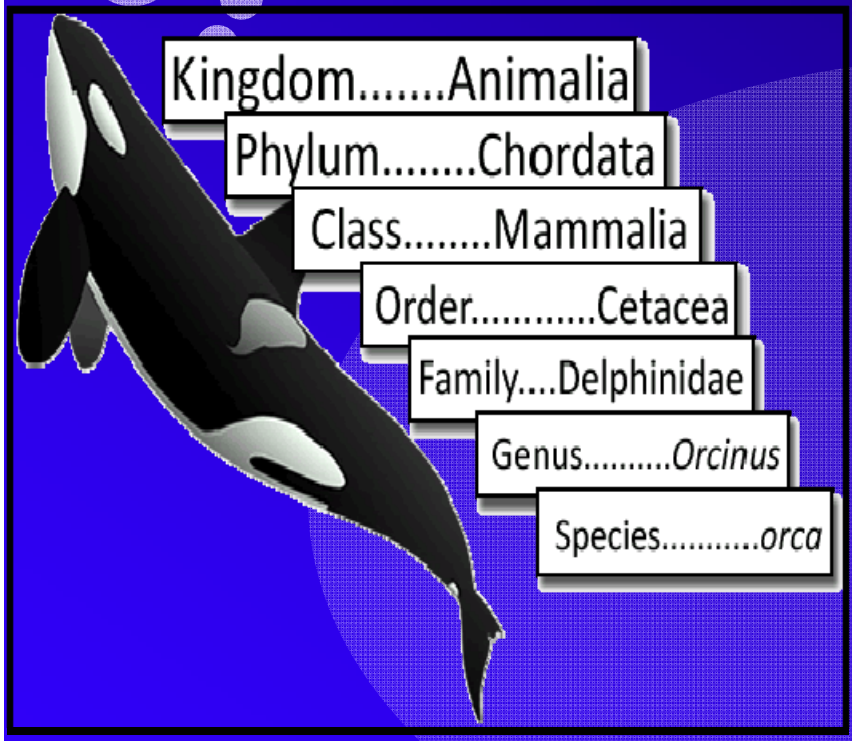


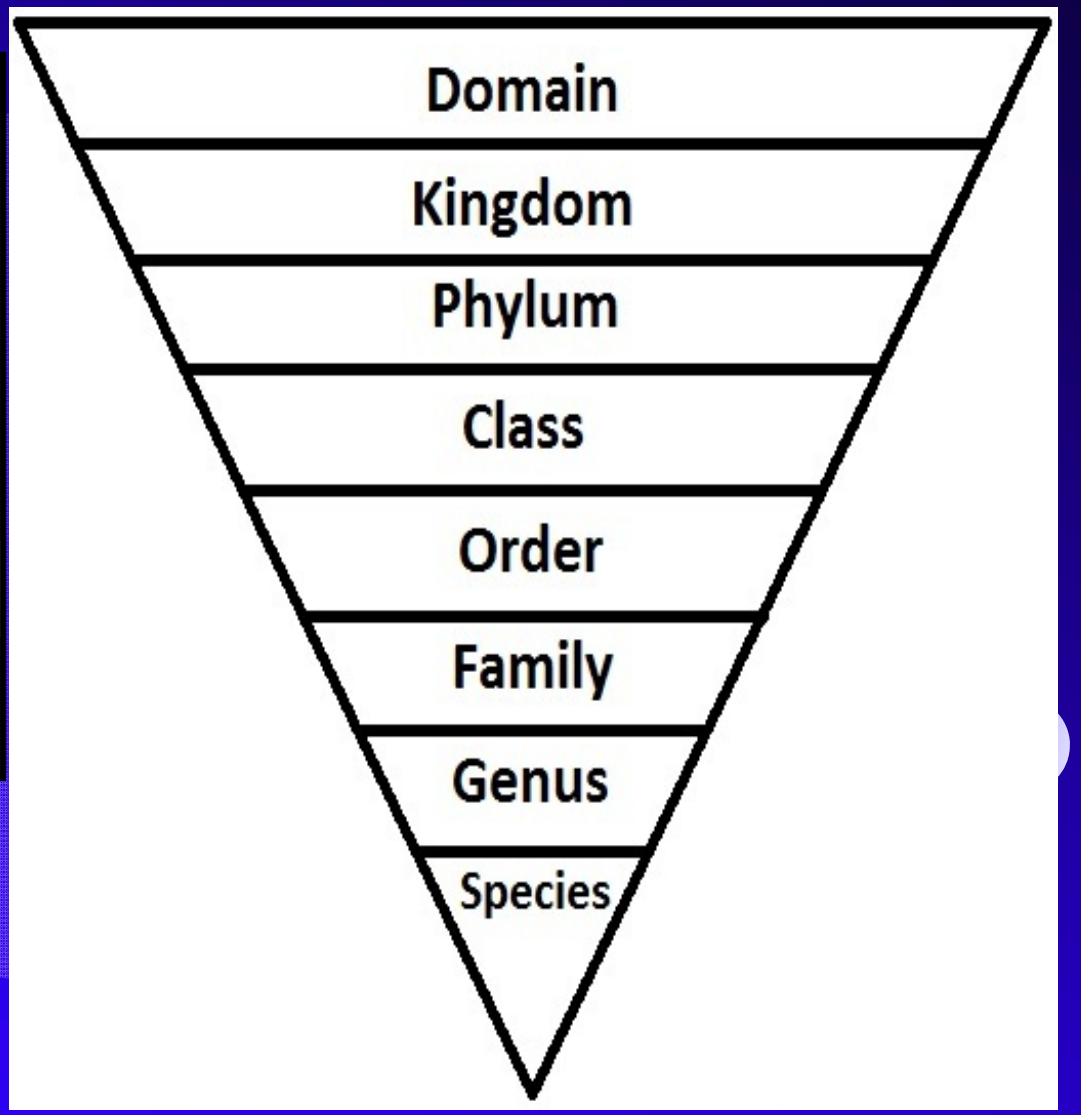
# 2. What do you call this animal?

3. Binomial nomenclature- the two word, Latin scientific name for each species. Prevents confusion between countries and regions.



# TAXONS – LARGEST TO SMALLEST



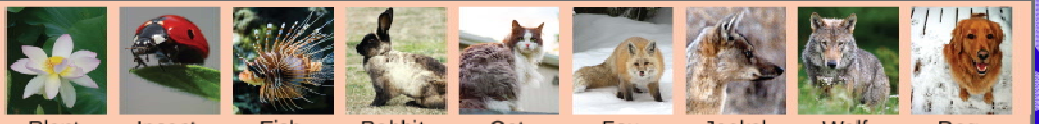




The scientific name for each species is made from its *Genus species*

# Scientific Name Rules

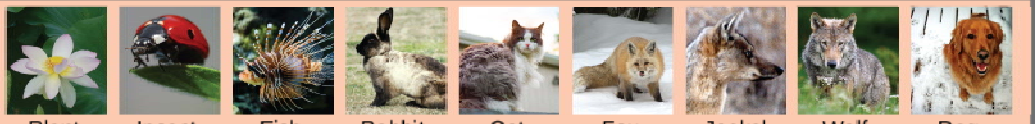
- Always *Genus species.*
- Genus is capitalized, species is lower case
- Always written in *italics (*or underlined if handwritten*)*
- Ex. *Homo sapiens, Panthera leo*

**Domain:** Eukarya



**Kingdom:** Animalia

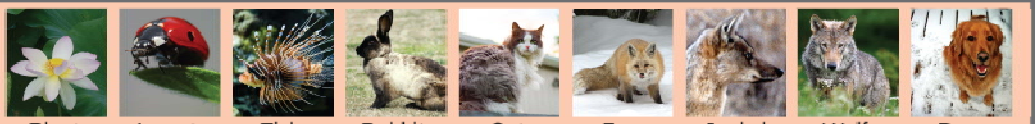

**Domain:** Eukarya



**Phylum:** Chordata


**Kingdom:** Animalia


**Domain:** Eukarya

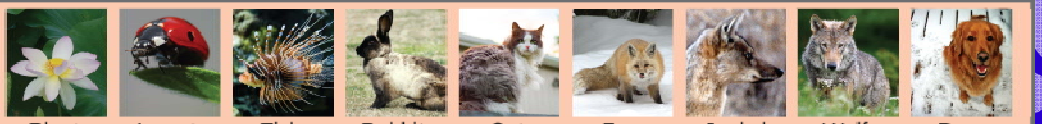


**Class:** Mammalia


**Phylum:** Chordata


**Kingdom:** Animalia

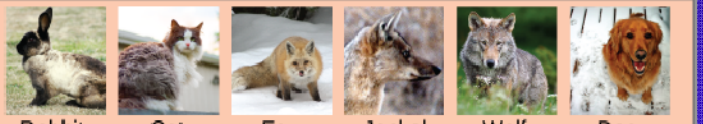

**Domain:** Eukarya

| | |
|---|---|
| **Order:** Carnivora |  Cat Fox Jackal Wolf Dog |
| **Class:** Mammalia |  Rabbit Cat Fox Jackal Wolf Dog |
| **Phylum:** Chordata |  Fish Rabbit Cat Fox Jackal Wolf Dog |
| **Kingdom:** Animalia |  Insect Fish Rabbit Cat Fox Jackal Wolf Dog |
| **Domain:** Eukarya |  Plant Insect Fish Rabbit Cat Fox Jackal Wolf Dog |

**Family:** Canidae


**Order:** Carnivora

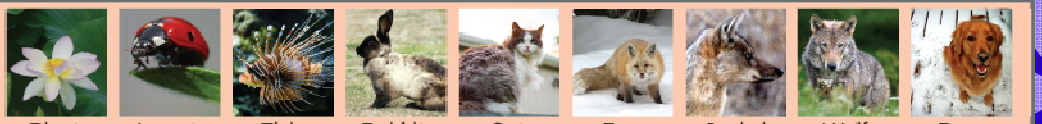

**Class:** Mammalia

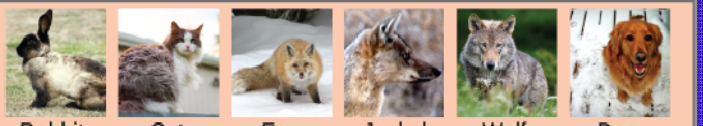
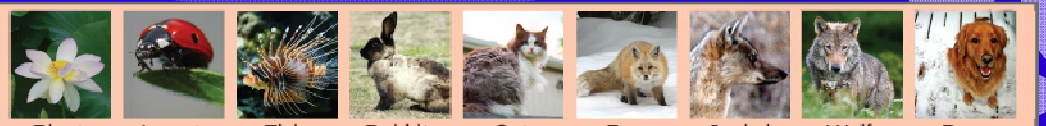


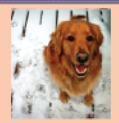
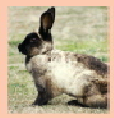

**Phylum:** Chordata

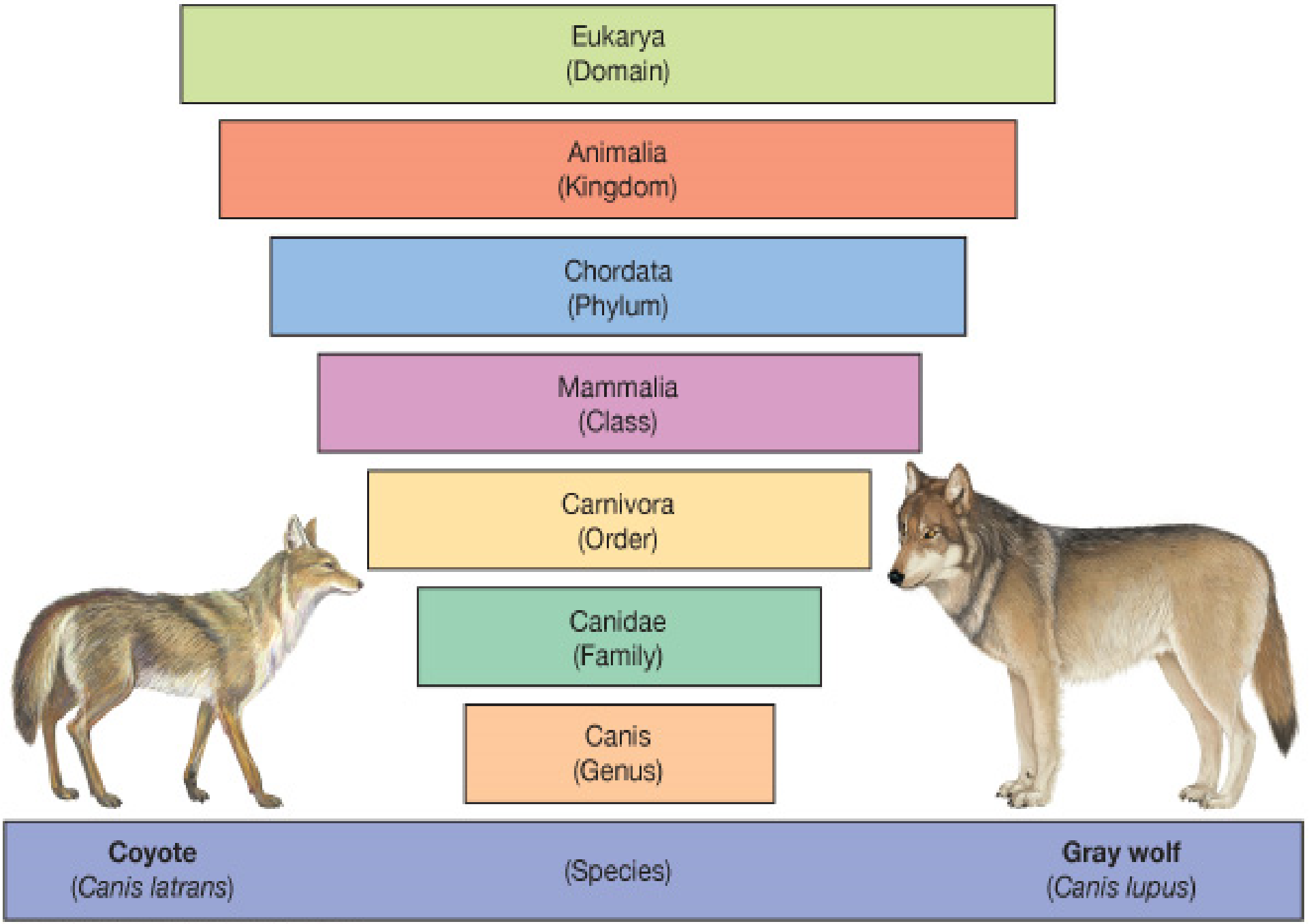

**Kingdom:** Animalia


**Domain:** Eukarya



| | |
|---|---|
| **Genus:** *Canis* |  Jackal Wolf Dog |
| **Family:** Canidae |  Fox Jackal Wolf Dog |
| **Order:** Carnivora |  Cat Fox Jackal Wolf Dog |
| **Class:** Mammalia |  Rabbit Cat Fox Jackal Wolf Dog |
| **Phylum:** Chordata |  Fish Rabbit Cat Fox Jackal Wolf Dog |
| **Kingdom:** Animalia |  Insect Fish Rabbit Cat Fox Jackal Wolf Dog |
| **Domain:** Eukarya |  Plant Insect Fish Rabbit Cat Fox Jackal Wolf Dog |

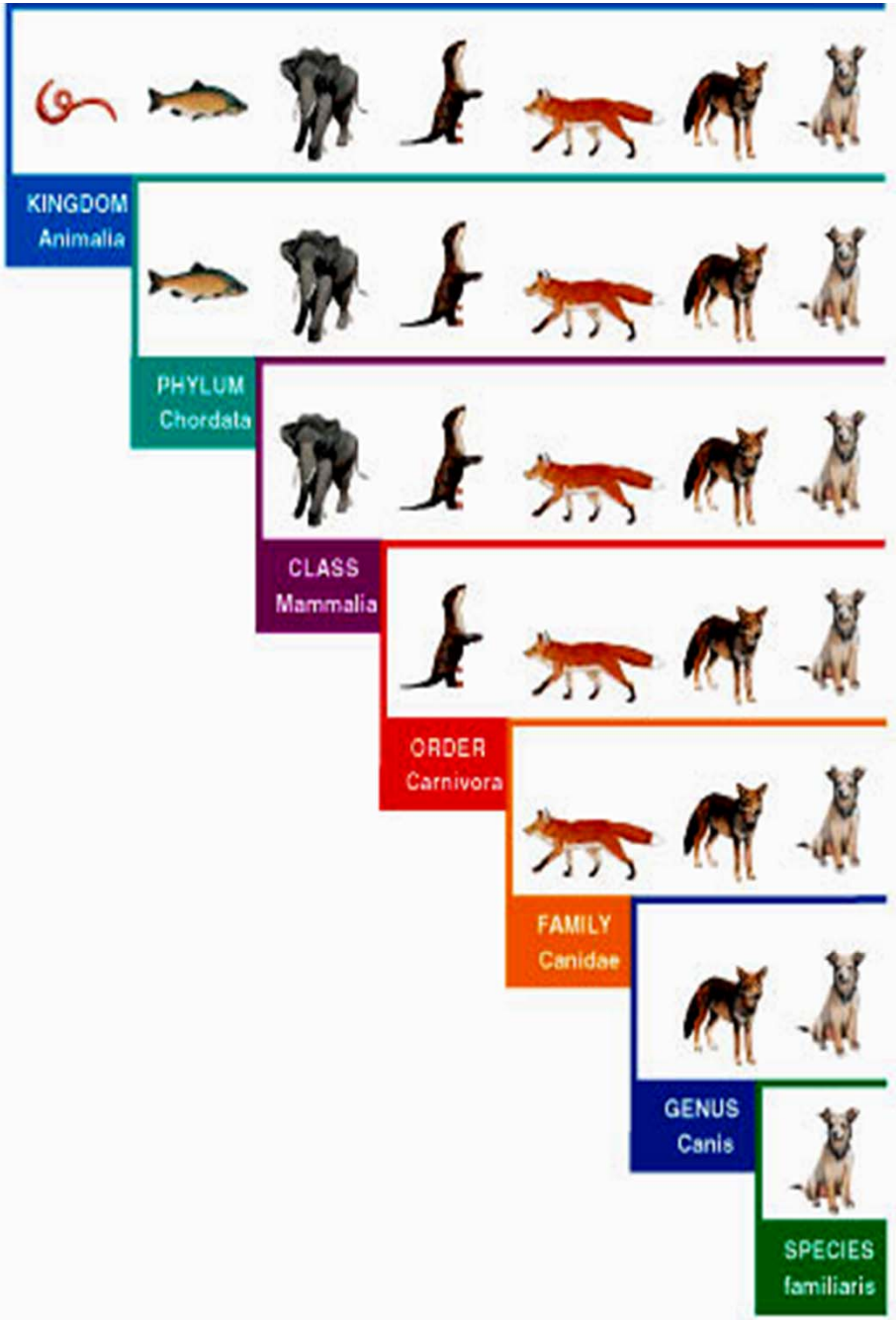
| | |
|---|---|
| **Subspecies:** *Canis lupus familiaris* |  Dog |
| **Species:** *Canis lupus* |  Wolf  Dog |
| **Genus:** *Canis* |  Jackal  Wolf  Dog |
| **Family:** Canidae |  Fox  Jackal  Wolf  Dog |
| **Order:** Carnivora |  Cat  Fox  Jackal  Wolf  Dog |
| **Class:** Mammalia |  Rabbit  Cat  Fox  Jackal  Wolf  Dog |
| **Phylum:** Chordata |  Fish  Rabbit  Cat  Fox  Jackal  Wolf  Dog |
| **Kingdom:** Animalia |  Insect  Fish  Rabbit  Cat  Fox  Jackal  Wolf  Dog |
| **Domain:** Eukarya |  Plant  Insect  Fish  Rabbit  Cat  Fox  Jackal  Wolf  Dog |



- Dear
- King
- Phillip
- Came
- Over
- For
- Good
- Soup

**Come up with your own memory device to remember the levels of classification in order**

6. Which other species is the dog, *Canis familiaris*, most closely related to?



# Practice!

Which Scientifc names are correct?

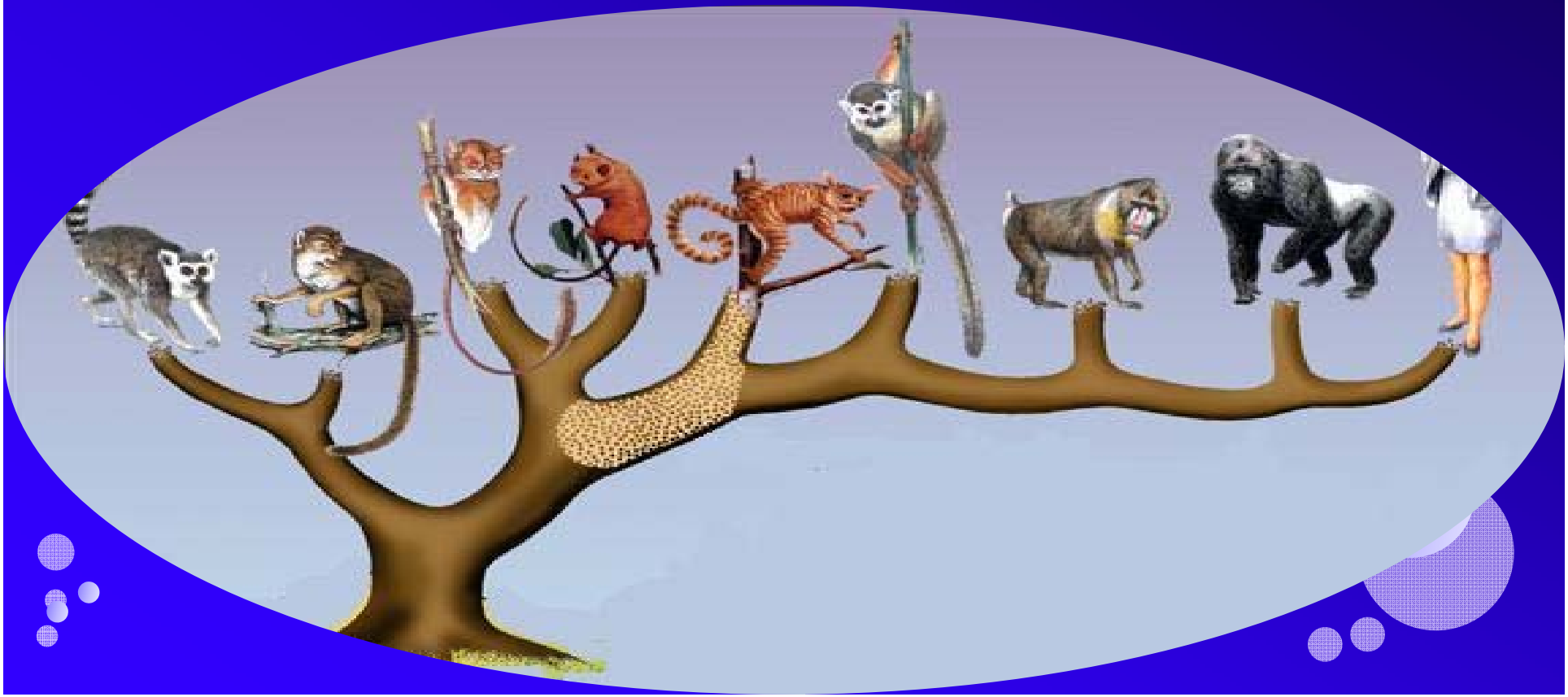
1. *Carnivora felidae*
2. felis Catus
3. *Panthera leo*
4. Homo sapiens
5. *Animalia leo*
6. Sapiens homonidae
7. *Felis catus*

**Who is most closely related?**

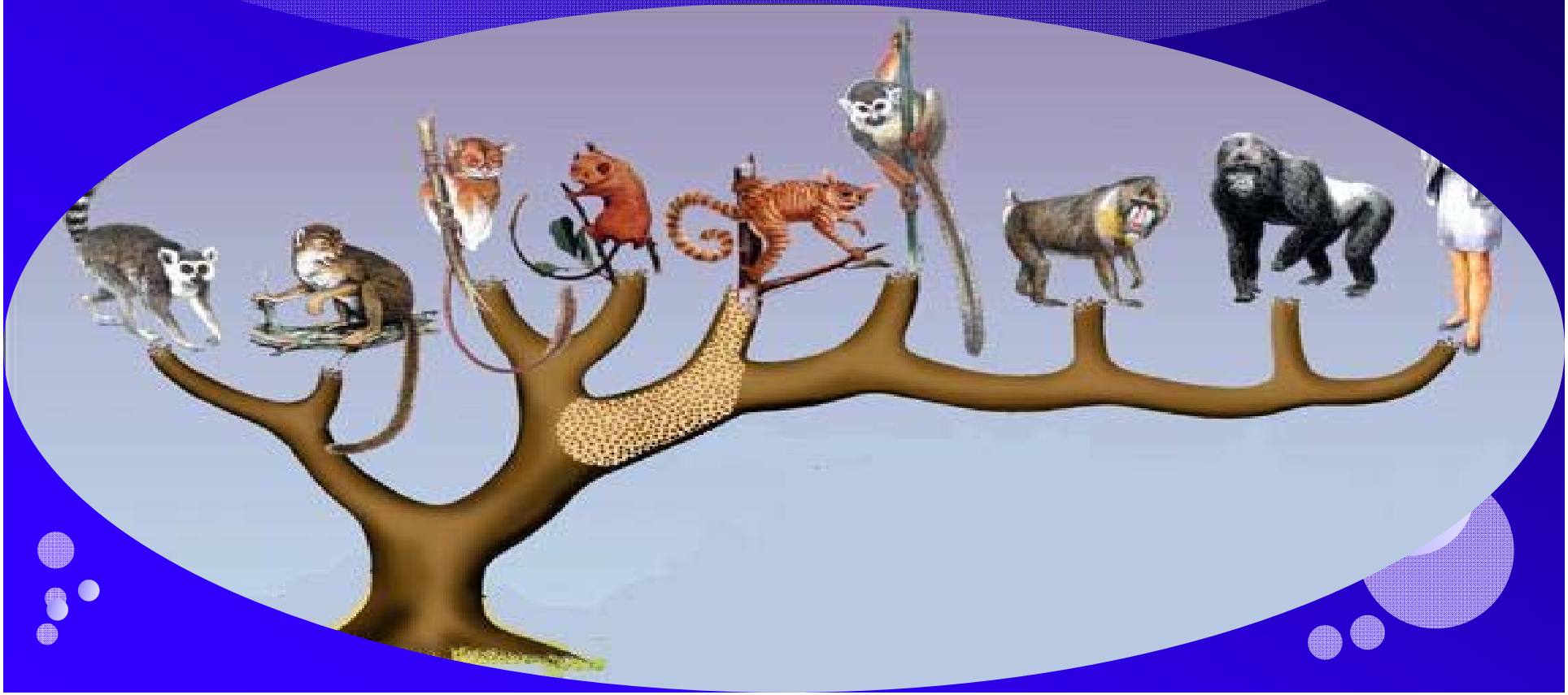
| Common name | Human | Lion | House Cat |
|---|---|---|---|
| Kingdom | Animalia | Animalia | Animalia |
| Phylum | Chordata | Chordata | Chordata |
| Class | Mammalia | Mammalia | Mammalia |
| Order | Primate | Carnivora | Carnivora |
| Family | Homonidae | Felidae | Felidae |
| *Genus* | *Homo* | *Panthera* | *Felis* |
| *species* | *sapiens* | *leo* | ***catus*** |

# 7. CLASSIFICATION IS BASED ON GENETIC & ANATOMICAL SIMILARITIES

Cladogram – diagram that shows evolutionary relationships

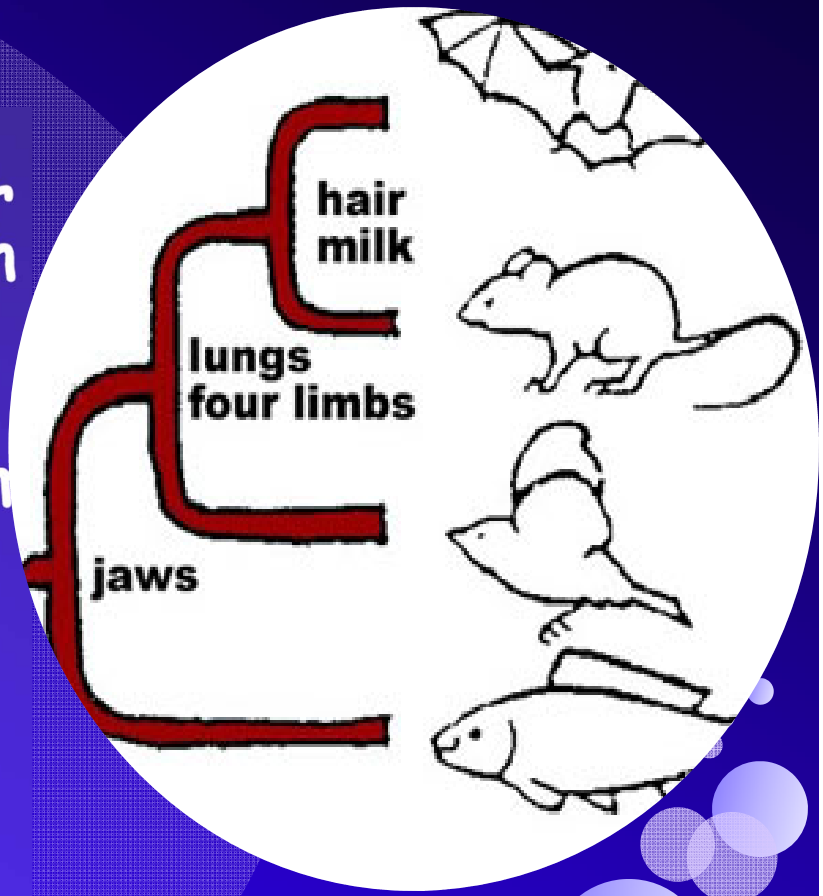


Very useful because organisms are placed in groups that show how things may have evolved.



# Cladistic Analysis…

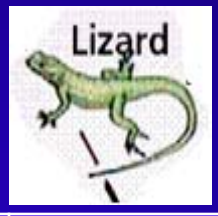
- Focuses on derived characteristics that appear in some organisms but not in others.
- Ancestral trait-appears in all organisms, inherited from their common ancestor
  - Ex: bones, spinal cord
- Derived Trait appears in recent parts of a lineage, but not in its older members
  - Ex: jaws, lungs, hair



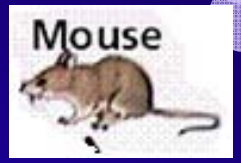

Possible Cladograms

# How should we classify these organisms?



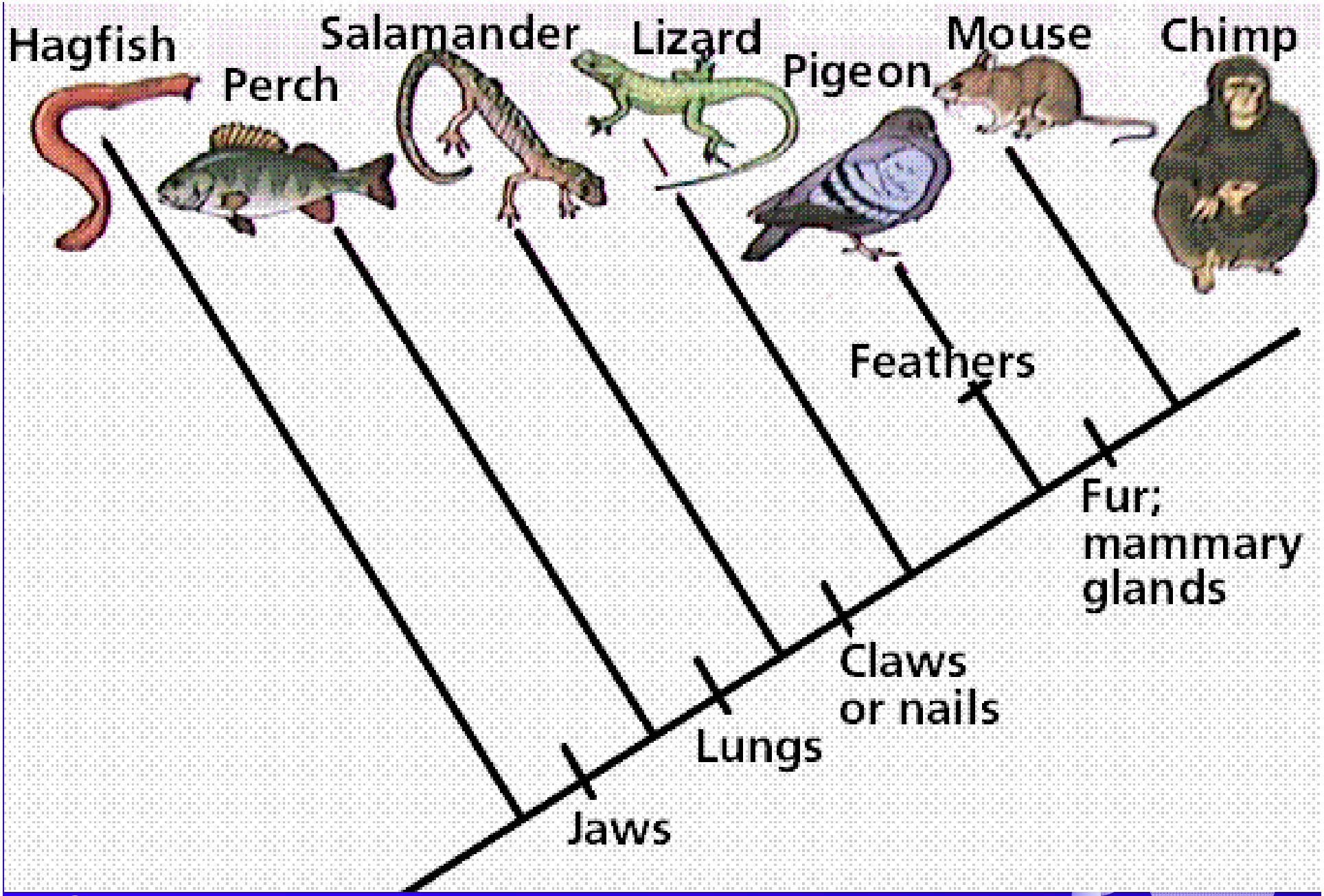









| | Hagfish | Perch | Salamander | Lizard | Pigeon | Mouse | Chimp |
|---|---|---|---|---|---|---|---|
| Jaws | | | | | | | |
| Lungs | | | | | | | |
| Claws/ Nails | | | | | | | |
| Feather | | | | | | | |
| Fur/ glands | | | | | | | |


Hagfish
Perch
Salamander
Lizard
Pigeon
Mouse
Chimp
Feathers
Fur; mammary glands
Claws or nails
Lungs
Jaws

# How can you identify an organism you find?

**Taxonomic (Dichotomous) Key** = series of paired statements describing characteristics of organisms

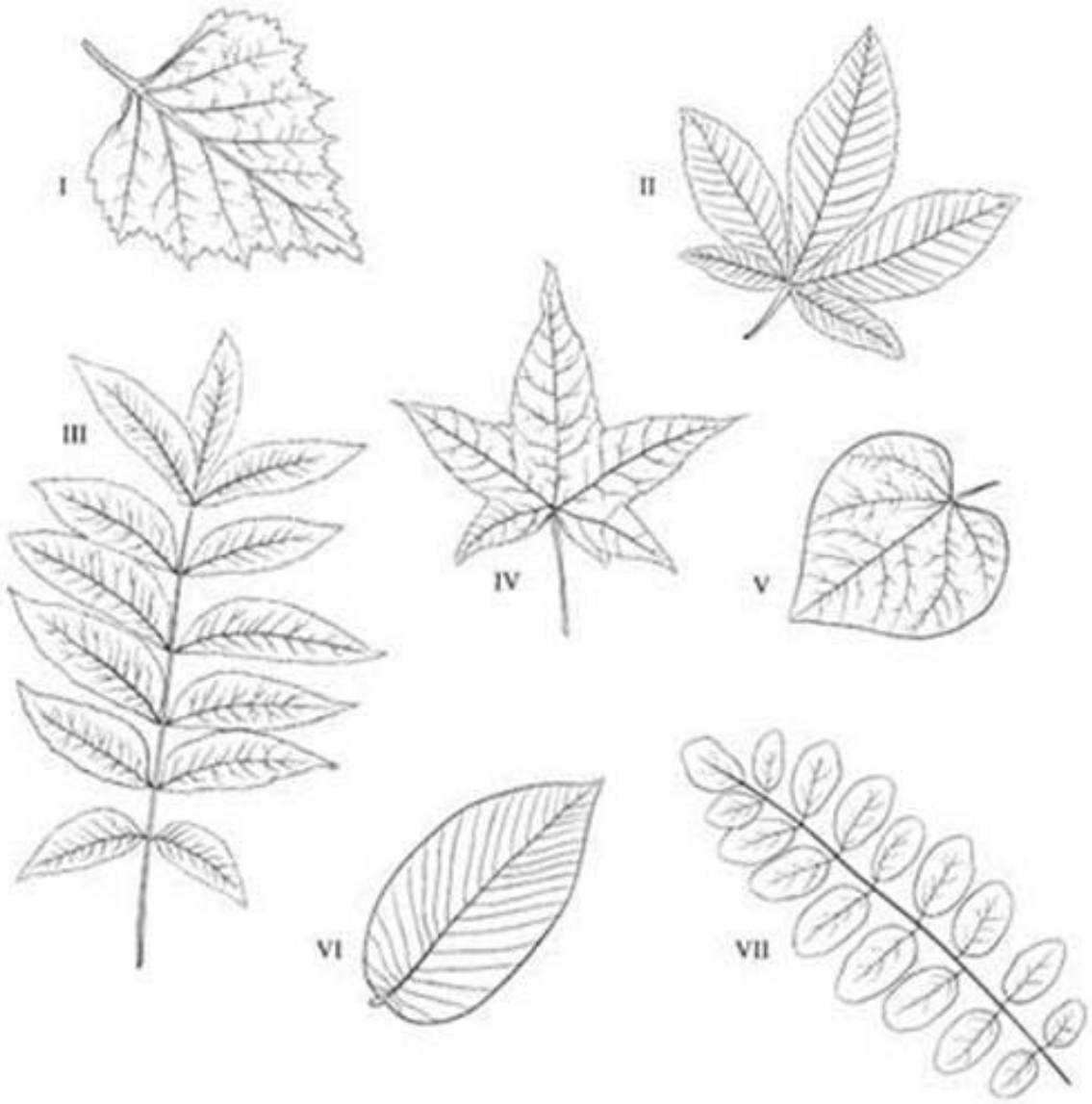
# Dichotomous Key Example

- 1A Snake is spotted……Spotted house snake
  ***Lamprophis guttatus***
- 1B Snake is striped……----------……Go to 2

- 2A Snake has lateral stripes……go to 3
- 2B Snake has vertical stripes……go to 4

- 3A Snake is red, black and yellow …… *Garter Snake)*
  *Thamnophis sirtalis*
  3B Snake is black and yellow…… Ribon Snake
  ***Thamnophis hammon***

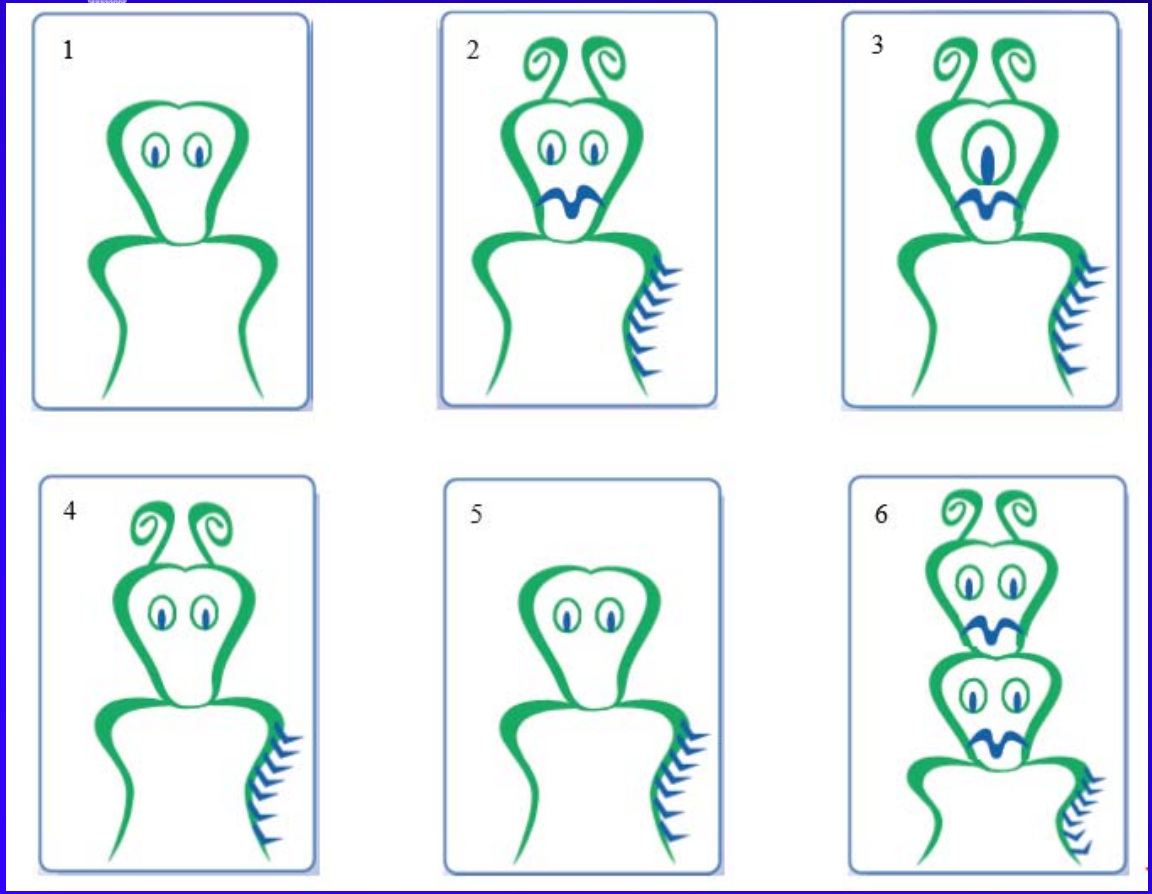
- 4A Red and yellow touch…… ***(Coral Snake)***
  ***Micrurus tener***
  4B Black and yellow touch…… *(Kingsnake)*
  *Lampropeltis getula*




**Dichotomous Key for Leaves**

1. Compound or simple leaf
   - 1a) Compound leaf (leaf divided into leaflets) .....go to step 2
   - 1b) Simple leaf (leaf not divided into leaflets) .....go to step 4
2. Arrangement of leaflets
   - 2a) Palmate arrangement of leaflets (leaflets all attached at one central point) .....*Aesculus* (buckeye)
   - 2b) Pinnate arrangement of leaflets (leaflets attached at several points) .....go to step 3
3. Leaflet shape
   - 3a) Leaflets taper to pointed tips .....*Carya* (pecan)
   - 3b) Oval leaflets with rounded tips .....*Robinia* (locust)
4. Arrangement of leaf veins
   - 4a) Veins branch out from one central point .....go to step 5
   - 4b) Veins branch off main vein in the middle of the leaf.....go to step 6
5. Overall shape of leaf
   - 5a) Leaf is heart-shaped.....*Cercis* (redbud)
   - 5b) Leaf is star-shaped .....*Liquidambar* (sweet gum)
6. Appearance of leaf edge
   - 6a) Leaf has toothed (jagged) edge .....*Betula* (birch)
   - 6b) Leaf has untoothed (smooth) edge .....*Magnolia* (magnolia)

# Make a Cladogram and Dichotomous Key




- Using the aliens here- create a cladogram showing the relationship between each creature
- Then create a small dichotomous key that a neighbor can use to identify a specific alien

# Make your Own Dichotomous Key

- Split your objects into two groups based on their physical characteristics- This will be questions 1a and 1b (It will help to make a spider chart first!)
  ex: 1a- Object is spherical…….. Goto 2
  1b- Object is disc shaped…..Goto 4
- You will continue to split your objects until each of them is alone- Be sure to give each of your objects a scientific name
- Have someone at your table try and key out of of your objects, were the able to? Have them sign your key
- Show your completed key to Mrs. FN before you do anything with your objects.