Honors Biology Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
NDHS Per: \_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Classification**

Putting things in groups and giving them names.

Father of Modern Taxonomy:

Grouped organisms into broad categories and then got more and more specific

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

The scientific name of an organism is called the  and is comprised of the  name where the Genus name is Capitalized and the species name is not but both are either  Ex:

History of Taxonomy:

|  |  |
| --- | --- |
| **Time** | **Names of Kingdoms** |
| **1700s** |  |  |
| **Late 1800s** |  |  |  |
| **1950s** |  |  |  |  |  |
| **1990s** |  |  |  |  |  |  |

Modern Approach:

Why? Based on molecular evidence of metabolism and cell structures

Three Domains:

**Eubacteria** –

**Archae** –   – swamps – make methane gas
  – acid loving bacteria
  – heat loving bacteria
  – salt loving bacteria

**Eukarya** –

 Plants, animals, fungus, Protista (Hodgepodge)

Modern Approach to Classification is based on  to differentiate things that look alike, but most classification is done using taxonomic keys.

An ideal taxonomic key presents the classifier with choices to direct the path of classification.

Because it presents two choices at each branch it is called a

USING A Dichotomous Key:

1. Examine the thing being classified
2. Follow the choices presented in the key until you have identified the sample.

Keys can be a flow chart or they can be a list.



**Flow Chart**:

Living?

 NO YES

Animal?

Joe

 NO Yes

Mammal?

Steve

 YES NO

Burt

Stuff of Nightmares?

 YES NO

Retractable Claws?

Claude

 Yes No

Frank

Walton

**List Form:**

1. Is the item living?
	1. No 🡪Joe
	2. Yes 🡪2
2. Is the organism an animal?
a. No 🡪 Steve

b. Yes 🡪 3

3) Is the organism a mammal?
 a. No 🡪 Burt
 b. Yes 🡪 4

4) Is the organism the stuff of nightmares?
 a. No 🡪 5
 b Yes 🡪 Claude
5) Does the organism have retractable claws?
 a. No 🡪 Frank
 b. Yes 🡪 Walton

Honors Biology Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
NDHS Per: \_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_

**Classification**

Given a bag of items. Come up with a scientific name for each, a specific epithet. If items are similar, then they should share the same Genus but have a different species name.

|  |  |
| --- | --- |
| Item | Scientific Name (*Genus species*) |
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|  |  |

On the back of the page make two classification keys, one flow chart and one list. However, each key must use different descriptive choices (they must be different). You will be graded on how well another person can identify an item using both keys.