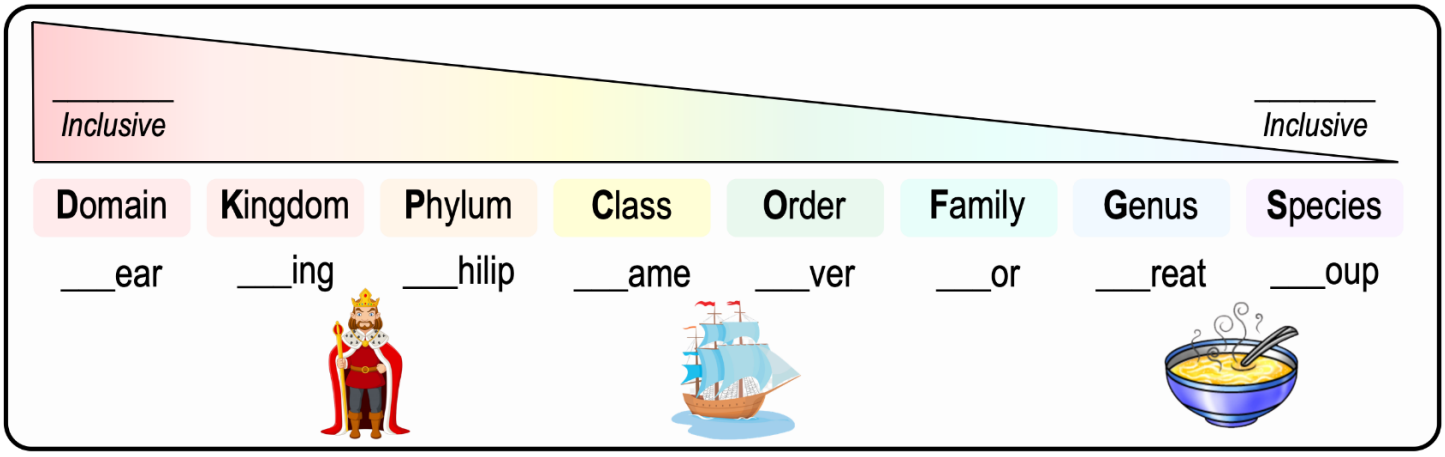
CONCEPT: INTRODUCTION TO TAXONOMY

- _____: the branch of science that *classifies*, *identifies* & *names* organisms.
  - □ _____ categories are used to classify *all* life.



PRACTICE: Which branch of biology is concerned with the naming and classifying of organisms?

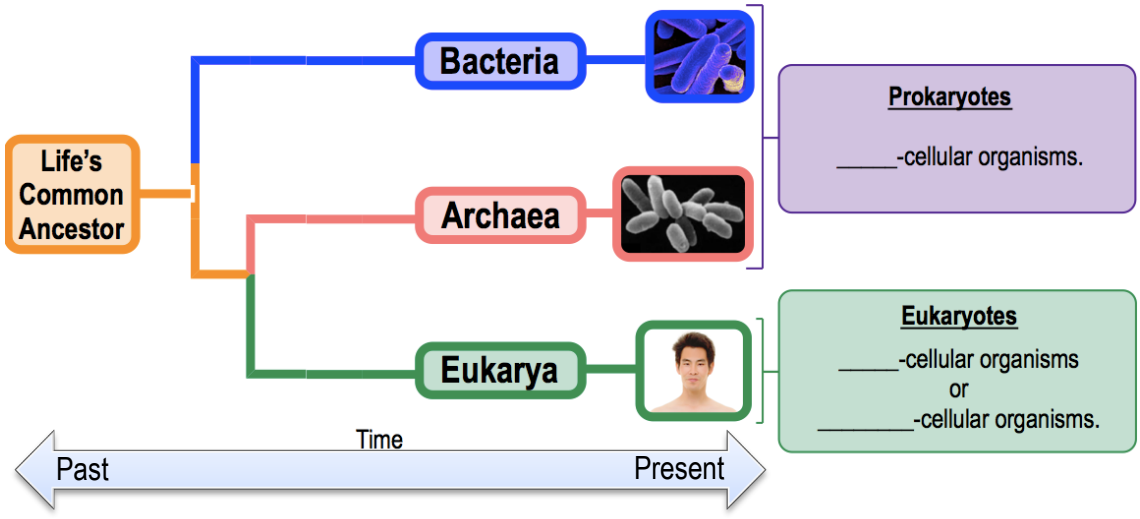
a) Bioinformatics. b) Taxonomy. c) Genomics. d) Evolution. e) Biology.

3 Domains of Life

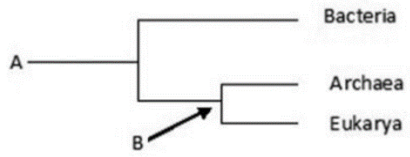
- The *broadest* & *most inclusive* categories of life are the *three domains*:

1) _____
2) _____ } Consist of _____ cells (_____ a nucleus).

3) _____ } Consist of _____ cells (*contain* a nucleus).



CONCEPT: INTRODUCTION TO TAXONOMY



EXAMPLE: According to the diagram, "A" is _____; "B" is _____.

a) The most recent species to evolve on Earth; an ancestor of group "A".

b) The most recent species to evolve on Earth; the last common ancestor of Archaea and Eukarya.

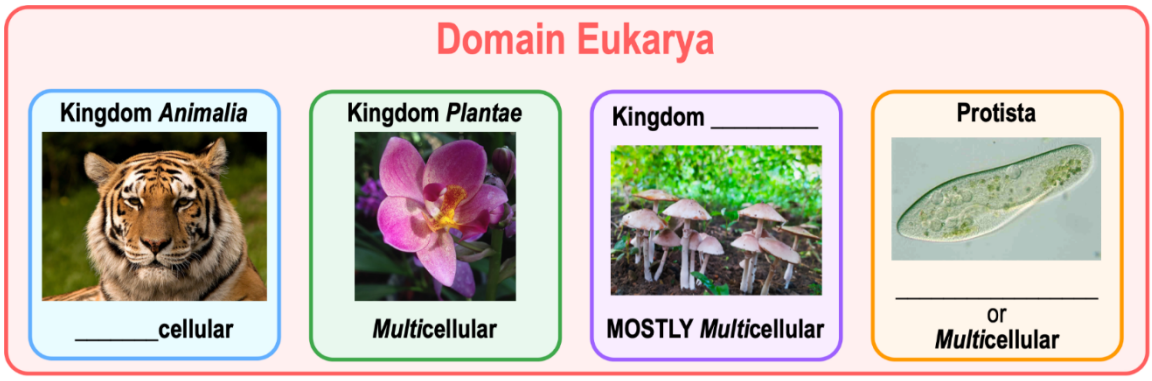
c) The common ancestor of all life; the common ancestor of Bacteria and Archaea.

d) The common ancestor of all life; the last common ancestor of Archaea and Eukarya.

Kingdoms of the Eukarya Domain

●Recall: organisms in each domain are further subdivided into _____.

□ Domain Eukarya has _____ kingdoms:



EXAMPLE: Which of the following kingdoms is NOT part of the Eukaryotic Domain?

a) Kingdom Plantae.

b) Kingdom Protista.

c) Kingdom Fungi.

d) Kingdom Eubacteria.

PRACTICE: The proposal that one type of organism can change into another type over a long period of time is known as:

a) Creativity.

b) Evolution.

c) Natural history.

d) Preconception.

e) Preservation.

CONCEPT: INTRODUCTION TO TAXONOMY

Categorizing Life Based on Energy Acquisition

●Scientists can categorize living organisms into _____ classes based on how they acquire their *energy*:

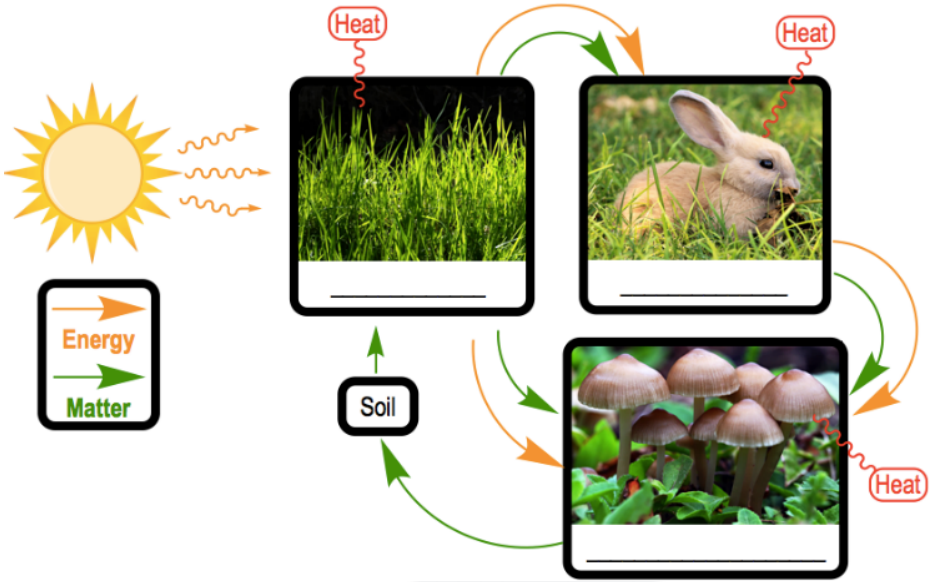
1) _____ (_____trophs): acquire energy by *making their own food*.

2) _____ (_____trophs): acquire energy by eating other living organisms.

3) _____: acquire energy from wastes & dead organisms.

●Most energy utilized by life originates from the _____.

□ With every transfer of energy, some energy is lost as _____.



EXAMPLE: Autotrophs are also called:

a) Consumers.

b) Synthesizers.

c) Producers.

d) Carnivores.

PRACTICE: Biologists can divide living organisms into two groups: autotrophs and heterotrophs, which differ in _____.

a) Their method of obtaining energy.

b) The characteristics of life.

c) Their mode of inheritance.

d) The way that they generate ATP.