

## Guided Reading

### Kingdoms and Dichotomous Keys

Complete this guided reading about Kingdoms and Dichotomous Keys using the Coach Book pg. 92.- 106.

#### Kingdoms

The Kingdom is one of the largest and most general classification groups. Scientists have identified six kingdoms. Factors scientist use to classify include: amount of cells, whether the cell has a nucleus, How cells are organized, How it get food and if they have cell walls.

The number of cells are usually defined as unicellular or multicellular. Two types of cells are prokaryote and eukaryote. Prokaryote cells do not have a cell nucleus. Eukaryote cells have a nucleus. Multi-celled organisms may have cells organized into tissues. Some have organs and organ system. If an organism is an autotroph, they are able to make their own Food. If an organism is a heteroph, they cannot make their own Food and must rely on others.

#### Kingdom: Eubacteria

All members of the kingdom Eubacteria are bacteria. These living things have only one cell. They are unicellular which means they do not have a nuclei. Their cells are surrounded by a thick cell walls. Most Eubacteria are heterotrophic but some are autotrophs. They make their own food through chlorophyll. They are often sorted into 3 shapes called coccus, Bacillus or sprillum. Many diseases are caused by Eubacteria, examples include Pneumonia and tuberculosis. Many of these bacteria are helpful and serve as decomposers keeping the ecosystem in balance.

#### Kingdom: Archaeobacteria

These bacteria are single-celled prokaryotes. Some in this group are autotrophs that make their food by photosynthesis other autotrophs in this group make food by chemosynthesis. That is they turn chemical energy into food instead of using light energy. Some Archaeobacteria live in harsh environments, such as hot spring and extremely salty water. Other members live in Ocean, soil and marsh environments.

#### Kingdom: Protista

Organisms in the Kingdom Protista are Eukaryotes. The cells in this kingdom have a nucleus and these organisms are very diverse. Most protists only have one cell. Examples of single cell protists include amoeba and Paramecium. Algae are multicellular protists. Most protists are heterotrophes and others are autotrophs making their food by photosynthesis.

### Kingdom: Fungi

Members of the kingdom Fungi are Eukaryotes. All fungi are heterotrophs. Most are decomposers feeding on the wastes of organisms. All fungi have cell walls that contain a substance called Chitin. An example of a single-cell fungi is yeast and an example of a multi-cell fungi is Mushrooms.

### Kingdom: Plantae

Organisms in the kingdom Plantae are plants. All plants are Eukaryotes made up of many cells. Plants are also autotrophes. Plants have organelles called chloroplast. Chloroplasts capture the Energy of sunlight to make food by photosynthesis. In the process, they release Oxygen into the air.

### Kingdom: Animalia

Organisms in the kingdom Animalia are animals. All animals are Eukaryotes made up of many cells. All animals are also heterotrophs. Animals get the energy they need by eating plants, animals or both.

Using the chart on pg. 95, answer the following questions.

1. Name the two Kingdoms that are prokaryotes.

Archaeobacteria, Eubacteria

2. Name the kingdom that is not a heterotroph.

Plantae

3. Which kingdom has cells with cell walls made of chitin?

Fungi

4. Which kingdom may live without oxygen?

archbacteria

5. Define the following terms:

a. Prokaryote - Does not have a cell nucleus

b. Eukaryote - has a cell nucleus

c. Autotroph - makes it's own Food

d. Heterotroph - depends on others For Food