**Chapter 20: Kingdom Protista**

 **K. Protista** contains a diverse group of mostly **­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**. They were probably the first forms of eukaryotic organisms on the planet and appeared about \_\_\_\_\_\_\_\_ billion years ago.

 **Protists** are classified based upon the **structures they use to \_\_\_\_\_\_\_\_\_\_\_**and how they obtain \_\_\_\_\_\_\_\_\_\_\_\_(food).

**20-2**

 Animal-like protists move using**\_\_\_\_\_\_\_\_\_**, **\_\_\_\_\_\_\_\_\_\_\_\_**, or**\_\_\_\_\_\_\_\_\_\_**. Some are incapable of movement.



Flagella Cilia Pseudopods

Reproduction occurs through **binary fission, conjugation**, and some can form gametes. Draw each in the space below:

Binary Fission Conjugation

 Animal-like protists obtain their food from their surroundings by eating other protists or by decomposition (**\_\_\_\_\_\_\_\_\_\_\_\_\_\_**). Many protists are **parasitic** and cause diseases like\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**20-3 and 20-4: Plant-like Protists**

 Plant-like protists contain pigments (like\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) that allow them to photosynthesize (**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**). Some are able of movement to obtain the nutrients they require.

Many plant-like protists form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_consisting of many cells (*Spirogyra*, *Volvox*) but \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and therefore do not have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



 During their lifetime many algae contain both a haploid stage and a diploid stage (**Alternation of\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**). The haploid stage produces a \_\_\_\_\_\_\_\_\_\_\_\_\_\_and is therefore called the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_stage** (gamete plant).

 When the gametes \_\_\_\_\_\_\_\_\_\_\_\_they form the diploid stage which eventually produces spores that grow into the entire organism. Because it developed from a spore it is called the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**(spore plant).

**Chapter 21: Kingdom Fungi**

 Fungi are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** with cell walls made of **\_\_\_\_\_\_\_\_**(unique to this Kingdom). Except for yeast all fungi are**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.

 The body of a fungus is made of thin filaments called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**(Hy-fee) tangled together to form a**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.



 Fungi reproduce both sexually and asexually (budding/spores).

 All fungi are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**and most are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**(decay). A few cause parasitic diseases like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and athlete's foot.

 Fungi sometimes live in a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**relationship with algae forming **lichens** or with plants forming mycorrhizae.

Examples of other common fungi include;\_\_\_\_\_\_\_\_\_\_\_\_\_\_, molds, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and *Penicillium*.



LICHEN Puffball Spores