

Lab # _____

Observing Living Things



Introduction

Biology is the study of life. In this course you will be learning about many different kinds of living things, or **organisms**. This introductory lab investigation will allow you to observe some of the organisms that you will study this year.

There are five main groups (kingdoms) of organisms: **monera, protists, fungi, plants, and animals**. After observing the organisms, you will classify them into one of these five groups.

Group (Kingdom)	Structures & Characteristics	Mode of Nutrition
Monera	Unicellular; some form chains ex. bacteria	Most absorb food
Protist	Most unicellular, some form chains or colonies	Some absorb, some ingest, and some photosynthesize food
Fungi	Most multicellular with specialized, complex cells	All absorb food
Plant	Multicellular with specialized, complex cells; sessile	All photosynthesize food
Animal	Multicellular with specialized, complex cells; motile	All ingest food

Vocabulary:

Absorb: to take food into cells that has been digested (chemically broken down)

Appendages: structures used to move from place to place (arms, legs, wings, fins). They have skeletal support and are joined to the main trunk of the body.

Colony: individual organisms of the same species living closely together

Endoskeleton: internal supporting structure (bones) inside

Exoskeleton: hard outer structure that provides protection and support

Ingest: to take in food that needs to be digested (chemically broken down)

Motile: capable of moving from place to place

Multicellular: organism made of many cells

Photosynthesize: to make food (sugar) from water and carbon dioxide using the energy from sunlight

Sessile: stay in one place

Unicellular: organism made of one cell

Purpose:

1. To strengthen observation and data collection skills by observing a variety of organisms
2. To classify organisms into 5 main groups/kingdoms (monera, protists, fungi, plants, and animals)
3. To become familiar with characteristics of the five main types (groups/kingdoms) of organisms

Materials:

variety of organisms
metric rulers

hand lenses and compound microscopes
pencil

Procedure:

1. You and a partner will be moving from station to station observing a variety of labeled specimens. Complete the data table as you observe each organism.
2. Follow your teacher's directions as you move around the room and use the guidelines on the following side for completing the data table.

Data: Complete the data table on **page 3**.

Insert data table (separate document)

Discussion/Conclusion: Use complete sentences and answer the following questions in the space provided.

1 a) What are some characteristics that were common to the organisms that you identified as **plants**?

b) What are some characteristics that were common to the organisms that you identified as **animals**?

2. Name 3 ways in which animals and fungi are similar.

3. There were no monera represented in this lab investigation. Why do you think your teacher left out this important group of living things?

4 a) You are an organism. In which main group/kingdom are you classified (monera, protist, fungi, plant or animal)?

b) List the characteristics that you possess which cause you to classify yourself in this group.

c) To which organism observed in the lab do you think you are most closely related? Why?
