

Life Science 7 Cells Unit – Activities 7, 8 & 9 Study Guide

The Characteristics of Cells

1. The Cell

Describe the relationship between cells and organisms

Explain why most cells are small in terms of their surface area – to – volume ratio

2. The Cell Theory

Summarize the cell theory

Summarize the contributions to cell theory of Robert Hooke, Anton van Leeuwenhoek, Theodor Schwann, and Rudolf Virchow

Compare unicellular and multicellular organisms

3. Two Types of Cells

Identify the parts that all cells have in common

Compare prokaryotes and eukaryotes

Cell Structure and Function

1. Eukaryotic Cells

Identify general characteristics of eukaryotic cells

Recognize how prokaryotes differ from eukaryotes

2. Parts of Eukaryotic Cells

Describe the cell membrane, cytoskeleton, and nucleus

Describe the structure and function of organelles found in eukaryotic cells, including mitochondria, ribosomes, endoplasmic reticulum, and Golgi complex

3. Plant and Animal Cells

Compare and contrast organelles found in plant and animal cells

Photosynthesis and Cellular Respiration

1. Cells Need Energy

State that all organisms need energy

Explain how organisms get energy

2. Photosynthesis

Define and describe photosynthesis

List the starting materials and the products of photosynthesis

State the location where photosynthesis takes place

3. Cellular Respiration

Define and describe cellular respiration

List the starting materials and the products of cellular respiration

State the location where cellular respiration takes place