

AP PACING GUIDE

Dates	Competency	Teaching Strategies
First Nine Weeks		
August 9 - 20, 2007	<p>1. Utilize critical thinking and scientific problem solving in designing and performing biological research and experimentation. (L, P, E)</p> <ul style="list-style-type: none">a. Demonstrate the proper use and care for scientific equipment used in life science.b. Observe and practice safe procedures in the classroom and laboratory.c. Apply the components of scientific processes and methods in the classroom and laboratory investigations.d. Communicate results of scientific investigations in oral, written, and graphic form. <p>2. Describe the basic organization of the body using the appropriate anatomical concepts. (L)</p> <ul style="list-style-type: none">a. Define the terms: anatomy, physiology, and homeostasis; explain the importance of the interaction between structure and function of organs and organ systems in the human body.b. Describe the anatomical position and apply anatomical terms, terms of direction, and planes of section to describe the body and the relationship of its parts.c. Identify the cavities of the body and locate the essential organs in each.	Hands on microscope work common sense safety rules lecture posters handouts Use graphs& charts from newspaper Videos
August 22 - September 10, 2007	<p>2. Investigate the biochemical basis of life. (L, P) - Objective review from Biology I</p> <ul style="list-style-type: none">a. Identify the characteristics of living things.b. Describe and differentiate between covalent and ionic bonds using examples of each.	Lecture handouts power point presentations Videos

- c. Describe the unique bonding and characteristics of water that makes it an essential component of living systems.
- d. Classify solutions using the pH scale and relate the importance of pH to organism survival.
- e. Compare the structure, properties and functions of carbohydrates, lipids, proteins and nucleic acids in living organisms.
- f. Explain how enzymes work and identify factors that can affect enzyme action

classroom demos

September 12 - October 5, 2007

ss the biochemical composition of the human body. (L, P)

- a. Identify the major elements that form the bulk of body matter.
- b. Explain the relationships among atoms, molecules, elements, and compounds.
- c. Explain the importance of water to body homeostasis.
- d. Describe the concept of pH and its relationship to acids and bases in the human body.
- e. Name the four major groups of organic substances in the human body and give examples and functions of specific members of each group.

Lecture
handouts
power point presentations
Videos
classroom demos
Student made cell models

Second Nine weeks

October 16 - 31, 2007

4. Explore the relationship of the cell to the more complex levels of organization within the body. (L)

- a. Describe the structure and function of the components of a typical animal cell, including membranous and non-membranous organelles.
- b. Relate plasma membrane structure to active and passive transport mechanisms.
- c. Name the four major categories of tissues and compare the location, structure, and function of each.

BIOLOGY 1 PACING GUIDE

Dates

Competency

Teaching Strategies

First Nine Weeks

August 9 - 20, 2007

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- Demonstrate the proper use and care for scientific equipment used in life science.
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 - Apply the components of scientific processes and methods in the classroom and laboratory investigations.
 - Communicate results of scientific investigations in oral, written, and graphic form.

Hands on microscope work
common sense safety rules
lecture
posters
handouts
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Videos

August 22 - September 10, 2007

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- Identify the characteristics of living things.
 - Describe and differentiate between covalent and ionic bonds using examples of each.
 - Describe the unique bonding and characteristics of water that makes it an essential component of living systems.
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- 3. Investigate cell structures, functions, and methods of reproduction. (L)**
- Differentiate between prokaryotic and eukaryotic cells.
 - Distinguish between plant and animal (eukaryotic) cell structures.
 - Identify and describe the structure and basic functions of the major eukaryotic organelles.
 - Describe the way in which cells are organized in multicellular organisms.
 - Relate cell membrane structure to its function in passive and active transport.
 - Describe the main events in the cell cycle and cell mitosis including differences in plant and animal cell divisions. (begin discussion not on 9 weeks test)

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