

The Living Environment

Christmas Vacation

Assignment



Christmas waves a magic wand over this world, and behold,
everything is softer and more beautiful."

~Norman Vincent Peale

The Living Environment

Midterm Review Sheet

Please fill in the following outline, using your workbook and notebook. Be as thorough as possible, providing as many facts as you can find under each subheading.

TOPIC 1: Similarities and Differences Among Living Organisms

The Characteristics of Life

Diversity Among Living Things

Similarities Among Living Things

Life Processes:

Chemical Composition:

Organization:

Cells: The Basic Structure of Life

Inside the Cell

Organelles

Nucleus:

Vacuoles:

Ribosomes:

Mitochondria:

Chloroplasts:

Cell Membrane:

Maintaining Separation

Controlling Transport in and Out of the Cell

Diffusion:

Active Transport:

Molecules in Cells:

Recognizing Signals

Receptor Molecules:

Human Body Systems

Digestion

Respiration

Circulation

Excretion

Movement

Coordination

Immunity

Interactions for Life Processes and Regulation

Comparing Single-Celled and Multicellular Organisms

TOPIC 2: Homeostasis in Organisms

Basic Biochemical Processes of Living Organisms

Storing Energy: Photosynthesis:

What happens to the sugar produced by Photosynthesis?

Releasing Energy: Cellular Respiration

Enzymes

The Function of Enzymes:

Importance of Molecular Shape:

Effects of Temperature on enzymes:

Effects of pH on enzymes:

Feedback and Homeostasis

Dynamic Equilibrium:

Feedback Mechanisms: (positive and negative)

Disease as a Failure of Homeostasis

Disease:

Bacterial pathogens:

Viral pathogens:

Fungal pathogens:

Parasitic pathogens:

The Immune System

White Blood Cells and Antibody/Antigen Connection:

Vaccinations:

Problems Associated with Immune Response

Allergies:

Organ Transplants:

TOPIC 8: Scientific Inquiry and Skills

What is Science?

Scientific Inquiry

Observations:

Inferences:

Assumptions:

Opinions:

The Scientific View:

Inquiry Skills and Understanding

Developing a Research Plan:

Making Hypotheses:

Designing an Experiment

The Independent Variable:

The Dependent Variable:

Controlling Variables:

Developing Experimental Techniques:

Collecting and Organizing Data

Rules for Creating Data Tables:

Rules for Creating Graphs:

Results:

Conclusions:

Peer Review:

TOPIC 9: Laboratory Skills

Tools for Measurement

Length:

Volume:

Mass:

Temperature:

The Microscope

Stereoscope:

The Compound Light Microscope:

Techniques for Using Microscopes

Images appear:

Focusing:

Preparing wet-mount slides:

Staining Specimens:

Identifying Cell Parts**See Topic 1!!

Additional Laboratory Techniques

Gel Electrophoresis:

Chromatography:

Stains:

Indicators:

Dichotomous Keys:

Laboratory Safety: