

How to study for my biology midterm!!

- **USE THIS STUDY GUIDE**
- Take each chapter a day at a time
- Use index cards to review and add on more relevant information to help UNDERSTAND THE CONCEPTS – don't just memorize the definition
- As you read over the book, have your notes in front of you – add to them and highlight areas of concern
- **MAKE A SPECIAL MARK** next to things you really are struggling with – be prepared to ask about it during review (chances are, if you're not confident with it someone else isn't either!!)
- **GO OVER TESTS AND QUIZZES**
- **GO OVER CHAPTER REVIEWS (in book), SECTION REVIEW WORKSHEETS AND READING GUIDES**
- Practice writing short essays relating materials within a chapter

*If you still have not thoroughly read the text,
taken notes or done index cards...*

DO IT NOW!!

CHAPTER 1 : The Science of Biology

➤ Vocabulary: Be able to define, match, compare and apply

Biology

Hypothesis

Theory

Data

Inference

Conclusion

Controlled experiment

Cell Membrane

Cell culture

Cell fractionation

Evolve

Homeostasis

Microscope – light v. electron (both SEM and TEM)

Spontaneous generation

Metabolism

Unicellular v. multicellular

Asexual v. sexual

Metric system

➤ Concepts: recall, explain, discuss

- The 3 Goals of Science
- The way scientists work – the scientific method
Observe, ask a question, state a hypothesis, test it, record/analyze data, come to a conclusion, repeat and report it
- Hypothesis vs. Theory
- Redi and Pasteur
- Uses for Cell Cultures and Cell Fractionation
- 8 characteristics of life

CHAPTER 7: Cell Structure and Function

- Vocabulary: Be able to define, match, recognize structure and function, compare

Cell

Cell membrane

Cell wall

Nucleus

Cytoplasm

Prokaryote

Eukaryote

Organelle

Chromatin

Nucleolus

Endoplasmic reticulum

Ribosomes

Centrioles

Mitochondria

Lysosomes

Chloroplast

Vacuole

Golgi apparatus

Phagocytosis

Endocytosis

Active transport

Facilitated transport

Diffusion

Osmosis

Selective permeability

Hypertonic Solution

Hypotonic Solution

Isotonic Solution

➤ Concepts: recall, explain, discuss

The cell theory has three parts:

All living things are made up of cells

Cells are the basic unit of structure and function

All cells come from existing cells

Plant v. animal cells

Levels of organization in multicellular organisms

cell → tissue → organ → organ systems

Diagrams of Eukaryotic cells

The effects on Animal Cells in different solutions

Chapter 10: Cell Growth and Division

➤ Vocabulary: Be able to define, match, recognize structure and function, compare

interphase – G1 phase, S phase, G2 phase

cell division/M phase – mitosis/cytokinesis

chromosomes

centromere

sister chromatids

anaphase

prophase

telophase

metaphase

mitosis

➤ Concepts: be able to diagram, label, explain, compare

What 2 problems do large cells have?

State and explain them

The Cell Cycle Diagram

Calculate the Surface Area/Volume ratio of cells