

EXAM REVIEW GUIDE: Trimester One

Exam Format:

Several types of questions will comprise the Biology Exam including multiple choice, matching, short-answer, and one long-answer. The exam will account for 20% of your trimester average. Students should respond to short-answer and long-answer questions with well-organized thoughts that are written in complete sentences.

Exam Study Strategies

Studying for an exam is much like studying for a test, but you must begin studying earlier for an exam than you might for a test. Organization is the foundation of good studying. Make sure that you collect all of your notes, labs study guides, quizzes, and tests in an orderly fashion before you begin. You'll also want to make a list of pages from the text and your literature book as well (use the archived class pages). Molecular Workbench is also a resource for information.

*Create a focused study environment by turning off cell phone, IM, email, Facebook, television, and other distracting factors.

*Use flash cards that you've made for tests or make new ones.

*Study the study guides you've made for tests. Go back to the book or Molecular Workbench for original information on topics that are still confusing to you.

*Correct your quizzes and tests using your text or notes. Re-write questions that you missed, and respond to them again without help. Check yourself for accuracy.

*Keep a separate, running list of questions that you need to ask Mrs. Fitzgerald during the review session or in spare moments before/after school.

*Look for patterns in the material that we've studied. Use the Nine Themes of Biology to look for ways that the material is connected across the trimester. Try to make connections between concepts that we have not explicitly discussed in class (like dehydration synthesis and protein synthesis).

*Create concept maps and other study tools to help put together ideas from different parts of the trimester. There is a good tutorial on concept maps, etc. on p. 814-815 in your text.

*After (and only after) you have become familiar and comfortable with all of the material, meet with classmates in study groups and go through the concepts together, forcing each other to provide as much detail as possible. The process of verbalizing ideas is important in solidifying your understanding. However, meeting in study groups can be counter-productive if all members are not prepared before hand. Meeting over IM is not as effective as meeting in person (it may be worse than not meeting).

Test Date & Time

Tuesday November 25, 2008

8:15 am – 10:15 am

Exam Topics

- ❑ Basic names and functions of cell organelles
- ❑ Structure and properties of water
- ❑ General characteristics of organic molecules
- ❑ Dehydration and hydrolysis reactions
- ❑ Carbohydrates: different forms and functions
- ❑ Lipids: different forms and functions
- ❑ Structure and properties of the cell membrane
- ❑ Diffusion & Osmosis
- ❑ Determining net movement of molecules across a membrane
- ❑ Factors affecting movement of molecules
- ❑ Basic knowledge of cell organelles
- ❑ Structure of the water molecule
- ❑ Properties of water that pertain to life on Earth
- ❑ General characteristics of organic molecules
- ❑ Structure and function of carbohydrates
- ❑ Structure and function of lipids
- ❑ Structure and function of the cell membrane
- ❑ Diffusion and osmosis
- ❑ Effect of solute concentration and solute size on osmosis and /or diffusion
- ❑ Effect of water “concentration” (water potential) on osmosis
- ❑ Passive versus active transport
- ❑ Protein Synthesis Pathway in the cell – organelles involved in making proteins
- ❑ Amino Acid Structure
- ❑ Protein Structure
- ❑ Nucleic acid structure
- ❑ Making proteins from info in DNA
- ❑ Hemoglobin structure and sickle cell anemia
- ❑ Enzyme function
- ❑ Digestive enzymes
- ❑ Enzyme lab – catalase
- ❑ Major themes from *In Defense of Food*