

Mid-term 2014 Exam Study Guide
Grade 10 ST
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When: December 19th– 8:00-11:00 (see teacher for room number)

Format: 60% multiple choice (15 questions), 40% extended answers (10 questions)

Concepts: The mid-term will cover the following topics

1. Ecosystems and Populations (Chapter 9 and 10)

- Studying Populations
 - Population Size, population density, population distribution, biological cycle (** Population size formulas must be known**)
- Studying Communities
 - Biodiversity, Interactions
- What is an ecosystem?
 - Trophic relationships, material and energy flow, disturbances

2. Energy (Chapter 3)

- What is Energy?
 - Types of energy, energy transfer and transformation, the law of conservation of energy, energy efficiency
- Energy Resources (Not in Chapter 3)
 - Resources from Lithosphere (Fossil Fuels, Geothermal, Uranium)
 - Resources from Hydrophere (Hydroelectric, Tidal and wave)
 - Resources from Atmosphere (Wind energy, solar energy)

3. Electricity (Chapter 5)

- What is the origin of electrical energy?
 - The charge of an electron? proton?
 - What does it mean to charge an object?
- Static electricity
 - Methods of charging:
 - friction
 - conduction
 - induction
 - insulators, conductors and semiconductors
- Dynamic electricity
 - Current intensity
 - What is it? How do we calculate it?
 - Potential difference
 - What is it? How do we calculate it?
 - Resistance
 - What is it? How do we calculate it?
 - What considerations must be taken into account to reduce or increase the resistance in circuit? (wire characteristics)
 - Power and energy
 - What is it? How do we calculate it?
 - Drawing electrical circuits using the proper symbols
 - Understanding and interpreting parallel and series circuits

How to study:

For each section listed above complete the following:

1. Collect all class notes, create a vocabulary list and small memory aid
2. Answer textbook review questions, or questions from this package
3. Review quizzes and tests completing all incorrect questions (check with a friend to see if they got it right)
4. Understand and memorize your memory aid materials.
5. Study hard and rest well prior to the exam