Living Environment I – Fall 2017–2018 Edward R. Murrow High School
Final Exam Review Sheet Mr. Sprague & Ms. Vogel

Format:

Part A (General Multiple Choice)	20 multiple choice questions covering material from the entire semester
Part B (Lab Specific Multiple Choice)	10 multiple choice questions covering lab and experiment skills
Part C (General Writing)	4 open questions covering big ideas from the semester
Part D (Lab Specific Writing)	3 open ended questions covering specific labs

Concepts to Review:

- Concepts that have appeared on Exams 1 and 2 (see those review sheets for more details)
  - Designing a controlled experiment (hypothesis, control, independent/dependent variables, graphing)
  - Life functions (eight life functions and their definitions, homeostasis, metabolism)
  - Cells (functions of all cell organelles, differences between plant/animal cells)
  - Transport (diffusion, osmosis, active transport, ATP energy)
  - Enzymes and digestion (enzymes/substrates, denaturing, nutrient groups and their building blocks)
  - Regulation and communication (endocrine and nervous systems, hormones/receptors, nerve messages)
  - Immunity (antigens/antibodies, white blood cells, vaccines, HIV/AIDS, allergies)

- Reproduction (new material covered since Exam 2)
  - Be able to define the life function of *reproduction*.
  - Be able to explain why reproduction is important even though an individual can survive without reproducing.
  - Know the main differences between *asexual* reproduction and *sexual* reproduction.
  - Know why chromosomes are important, what they are made up of, and where they are found in the cell.
  - Be able to summarize the process of mitosis.
  - Be able to compare the number of chromosomes in a parent cell to the number in its daughter cells.
  - Be able to explain how cancer occurs.
  - Be able to give some examples of asexual reproduction in various organisms (binary fission, budding, regeneration, spores, vegetative propagation).
  - Be able to define the terms *gamete* and *zygote*, and identify the male and female gametes.
  - Be able to describe some ways in which *meiosis* is different from *mitosis*.
  - Know how to figure out the number of chromosomes in a gamete.
  - Know the structures and functions of the male and female reproductive systems in humans.
  - Be able to describe the roles of the hormones *testosterone*, *estrogen*, and *progesterone*.

- Lab Skills (see Labs 4, 5, 6: *Making Connections* and Labs 10 & 12: *Diffusion Through a Membrane*)
  - Designing scientific experiments
  - Observing a red onion cell when placed in salt water
  - Diffusion using dialysis tubing as a selectively permeable membrane (you should know which of the following molecules are small enough to diffuse through the cell membrane: glucose, starch, iodine)

Practice Exam Questions: Visit the "Practice Exam Questions" page at www.spraguescience.com

Extra Credit:

Extra credit will be awarded for unused Fall 2017 hall pass coupons that are turned in on the day of the exam.
Do *not* attempt to photocopy a hall pass coupon or use another student's coupons.
Students who forget to bring their hall pass coupons the day of the final exam will forfeit the points!

Make Up Opportunities:

No students will be permitted to make up the exam except in the case of a documented emergency.
No make up exams can be given for any reason after Friday, January 19, 2018.
Students who do not take the exam will receive a grade of zero.