Science 9 Final - Study Guide

(thanks Mr. Young!!)

1. Chemistry (text pages 8 to 102)

Terms you should know:

P16 Matter _____

Mass _____

Volume _____

P17 Chemical change _____

P18 Physical change _____

P19 Kinetic Molecular Theory _____

P21 Figure 1.10 changes in state

Sublimation _____

Deposition _____

Condensation _____

Evaporation _____

Melting _____

Solidification "freezing" _____

P22 Physical properties _____

Pure substance

Element _____

Compound _____

P32 Atom _____

Neutron _____

Proton _____

Electron _____

P45 Chemical properties _____

Metal _____

Non-metal _____

P53 How to read the periodic table – Figure 2.12 (good to review!)

Atomic Number _____

Atomic mass _____

P56 Alkali metals _____

Alkaline earth metals _____

Halogen _____

Noble gases _____

P65 How to Draw those Atoms – good to know!

P66 Valence electron _____

P67 Ions _____

P77 Covalent Compounds _____

Molecule _____

P78 Ionic Compounds _____

P79 Polyatomic Ions _____

P86 Naming Ionic Compounds - Try the practice problems

P87 Rules for Writing Ionic Compounds - Try the practice problems

P89 Rules for Writing Ionic Compounds containing metals with more than one possible charge

P92 Table of common polyatomic ions (you don't need to have these memorized.)

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2. Astronomy (text pages 341 to 445)

Terms you should know:

P350 Big Bang Theory _____

P356 Galaxy _____

P357 Nebula _____

P. 358 Spiral Galaxy _____

Elliptical Galaxy _____

Irregular Galaxy _____

P. 371 The Evolution of Stars – Also refer to the handout on the Life of Stars

P370 Fusion _____

Low mass stars _____

Intermediate mass stars _____

High mass stars _____

P371 Supernova _____

P373 Black Hole _____

Neutron Star _____

White dwarf _____

Black dwarf _____

376 Doppler effect/ Red Shift (support for an expanding universe)

_____

_____

P383 Formation of the solar system

_____

P386 The Planets

P416 Solar Eclipse _____

P418 Lunar Eclipse _____

P419 Constellations _____

P426 Holistic _____

P436 Satellites _____

P437 Probe_____

P438 Rover _____

P439 Rocket _____

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3. Electricity (text pages 242 to 326)

Terms you should know:

P252 Insulator _____

Conductor_____

How objects become:

Positively charged _____

Negatively charged _____

Neutral (grounded) _____

P259 Law of Static Charge

_____

_____

P259 Charging by conduction _____

P260 Charging by induction_____

P260 Attraction of Neutral objects _____

P270 Battery _____

P272 Voltage _____

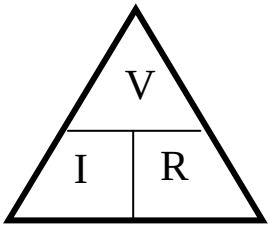
P281 Electric Load _____

P282 Review the symbols in Figure 8.10 (you are expected to know these)

P282 Current electricity _____

P290 Resistance _____

P293 Ohm's Law - review this. You need to be able to solve problems using



P295 Resistor _____

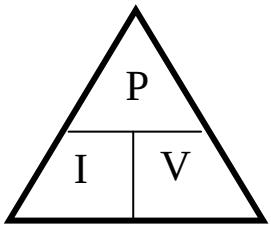
P306 Parallel Circuits (add some notes/ diagrams) _____

P309 Series Circuits (add some notes/ diagrams) _____

P322 Power _____

P322 Watt _____

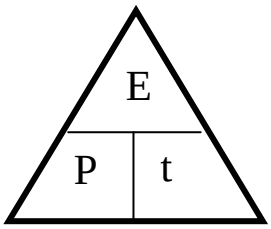
P323 Know how to use:



What do they stand for?

P= _____
I= _____
V= _____

P324 Know how to use



What do they stand for?

E= joules
I= _____
V= _____

Or

When BC hydro wants to charge you:

E= kW.h
I= _____
V= _____

P325 Know how to calculate the cost of energy.

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4. Reproduction (text pages 116 to 229)

Terms you should know:

P122 to 128

Cell membrane _____

Cell Wall (Plants) _____

Cytoplasm _____

Organelle _____

Chloroplasts (Plants) _____

Mitochondrion _____

Ribosome _____

Protein _____

Endoplasmic Reticulum _____

Vesicles _____

Vacuole _____

Nuclear membrane _____

Nucleolus _____

Chromatin (p127) _____

Chromosome (p128) _____

DNA (and what it looks like – base pairing)

P131 How proteins are made

P136 Mutations _____

P138-141

Mutagen _____

Positive Mutation _____

Neutral Mutation _____

Negative Mutation _____

P156-157 Key events of Mitosis

P156/157 Mitosis _____

- Sister Chromatid _____
- Spindle Fibres _____
- Interphase _____
- Prophase _____
- Metaphase _____
- Anaphase _____
- Telophase _____

Cytokinesis (p158) _____

P160 Cancer _____

Asexual Reproduction

- Binary Fission (p168) _____
- Budding (p170) _____
- Fragmentation (p170)_____
- Vegetative reproduction (p172) _____
- Spore formation (p174) _____
- Cloning (p177) _____

(P 188) Sexual Reproduction

(P 191) Know the key events of Meiosis – study figure 6.4 and reproduce it below. What were the main events of Meiosis I and Meiosis II?

(P191) Homologous chromosomes _____

(P192) Crossing over _____

(P206) Mating _____

(p207) External Fertilization _____

(P210) Internal Fertilization _____

(P212) Pollination _____

P216-217 **Embryonic Development**

Zygote _____

Embryo _____

Morula _____

Blastula _____

Gastrula _____

Endoderm _____

Mesoderm _____

Ectoderm _____

(P218) Fetus _____

(P219) Review the key events of the three trimesters in table 219.

(P226) In Vitro Fertilization _____