SBI4U BIOCHEMISTRY Unit Checklist

Name: _____

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Mastery Checks may be attempted more than once within the Mastery Check Window.

Notes will be checked for completion.

Topic	Objective(s)	Key Concepts	Approx. # classes	Notes	Mastery Check *# of attempts*
1	**Cells & Organelles**: *Explain the role of various organelles in cellular processes*	*- Eukaryotic vs. Prokaryotic* *- Comparing Plant & Animal Cells* *- Structure & Function of organelles*	1		**Got It!** ❑❑❑❑ **Not Yet!**
2	**Atoms, Bonding & Polarity**: *Understand various types of bonds between elements* *Identify molecules as polar, non-polar and their solubility* *Explain the unique properties of water*	*- Atomic Structure* *- Isomers* *- Isotopes* *- Bonds: Ionic, Covalent, Intermolecular, Hydrogen* *- Electronegativity* *- Polar vs. Non-Polar, dipoles* *- Adhesion & cohesion*	3		
3	**Functional Groups**: *Identify common functional groups within biological molecules* *Explain how they contribute to function*	*- Carboxyl* *- Carbonyl (aldehyde, ketone)* *- Hydroxyl* *- Amino* *- Phosphate* *- Sulfhydryl*	2		
4	**Macromolecules**: *Describe the structure of biochemical compounds (carbohydrates, proteins, lipids, nucleic acids)* *Explain their functions within cells* ***Quiz***	*- Monomers & Polymers* *- Structures, functions & uses* *- Bonds:* *glycosidic linkages* *ester linkages* *peptide bonds* *phosphodiester bond* *- Dehydration & Synthesis Reactions*	6		**Got It!** ❑❑❑❑ **Not Yet!**
5	**Enzymes**: *Explain chemical structures and mechanisms of various enzymes* ***Quiz & Lab***	*- Models:* *Induced Fit & Lock & Key* *- Factors Affecting Rate of Reaction (denaturing)* *- Cofactors* *- Competitive Inhibitors* *- Allosteric Regulation*	6		**Got It!** ❑❑❑❑ **Not Yet!**
Unit Test					
6	**Phospholipid Bilayer & Transport**: *Describe the structure of cell membranes* *Explain the dynamics various forms of transport across membranes* ***Quiz***	*- Structure & Function* *- Cell Membrane: Fluid Mosaic Model* *- Passive vs. Active Transport* *- Facilitated Diffusion* *- Endocytosis vs. Exocytosis*	3		**Got It!** ❑❑❑❑ **Not Yet!**

Assessment	Date
Macromolecule Quiz	
Enzyme Quiz	
Enzyme Lab	
Unit Test	
Cell Membrane Quiz	

Biochemistry Terms to Know

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- Activation Energy
- Activator
- Active Form
- Active Site
- Active Transport
- Adenine
- Adhesion
- Aldehyde
- Allosteric Activator
- Allosteric Inhibitor
- Allosteric Regulation
- Allosteric Site
- Amino
- Amino acid
- Amphipathic
- Anabolic
- Analytical
- Antiport
- Aquaporin
- ATP
- Base Pair
- Bioremediation
- Bond Energy
- Carbohydrate
- Carbonyl
- Catabolic Reactions
- Catalyst
- Cholesterol
- Coenzyme
- Cofactor
- Cohesion
- Competitive inhibition
- Concentration
- Concentration Gradient
- Condensation
- Condensation Reaction
- Coupled Transport
- Covalent Bond
- Cytosine
- Dehydration Synthesis
- Denature
- Deoxyribose
- Dialysis
- Diffusion
- Dipole
- Disaccharide
- Disulfide Bridge
- DNA
- Dynamic
- Electronegativity
- Endergonic
- Endocytosis
- Energy
- Enzyme
- Enzyme-Substrate Complex
- Equilibrium
- Ester Bond
- Eukaryote
- Exergonic
- Exocytosis
- Facilitated Diffusion
- Feedback Inhibition
- First Law of Thermodynamics
- Fluid Mosaic Model
- Functional Group
- Glycerol
- Glycolipid
- Glycoprotein
- Glycosidic Linkage
- Guanine
- Heat Capacity
- Hydrogen Bonds
- Hydrolysis
- Hydrophilic
- Hydrophobic
- Hydroxyl
- Hypertonic
- Hypotonic
- Inactive Form
- Induced Fit Model
- Inhibitor
- Integral Protein
- Ionic Bond
- Isomer
- Isotonic
- Isotope
- Ketone
- Kinetic
- Lipid
- Lock & Key
- Membrane
- Metabolism
- Monomer
- Monosaccharide
- Na^+/K^+ Pump
- Negative
- Nitrogenous Base
- Non-competitive inhibition
- Non-Polar
- Nucleic Acid
- Nucleotide
- Oligosaccharide
- Osmosis
- Osmotic Concentration
- Oxidation
- Passive Transport
- Pentose Sugar
- Peptide Bond
- Peripheral Protein
- pH
- Phagocytosis
- Pharmaceutical
- Phosphate
- Phosphate Group
- Phosphodiester Bond
- Phospholipid
- Pinocytosis
- Polar
- Polymer
- Polypeptide
- Polysaccharide
- Positive
- Primary
- Product
- Prokaryote
- Protein
- Protein Carrier
- Protein Channel
- Purine
- Pyrimidine
- Quaternary
- Reactant
- Receptor-Mediated Endocytosis
- Reduction
- Ribose
- RNA
- Saturated
- Secondary
- Selectively Permeable
- Simple Diffusion
- Solute
- Solvent
- Steroid
- Substrate
- Sulfhydryl
- Symport
- Temperature
- Tertiary
- Thalidomide
- Therapeutic
- Thymine
- Transition State
- Triglyceride
- Unsaturated
- Uracil
- Vesicle
- α – Helix

Mastery Checks:

- May be attempted more than once within Mastery Check "window"
  Extra practice must be completed & shown to get another code
- Must be written during class or after school during supervised extra help times.
- Mastery is considered **≥ 75%**