Edit page

CW High School

AP Biology A

1. **Chemistry of Life** (20.00%)

Learning Targets

1.1 I can use graph and data evidence to justify the importance of polar covalent bonds with respect to the emergent properties of water.

Learning Target	Descriptor	Definition
4	Proficient	I can use graph and data evidence to justify the importance of polar covalent bonds with respect to the emergent properties of water.
3	Developing	I can discuss the importance of polar covalent bonds and hydrogen bonds with the emergent properties of water.
2	Basic	I can define the emergent properties of water, polar covalent, and hydrogen bonds.
1	Minimal	I can list the emergent properties of water.
0	No Evidence	No evidence shown.

1.2 I can use design, conduct, and report on a transpiration lab investigating transpiration rates, water potential, and plant structure .

Learning Target	Descriptor	Definition
4	Proficient	I can use design, conduct, and report on a transpiration lab investigating transpiration rates, water potential, and plant structure .
3	Developing	I can conduct and analyze results of a guided lab investigating transpiration rates and water potential.
2	Basic	I can relate plant structure to differing transpiration rates.
1	Minimal	I can define terms associated with transpiration.
0	No Evidence	No evidence shown.

1.3 I can predict the effects of changes in building blocks of polymers.

Learning Target	Descriptor	Definition
4	Proficient	I can predict the effects of changes in building blocks of polymers.
3	Developing	I can explain the biological purpose of the four major macromolecules.
2	Basic	I can discuss the molecular structure and bonds of each of the four major macromolecules.
1	Minimal	I can identify the monomers of the four major macromolecules.
0	No Evidence	No evidence shown.

1.4 I can use my knowledge of scientific roots to deduce the meanings of biological terms.

Edit page

CW High School

AP Biology A

Learning Target	Descriptor	Definition
4	Proficient	I can use my knowledge of scientific roots to deduce the meanings of biological terms.
3	Developing	I can use my knowledge of scientific roots to identify words related to a root.
2	Basic	I can define various scientific roots
1	Minimal	I can identify scientific roots, prefixes, and suffixes.
0	No Evidence	No evidence shown.

2. **The Cell (20.00%)**

Learning Targets

2.1 I can relate structure of cellular structures to their specific functions and compartmentalization.

Learning Target	Descriptor	Definition
4	Proficient	I can relate structure of cellular structures to their specific functions and compartmentalization.
3	Developing	I can describe the functions of the cells parts in prokaryotic and eukaryotic cells.
2	Basic	I can describe the structures of cellular structures.
1	Minimal	I can compare and contrast components of eukaryotic and prokaryotic cells.
0	No Evidence	No evidence shown.

2.2 I can relate surface area to volume ratio to the exchange of materials and properties of the cell.

Learning Target	Descriptor	Definition
4	Proficient	I can relate surface area to volume ratio to the exchange of materials and properties of the cell.
3	Developing	I can explain the relationship between surface area to volume ratio and cell success.
2	Basic	I can describe methods for a cell to increase surface area.
1	Minimal	I can calculate surface area to volume ratio of various shapes.
0	No Evidence	No evidence shown.

2.3 I can compare and contrast the cell wall structure and function of plants, prokaryotes, and fungi.

Learning Target	Descriptor	Definition
4	Proficient	I can compare and contrast the cell wall structure and function of plants, prokaryotes, and fungi.

Edit page

CW High School

AP Biology A

Learning Target	Descriptor	Definition
3	Developing	I can discuss functions of the cell membrane regarding cell structure and permeability.
2	Basic	I can explain the fluid mosaic model in regards to the plasma membrane.
1	Minimal	I can describe the structure of the plasma membrane.
0	No Evidence	No evidence shown.

2.4 I can use the water potential and solute potential formulas to explain cellular osmolarity in fresh and saltwater environments.

Learning Target	Descriptor	Definition
4	Proficient	I can use the water potential and solute potential formulas to explain cellular osmolarity in fresh and saltwater environments.
3	Developing	I can conduct an experiment to determine sucrose solution concentrations using the principles of osmosis and diffusion.
2	Basic	I can, through a dialysis tubing lab, predict the direction of flow of water or solutes.
1	Minimal	I can determine, using given concentrations, whether a solution is hyper, iso, or hypotonic compared to another solution.
0	No Evidence	No evidence shown.

2.5 I can describe the various ways ions move across the membrane and how they impact membrane potential.

Learning Target	Descriptor	Definition
4	Proficient	I can describe the various ways ions move across the membrane and how they impact membrane potential.
3	Developing	I can discuss methods and molecules of active transport (endocytosis, exocytosis, Na+/Ca2+ pump).
2	Basic	I can discuss the methods and molecules of passive transport (diffusion, osmosis, and facilitated diffusion).
1	Minimal	I can define and give examples of passive and active transport.
0	No Evidence	No evidence shown.

2.6 I can use evidence to support the endosymbiotic theory.

Learning Target	Descriptor	Definition
4	Proficient	I can use evidence to support the endosymbiotic theory.
3	Developing	I can trace the origins of compartmentalization in terms of prokaryotic and eukaryotic cells.

Edit page

CW High School

AP Biology A

Learning Target	Descriptor	Definition
2	Basic	I can justify why a cell would compartmentalize.
1	Minimal	I can define compartmentalization in regards to cells.
0	No Evidence	No evidence shown.

2.7 **I can use my knowledge of scientific roots to deduce the meanings of biological terms.**

Learning Target	Descriptor	Definition
4	Proficient	I can use my knowledge of scientific roots to deduce the meanings of biological terms.
3	Developing	I can use my knowledge of scientific roots to identify words related to a root.
2	Basic	I can define various scientific roots.
1	Minimal	I can identify scientific roots, prefixes, and suffixes.
0	No Evidence	No evidence shown.

Edit page

CW High School

AP Biology A

3. **Energy and Enzymes (20.00%)**

Learning Targets

3.1 I can discuss environmental impacts on enzyme function and ideal enzymatic conditions.

Learning Target	Descriptor	Definition
4	Proficient	I can discuss environmental impacts on enzyme function and ideal enzymatic conditions.
3	Developing	I can explain how changes in enzyme structure affect function.
2	Basic	I can explain how enzymes affect the rate of chemical reactions.
1	Minimal	I can describe enzyme structure and function.
0	No Evidence	No evidence shown.

3.2 I can interpret and analyze data collected from the cheese lab pertaining to environmental impacts of enzymes and ideal conditions.

Learning Target	Descriptor	Definition
4	Proficient	I can interpret and analyze data collected from the cheese lab pertaining to environmental impacts of enzymes and ideal conditions.
3	Developing	I can design a cheese lab and choose accurate methods of representing data (charts, graphs, etc.).
2	Basic	I can describe the purpose (the background and the "why" of the experiment) for guided and inquiry-based cheese labs.
1	Minimal	I can write a hypothesis for guided and inquiry-based cheese labs.
0	No Evidence	No evidence shown.

4. **Cellular Respiration and Photosynthesis (20.00%)**

Learning Targets

4.1 I can speculate, and support with evidence, the effects of any disruptions or changes in the process of photosynthesis.

Learning Target	Descriptor	Definition
4	Proficient	I can speculate, and support with evidence, the effects of any disruptions or changes in the process of photosynthesis.
3	Developing	I can describe the reactants, steps, and products of the light-dependent reaction
2	Basic	I can describe the reactants, steps, and products of the light-dependent reaction
1	Minimal	I can describe the origins of Earth's oxygenated atmosphere.
0	No Evidence	No evidence shown.

Edit page

2 I can speculate, and support with evidence, the effects of any disruptions or changes in the process of cellular respiration.

Learning Target	Descriptor	Definition
4	Proficient	I can speculate, and support with evidence, the effects of any disruptions or changes in the process of cellular respiration.
3	Developing	I can trace the path of glucose and its products through glycolysis, the Krebs cycle, and the electron transport chain.
2	Basic	I can describe the reactants and products of glycolysis, the Krebs Cycle, and the electron transport chain.
1	Minimal	I can identify the steps and equation of cellular respiration.
0	No Evidence	No evidence shown.

4.3 I can, given a particular environment, suggest and defend a molecular difference that would increase an organism's fitness.

Learning Target	Descriptor	Definition
4	Proficient	I can, given a particular environment, suggest and defend a molecular difference that would increase an organism's fitness.
3	Developing	I can provide an example at the molecular level of how an organism can increase its fitness.
2	Basic	I can, given a scenario, describe how an organism's properties increase its fitness.
1	Minimal	I can define fitness as it relates to biology.
0	No Evidence	No evidence shown.

4.4 I can use my knowledge of scientific roots to deduce the meanings of biological terms.

Learning Target	Descriptor	Definition
4	Proficient	I can use my knowledge of scientific roots to deduce the meanings of biological terms.
3	Developing	I can use my knowledge of scientific roots to identify words related to a root.
2	Basic	I can define various scientific roots.
1	Minimal	I can identify scientific roots, prefixes, and suffixes.
0	No Evidence	No evidence shown.

5. Cell Communication (20.00%)

Learning Targets

5.1 I can describe the impact of the environment in eliciting a cellular response and what those responses could be.

Learning Target	Descriptor	Definition

Edit page

CW High School

AP Biology A

Learning Target	Descriptor	Definition
4	Proficient	I can describe the impact of the environment in eliciting a cellular response and what those responses could be.
3	Developing	I can describe the role of components of a signal transduction pathway in producing a cellular response.
2	Basic	I can describe reception and transduction for G-coupled protein receptors, enzyme-mediated receptors, and ligand gated ion channels.
1	Minimal	I can define the types of cell signaling and describe when they are used.
0	No Evidence	No evidence shown.

5.2 I can explain how positive feedback affects homeostasis.

Learning Target	Descriptor	Definition
4	Proficient	I can explain how positive feedback affects homeostasis.
3	Developing	I can explain how negative feedback affects homeostasis.
2	Basic	I can describe why organisms use feedback mechanisms.
1	Minimal	I can define homeostasis, negative feedback, and positive feedback.
0	No Evidence	No evidence shown.

5.3 I can discuss the consequences of a build up of mutations and improper cell cycle control.

Learning Target	Descriptor	Definition
4	Proficient	I can discuss the consequences of a build up of mutations and improper cell cycle control.
3	Developing	I can explain how checkpoints as well as cyclins/cyclin dependent kinases maintain the cell cycle.
2	Basic	I can describe the role and phases of mitosis.
1	Minimal	I can describe the phases of the cell cycle.
0	No Evidence	No evidence shown.

Submitted on 7/29/2022 by