Designing Adaptable Classroom Assessments
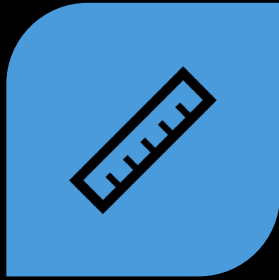
Suzanne Wakim

Outcomes

- Identify confounding variables of fixed assessments

- Identify examples of adaptable assessments

- Design assessments that are adaptable, accurate, and authentic

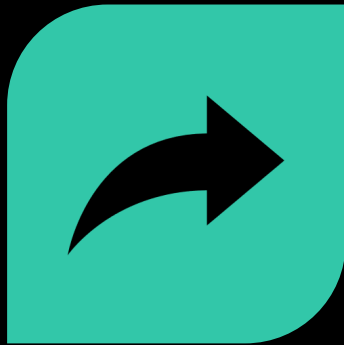# Assessment as

Measurement Tool

Learning Tool

Collaboration Tool

Assessment that are

Adaptable

Accurate

Learning Outcome: Define and Group Terms

Peptide Bond

Lactose

Cholesterol

Wax

Polysaccharide

Nucleotide

Cellulose

Nitrogenous base

Monosaccharide

Triglyceride

Glucose

Amino acid

Disaccharide

Fatty Acid

Deoxyribose

Chitin

Phospholipid

Ribose

Lipid

Protein

Testing: Confounding Variables

1. Which relationship is different?

   A. Monosaccharide / Polysaccharide

   B. Monosaccharide / Disaccharide

   C. Phospholipid / Lipid

   D. Amino Acid / Protein

The alternative

- Clearly identify the learning outcome

- Let students select the strategy for demonstrating knowledge

- Provide a clear and detailed rubric

Carbohydrate: (Sugars, disaccharide, monosaccharide's, polysaccharides) Store energy and maintain cell structure. They are non-polar and are insoluble in water. They are hydrophobic.

Monosaccharide: Simple sugar

Polysaccharide: When numerous monosaccharide's are joined together.

Disaccharide: double sugar, two monosaccharide's connected.

Glycogen: starch in plants

Chitin: Polysaccharide N- acetyglucosamine

Starch: Plant product formed together by bonding together thousand of glucose.

Cellulose: produced by plants, it's a polysaccharide of glucose.

Glucose: the most abundant monosaccharide in nature. It is the sugar molecule the body uses to create energy, and it is the fuel used by brain cells.

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Sugars	Deoxyribose, fructose, glucose, lactose, ribose, sucrose
Sugar Identification	Monosaccharides, disaccharides, polysaccharides
Nucleobases	Adenine, cytosine, guanine, thymine
Nucleic Acid	Deoxyribonucleic acid, nucleotide, nitrogenous base, ribonucleic acid
Cell essentials	Cellulose, protein, cholesterol, chitin
Fats	fatty acids, glycerol, lipids, phospholipid, steroid, triglyceride, waxes
Storage	Carbohydrates, glycogen, starch
Reactions	Amino acids, Enzymes,
Chemical Identification	Peptide bond, saturated, unsaturated

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...teroid, triglyceride, waxes

Remaining	Correct	Wrong		8%	07:45.0	Quit
8	1	3				

Chloroplast	Photosynthesis
Cytoskeleton	Protein synthesis
Cytosol	cellular respiration and ATP production
DNA	control calcium release and muscle contractions, and breakdown toxins in liver
Golgi apparatus	digestive function in plant cells
Mitochondrion	directs synthesis of ribosomes and proteins, houses DNA
Nucleus	distributes lipids and proteins after modifing, sorting, taging, and packaging them
Plasma membrane	genetic codes or markers, making everyone unique
Ribosomes	organelles stay in specific positions, lets cytoplasm and vesicles move around in the cell, and unicellular organisms to move independently keeps the shape of the cell
Rough endoplasmic reticulum	
Smooth endoplasmic reticulum	
Vesicle	

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Fatty Acid
A carboxylic acid consisting of a hydrocarbon chain and a terminal carboxyl group, especially anyof those occurring as esters in fats and oils.

Glycogen
A substance deposited in body tissues as a store of carbohydrates. It is a polysaccharide that forms glucose and on hydrolysis.

Guanine
A compound that occurs in guano and fish scales, and is one of four constituent bases of nucleic acids

Glycerol
A colorless, sweet, viscous liquid formed as a byproduct in soap manufacture. It is used as an emollient and laxative, and for making explosives and antifreeze

Lipid
...ass of nonpolar organic compounds ...uilt from hydrocarbons and ...distinguished by the fact that they ...re not soluble in water.

Glucose
A simple sugar that is an important energy source in living organisms and is a component of many carbohydrates

8%   07:45.0   Quit

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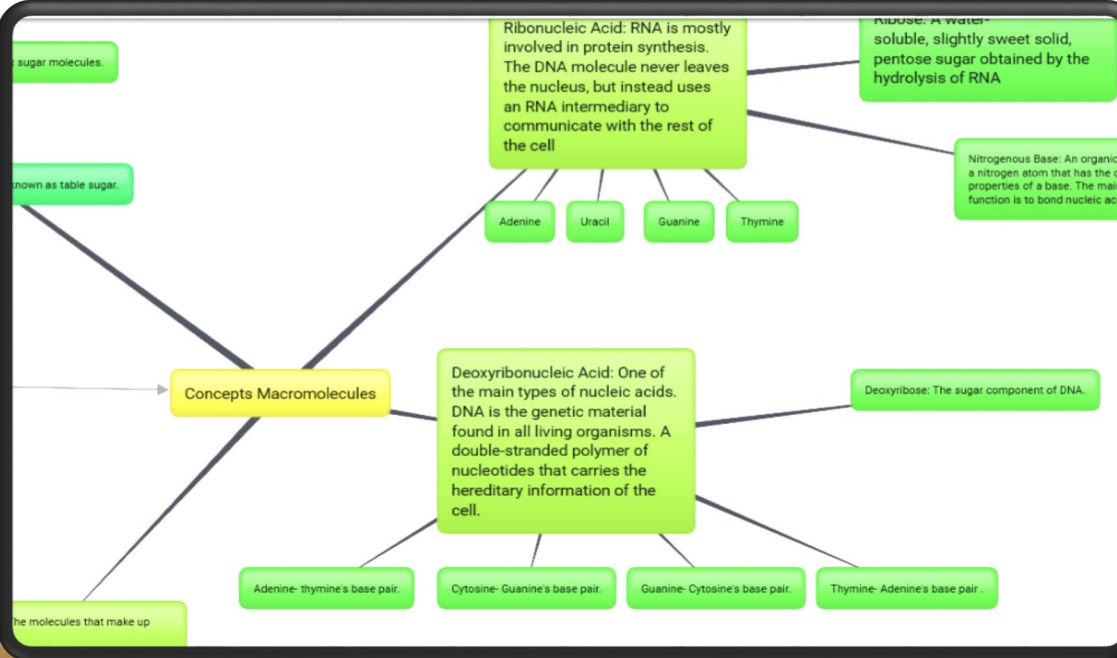**Glycogen:** starch in p
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Ribonucleic Acid: RNA is mostly involved in protein synthesis. The DNA molecule never leaves the nucleus, but instead uses an RNA intermediary to communicate with the rest of the cell

Ribose: A water-soluble, slightly sweet solid, pentose sugar obtained by the hydrolysis of RNA

Nitrogenous Base: An organic a nitrogen atom that has the ch properties of a base. The main function is to bond nucleic acid

Adenine | Uracil | Guanine | Thymine

Concepts Macromolecules

Deoxyribonucleic Acid: One of the main types of nucleic acids. DNA is the genetic material found in all living organisms. A double-stranded polymer of nucleotides that carries the hereditary information of the cell.

Deoxyribose: The sugar component of DNA.

Adenine- thymine's base pair. | Cytosine- Guanine's base pair. | Guanine- Cytosine's base pair. | Thymine- Adenine's base pair .

sugar molecules.

nown as table sugar.

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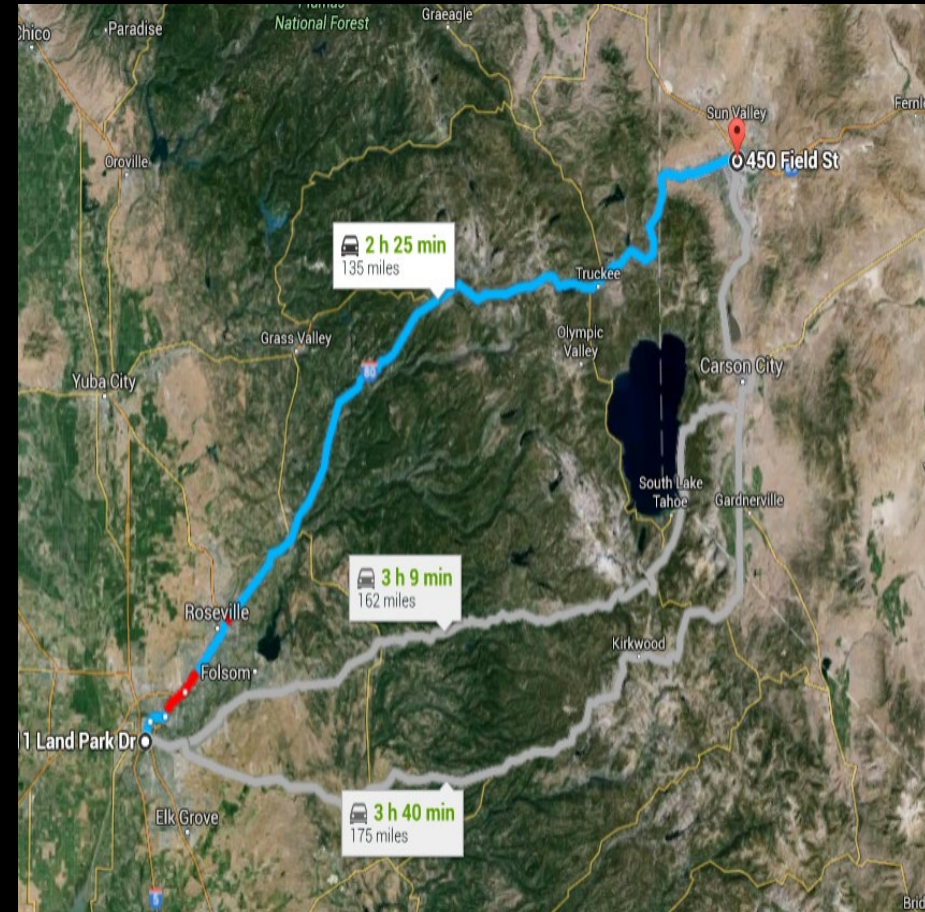# Choices and Constants

Constant
- Content
- Rigor

Choices
- Learning Resources
- Assignments

Benefits

- Assessing SLO directly - single variable

- Students learning - focused on content rather than form

- Universal Design for Learning

Considerations

- Scaffold learning by providing examples in early assignments

- Provide a detailed rubric

  - Students know exactly what to do

  - Makes grading easier

Learning Outcome: Explain a Process

Explain how your nervous system allows to you see a pen on the table and pick it up. Include: sensory neuron, interneuron, brain, motor neuron, skeletal muscle, electrical message, chemical message, synapse, axon, dendrite, sodium channels, potassium channels, the Na/K pump, and ATP.
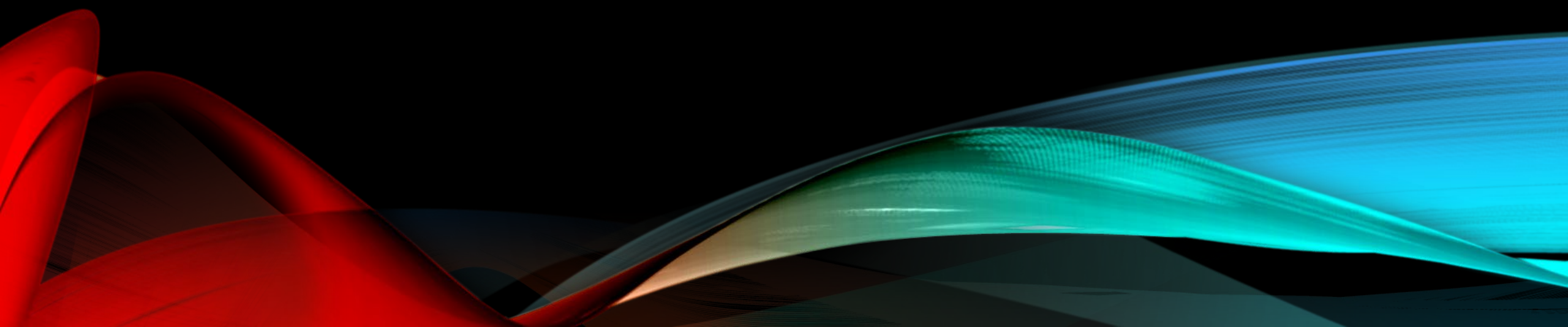
Essays: Confounding Variables

Write an essay explaining how your nervous system allows to you see a pen on the table and pick it up. Include: sensory neuron, interneuron, brain, motor neuron, skeletal muscle, electrical message, chemical message, synapse, axon, dendrite, sodium channels, potassium channels, the Na/K pump, and ATP.

Considerations

- Accurately assess synthesis
- Writing is an important skill
  - Multiple content reviews
- Peer review
  - Provide training

Assessment Options

- Case studies

- Multi-media

- Porfolios

- Online collaborations

- Annotations

- Study Resources

More Assessment Types

Renewable Assignments

Disposable Assignments

Frameworks and Resources

- Assessment Worksheet

- TILT – Transparency in Learning and Teaching

- UDL – Universal Design for Learning

- Understanding by Design

- Culturally Responsive Assessment

Thank you!

Contact Information:

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