lead4ward

Academic Vocabulary

CONTENT BUILDER FOR THE PLC

SCIENCE
BIOLOGY

Academic Vocabulary Analysis

Biology

STANDARDS (TEKS): academic vocabulary directly taken from the standard
STAAR: academic vocabulary used on the assessment (source released tests)

STANDARD B.4B investigate and explain cellular processes, including homeostasis, energy conversions, transport of molecules, and synthesis of new molecules

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Investigate	Cellular process	Organelle	Production
Explain	Homeostasis	Ribosome	
	Energy conversion	Endoplasmic reticulum	
	Molecule transport	Golgi apparatus	
	Synthesis	Lysosome	
		Plasma membrane	
		Vacuole	
		Plastid	
		Nucleolus	
		Active transport	
		Concentration gradient	
		Mitochondria	
		Glucose molecule	
		Phosphate bond	
		ATP	
		Ion	
	Vocabulary term used on STAAR		

STANDARD B.4C compare the structures of viruses to cells, describe viral reproduction, and describe the role of viruses in causing diseases such as human immunodeficiency virus (HIV) and influenza

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Compare	Virus	Immune cells	Symptoms
Describe	Viral reproduction	Lytic	Machinery
	Human immunodeficiency virus (HIV)	Lysogenic	Projections
	Influenza	Host cell	Mechanism
		Reproductive cycle	
		Infect	
		Cell	
	Vocabulary term used on STAAR		

Source: Texas Education Agency

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STANDARD B.5A describe the stages of the cell cycle, including deoxyribonucleic acid (DNA) replication and mitosis, and the importance of the cell cycle to the growth of organisms

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Describe	Cell cycle	G_1 stage/phase	Stage
	Deoxyribonucleic acid (DNA)	G_2 stage/phase	Cellular process
	DNA Replication	S stage/phase	Phase
	Mitosis	M stage/phase	
		Telophase	
		Chromosome	
		Poles (of a cell)	
		Translation	
		Interphase	
		Transcription	
		Daughter cell	
		Prophase	
		Metaphase	
		Anaphase	
	Vocabulary term used on STAAR		

STANDARD B.9A compare the structures and functions of different types of biomolecules, including carbohydrates, lipids, proteins, and nucleic acids

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Compare	Structure	Metabolize	Molecule
	Function	Energy	
	Biomolecule	Nitrogen	
	Carbohydrate	Phosphate	
	Lipid	Polysaccharide	
	Protein	Polymer	
	Nucleic acid	Dehydration synthesis	
	Models (process)	Amino acid	
		Peptide bond	
		Fatty acid	
	Vocabulary term used on STAAR		

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STANDARD B.6A identify components of DNA, and describe how information for specifying the traits of an organism is carried in the DNA

STANDARDS (TEKS)		STAAR	
Thinking	Content	Content	Common
Identify	DNA	Nitrogenous base	Sequence
Describe	Traits	Double helix	Structure
	Model (process)	DNA molecule	
		Hydrogen bond	
		Complimentary nucleotide	
		Nucleotide	
		Genetic code	
		Deoxyribose sugar	
	Vocabulary term used on STAAR		

STANDARD B.6E identify and illustrate changes in DNA and evaluate the significance of these changes

STANDARDS (TEKS)		STAAR	
Thinking	Content	Content	Common
Identify	DNA	Genetic change	Offspring
Illustrate		Chromosome	
Evaluate		Mutation	
		Base sequence	
		Substitution mutation	
		Insertion mutation	
		Deletion mutation	
		Frameshift mutation	
		Codon	
		DNA triplet	
		Gamete	
	Vocabulary term used on STAAR		

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STANDARD B.6F predict possible outcomes of various genetic combinations such as monohybrid crosses, dihybrid crosses and non-Mendelian inheritance

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Predict	Genetic combinations	Gregor Mendel	Characteristics
	Monohybrid cross	Trait	
	Dihybrid cross	Allele	
	Non-Mendelian inheritance	Dominant	
	[Punnett Square]	Heterozygous	
		Homozygous	
		Recessive	
		Gene	
		Genotype	
		Genotypic ratio	
		Outcome	
		Cross	
		Offspring	
	Vocabulary term used on STAAR		

STANDARD B.7A analyze and evaluate how evidence of common ancestry among groups is provided by the fossil record, biogeography, and homologies, including anatomical, molecular, and developmental

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Analyze	Common ancestry	Genome map	Native
Evaluate	Fossil record	DNA sequence	Ancestor
	Biogeography	Taxonomic	Descended
	Homology	Phylogenic	
	Anatomical homology	Offspring	
	Molecular homology	Species	
	Developmental homology		
	Vocabulary term used on STAAR		

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STANDARD B.7E analyze and evaluate the relationship of natural selection to adaptation and to the development of diversity in and among species

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Analyze	Natural selection	Adapt	Environment
Evaluate	Adaptation	Competition	
	Diversity	Survive	
	Species	Reproduce	
		Gene frequency	
		Predator	
		Population	
		Habitat	
		Offspring	
	Vocabulary term used on STAAR		

STANDARD B.8B categorize organisms using a hierarchical classification system based on similarities and differences shared among groups

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Categorize	Hierarchical classification system	Taxonomic group	Characteristics
		Bacteria	
		Dichotomous key	
		Species	
		Classify	
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STANDARD B.10A describe the interactions that occur among systems that perform the functions of regulation, nutrient absorption, reproduction, and defense from injury or illness in animals

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Describe	Interactions	[Human body systems]	Contractions
	Systems [body]	Reflex response	
	Regulation	Nerve impulse	
	Nutrient absorption	Sensory neuron	
	Reproduction	Motor neuron	
	Defense	Response	
		Pathogen	
		Pathogenic	
		Digestive tract	
		Microorganism	
	Vocabulary term used on STAAR		

STANDARD B.10B describe the interactions that occur among systems that perform the functions of transport, reproduction, and response in plants

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Describe	Interactions	Epidermal cell	Roots
	Systems	Guard cell	Stem
	Transport	Stomata	Shoot
	Reproduction	Cellular reproduction	
	Response	Xylem	
		Phototropism	
		Geotropism	
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STANDARD B.11D describe how events and processes that occur during ecological succession can change populations and species diversity

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Describe	Ecological succession	Succeed	Disturbance
	Population diversity	Ecosystem	
	Species diversity	Community	
	Diversity	Species	
	Vocabulary term used on STAAR		

STANDARD B.12A interpret relationships, including predation, parasitism, commensalism, mutualism, and competition among organisms

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Interpret	Predation	Environment	Relationship
	Commensalism	Ecosystem	Native species
	Mutualism	Parasitism	
	Competition		
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STANDARD B.12C analyze the flow of matter and energy through trophic levels using various models, including food chains, food webs, and ecological pyramids

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Analyze	Flow of matter	Marine ecosystem	Environment
	Flow of energy	Ecosystem	
	Trophic levels	Heat	
	Food chains	Terrestrial	
	Food webs	Producer	
	Ecological pyramids	Decomposer	
	Models (process)	Omnivore	
		Predator	
		Energy pyramid	
	Vocabulary term used on STAAR		

STANDARD B.12F describe how environmental change can impact ecosystem stability

STANDARDS (TEKS)		**STAAR**	
Thinking	Content	Content	Common
Describe	Environmental change	Terrestrial ecosystem	Contributor
	Ecosystem	Algae overgrowth	Impact
	Ecosystem stability	Intensive fishing	Organisms
			Nutrients
	Vocabulary term used on STAAR		