

Page Keeley Probes TEKS Correlations

General Science

TEK	Book Title	Page Number	Probe Title
	Uncovering Student Ideas in Science Vol. 3	83-91	Is It a Theory?
6.2A, 7.2A, 8.2A Plan and implement comparative and descriptive investigations by making observations, asking well-defined questions, and using appropriate equipment and technology.	Uncovering Student Ideas in Science Vol. 3	93-100	Doing Science
6.2B, 7.2B, 8.2B Design and implement experimental investigations by making observations, asking well-defined questions, formulating testable hypotheses, and using appropriate equipment and technology.	Uncovering Student Ideas in Science Vol. 3	101-108	What is a Hypothesis?
6.3B, 7.3B, 8.3B Use models to represent aspects of the natural world such as an atom, a molecule, space, or a geologic feature.	Uncovering Student Ideas in Science Vol. 4	73-80	Is It a Model?
For Fun!	Uncovering Student Ideas in Science Vol. 4	105-111	Chicken Eggs
	Uncovering Student Ideas in Astronomy	11-14	Where Do People Live?
	Uncovering Student Ideas in Astronomy	15-19	Falling Through the Earth

6th Grade

TEK	Book Title	Page Number	Probe Title
6.5A Know that an element is a pure substance represented by chemical symbols			
6.5B Recognize that a limited number of the many known elements comprise the largest portion of solid Earth, living matter, oceans, and the atmosphere			
6.5C Differentiate between elements and compounds on the most basic level.			
6.5D Identify the formation of a new substance by using the evidence of a possible chemical change such as production of a gas, change in temperature, production of a precipitate, or color change.			
6.6A Compare metals, nonmetals, and metalloids using physical properties such as luster, conductivity or malleability	Uncovering Student Ideas in Science Vol. 1	73-77	Is It Melting?
	Uncovering Student Ideas in Science Vol. 1	79-84	Is it Matter?
	Uncovering Student Ideas in Science Vol. 2	19-25	Comparing Cubes
	Uncovering Student Ideas in Science Vol. 2	47-52	Turning the Dial
	Uncovering Student Ideas in Science Vol. 2	53-58	Boiling Time and Temperature
	Uncovering Student Ideas in Science Vol. 2	59-64	Freezing Ice
	Uncovering Student Ideas in Science Vol. 2	65-70	What's in the Bubbles?
	Uncovering Student Ideas in Science Vol. 3	25-31	Is It Solid?
	Uncovering Student Ideas in Science Vol. 3	39-44	Floating Balloon
	Uncovering Student Ideas in Science Vol. 3	45-50	Hot and Cold Balloons
	Uncovering Student Ideas in Science Vol. 3	163-169	Where Did the Water Come From?
	Uncovering Student Ideas in Science Vol. 4	11-16	Sugar Water
	Uncovering Student Ideas in Science Vol. 4	17-22	Iron Bar
6.6B Calculate density to identify an unknown substance	Uncovering Student Ideas in Science Vol. 2	27-32	Floating Logs
	Uncovering Student Ideas in Science Vol. 2	33-39	Floating High and Low
	Uncovering Student Ideas in Science Vol. 2	41-46	Solids and Holes
6.6C Test the physical properties of minerals including hardness, color, luster, and streak.			

6.7A Research and debate the advantages and disadvantages of using coal, oil, natural gas, nuclear power, biomass, wind, hydropower, geothermal, and solar resources	Uncovering Student Ideas in Science Vol. 4	143-149	Global Warming
	Uncovering Student Ideas in Science Vol. 4	151-156	Where Does Oil Come From?
6.7B Design a logical plan to manage energy resources I the home, school or community			
6.8A Compare and contrast potential and kinetic energy.	Uncovering Student Ideas in Science Vol. 3	63-69	Apple on a Desk
6.8B Identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces	Uncovering Student Ideas in Physical Science	23-26	Following Jack; Part 1
	Uncovering Student Ideas in Physical Science	27-30	Following Jack; Part 2
	Uncovering Student Ideas in Physical Science	31-34	Go-Cart Test Run
	Uncovering Student Ideas in Physical Science	43-46	Just Rolling Along
	Uncovering Student Ideas in Physical Science	71-74	Talking About Forces
	Uncovering Student Ideas in Physical Science	75-78	Does it Have To Touch?
	Uncovering Student Ideas in Physical Science	79-82	Force and Motion Ideas
	Uncovering Student Ideas in Physical Science	83-86	Friction
	Uncovering Student Ideas in Physical Science	87-89	A World Without Friction
	Uncovering Student Ideas in Physical Science	91-94	Rolling to a Stop
	Uncovering Student Ideas in Physical Science	95-97	Outer Space Push
	Uncovering Student Ideas in Physical Science	107-110	Apple in a Plane
6.8C Calculate average speed using distance and time measurements.	Uncovering Student Ideas in Physical Science	35-38	Checking the Speedometer
	Uncovering Student Ideas in Physical Science	39-42	Speed Units
6.8D Measure and graph changes in motion.	Uncovering Student Ideas in Physical Science	23-26	Following Jack; Part 1
	Uncovering Student Ideas in Physical Science	27-30	Following Jack; Part 2
	Uncovering Student Ideas in Physical Science	31-34	Go-Cart Test Run
	Uncovering Student Ideas in Physical Science	59-62	Rolling Marbles
6.8E Investigate how inclined planes and pulleys can be used to change the amount of force to move an object.	Uncovering Student Ideas in Physical Science	181-183	Pulley Size
	Uncovering Student Ideas in Physical Science	185-187	Rescuing Isabelle
	Uncovering Student Ideas in Physical Science	197-200	Lifting A Rock
6.9A Investigate methods of thermal energy transfer including conduction, convection, and radiation.	Uncovering Student Ideas in Science Vol. 1	73-77	Is It Melting?
	Uncovering Student Ideas in Science Vol. 1	103-108	The Mitten Problem
	Uncovering Student Ideas in Science Vol. 1	155-161	Wet Jeans
	Uncovering Student Ideas in Science Vol. 3	33-38	Thermometer
	Uncovering Student Ideas in Science Vol. 4	53-59	Warming Water
6.9B Verify through investigations that thermal energy moves in a predictable pattern from warmer to cooler until all the substances attain the same temperature such as an ice cube melting	Uncovering Student Ideas in Science Vol. 1	109-114	Objects and Temperature
	Uncovering Student Ideas in Science Vol. 2	77-82	Ice-Cold Lemonade
	Uncovering Student Ideas in Science Vol. 2	83-89	Mixing Water
	Uncovering Student Ideas in Science Vol. 4	45-51	Ice Water
6.9C Demonstrate energy transformations such as the energy in a flashlight battery changes from chemical energy to electrical energy to light energy.			
6.10A Build a model to illustrate the structural layers of Earth including the inner core, outer core, mantle, crust, asthenosphere, and lithosphere.			
6.10B Classify rocks as metamorphic, igneous, or sedimentary by the processes of their formation.	Uncovering Student Ideas in Science Vol. 2	151-156	Is It a Rock? (Version 1)
	Uncovering Student Ideas in Science Vol. 2	157-163	Is It A Rock? (Version 2)
6.10C Identify the major tectonic plates including Eurasian, African, Indo-Australian, Pacific, North American, and South American.			
6.10D Describe how plate tectonics causes major geological events, such as ocean basins, earthquakes, volcanic eruptions, and mountain building.	Uncovering Student Ideas in Science Vol. 2	165-170	Mountaintop Fossil

6.11A Describe the physical properties, locations, and movements of the Sun, planets, Galilean moons, meteors, asteroids, and comets.	Uncovering Student Ideas in Science Vol. 4	157-160	Where Would it Fall?
	Uncovering Student Ideas in Astronomy	27-31	The Two Rs
	Uncovering Student Ideas in Astronomy	33-36	Where Did the Sun Go?
	Uncovering Student Ideas in Astronomy	51-54	What's Moving?
	Uncovering Student Ideas in Astronomy	55-59	Pizza Sun
	Uncovering Student Ideas in Astronomy	61-64	How Far Away is the Sun?
	Uncovering Student Ideas in Astronomy	65-68	Sunspots
	Uncovering Student Ideas in Astronomy	147-152	What's Inside our Solar System?
	Uncovering Student Ideas in Astronomy	153-157	How Do Planets Orbit the Sun?
	Uncovering Student Ideas in Astronomy	185-188	Shooting Star
	Uncovering Student Ideas in Astronomy	189-192	Is the Sun a Star?
Uncovering Student Ideas in Astronomy	199-202	Which is Bigger?	
6.11B Understand that gravity is the force that governs the motion of our solar system.	Uncovering Student Ideas in Physical Science	157-161	Experiencing Gravity
	Uncovering Student Ideas in Science Vol. 1	97-102	Talking About Gravity
	Uncovering Student Ideas in Astronomy	139-142	Is the Moon Falling?
	Uncovering Student Ideas in Astronomy	171-175	Where do You Find Gravity?
	Uncovering Student Ideas in Astronomy	177-180	Gravity in other Planetary systems
6.11C Describe the history and future of space exploration including the types of equipment and transportation needed for space travel.	Uncovering Student Ideas in Astronomy	165-170	Human Space Travel
6.12A Understand that all organisms are composed of one or more cells.	Uncovering Student Ideas in Life Science	39-44	Atoms and Cells
	Uncovering Student Ideas in Science Vol. 1	131-137	Is it Made of Cells?
	Uncovering Student Ideas in Science Vol. 2	137-142	Whale and Shrew
	Uncovering Student Ideas in Science Vol. 3	117-123	Cells and Size
6.12B Recognize the presence of a nucleus determines whether a cell is prokaryotic or eukaryotic.			
6.12C Recognize the broadest taxonomic classification of living organisms is divided into currently recognized Domains.			
6.12D Identify the basic characteristics of organisms, including prokaryotic or eukaryotic, unicellular or multicellular, autotrophic or heterotrophic, and mode of reproduction, that further classify them in the currently recognized Kingdoms.			
6.12E Describe biotic and abiotic parts of an ecosystem in which organisms interact			
6.12F Diagram the levels of organization within an ecosystem including organism, population, community, and ecosystem.			

7th Grade

TEK	Book Title	Page Number	Probe Title
7.5A Recognize that radiant energy from the sun is transformed into chemical energy through the process of photosynthesis.	Uncovering Student Ideas in Life Science	51-56	Chlorophyll
	Uncovering Student Ideas in Life Science	57-62	Apple Tree
	Uncovering Student Ideas in Life Science	63-68	Light and Dark
	Uncovering Student Ideas in Life Science	69-74	Food for Corn (?)
	Uncovering Student Ideas in Science Vol. 2	107-111	Plants in the Dark and Light
	Uncovering Student Ideas in Science Vol. 2	113-119	Is it Food for Plants?
	Uncovering Student Ideas in Science Vol. 3	131-137	Respiration
7.5B Demonstrate and explain the cycling of matter within living systems, such as in the decay of biomass in a compost bin.	Uncovering Student Ideas in Science Vol. 3	139-145	Rotting Apple
	Uncovering Student Ideas in Science Vol. 3	147-154	Earth's Mass
7.5C Diagram the flow of energy through living systems including food chains, food webs and energy pyramids.			

7.6A Identify that organic compounds contain carbon and other elements such as hydrogen, oxygen, phosphorous, nitrogen or sulfur.	Uncovering Student Ideas in Science Vol. 2	121-128	Giant Sequoia Tree (?)
7.6B Distinguish between physical and chemical changes in matter in the digestive system.			
7.6C Recognize how large molecules are broken down into smaller molecules, such as carbohydrates can be broken down into sugars.			
7.7A Contrast situations where work is done with different amounts of force			
7.7B Illustrate the transformation of energy within an organism such as the transfer from chemical energy to heat and thermal energy indigestion			
7.7C Demonstrate and illustrate forces that affect motion in everyday life, such as emergence of seedlings, turgor pressure, and geotropism.			
7.8A Predict and describe how different types of catastrophic events impact ecosystems, such as floods, hurricanes, or tornadoes.			
7.8B Analyze the effects of weathering, erosion, and deposition on the environment in ecoregions of Texas	Uncovering Student Ideas in Science Vol. 1	163-168	Beach Sand
	Uncovering Student Ideas in Science Vol. 1	169-175	Mountain Age
7.8C Model the effects of human activity on ground water and surface water in a watershed.			
7.9A Analyze the characteristics of objects in our solar system that allow life to exist such as the proximity of the Sun, presence of water, and composition of the atmosphere.			
7.9B Identify the accommodations, considering the characteristics of our solar system, that enabled manned space exploration			
7.10A Observe and describe how different environments, including microhabitats in schoolyards and biomes, support different varieties of organisms.			
7.10B Describe how biodiversity contributes to the sustainability of an Ecosystem			
7.10C Observe, record, and describe the role of ecological succession such as in a microhabitat of a garden with weeds.			
7.11A Examine organisms or their structures, such as insects or leaves, and use dichotomous keys for identification			
7.11B Explain variation within a population or species by comparing external features, behaviors, or physiology of organisms that enhance their survival such as migration, hibernation, or storage of food in a bulb.	Uncovering Student Ideas in Life Science	103-107	No More Plants
	Uncovering Student Ideas in Science Vol. 4	113-118	Adaptation
	Uncovering Student Ideas in Science Vol. 4	119-124	Is It "Fitter"?
7.11C Identify some changes in genetic traits that can have occurred over several generations through natural selection and selective breeding such as the Galapagos Medium Ground Finch (<i>Geospiza fortis</i>) or domestic animals.			

7.12A Investigate and explain how internal structures of organisms have adaptations that allow specific functions, such as gills in fish, hollow bones in birds, or xylem in plants.	Uncovering Student Ideas in Science Vol. 4	119-124	Is it "Fitter"?
7.12B Identify the main functions of the systems of the human organism including the circulatory, respiratory, skeletal, muscular, digestive, excretory, reproductive, integumentary, nervous, and endocrine system.	Uncovering Student Ideas in Life Science	141-144	Human Body
	Uncovering Student Ideas in Life Science	145-150	Human Excretory System
	Uncovering Student Ideas in Science Vol. 4	131-136	Digestive System
7.12C Recognize levels of organization in plants and animals including cells, tissues, organs, organ systems, and organisms	Uncovering Student Ideas in Life Science	39-44	Atoms and Cells
	Uncovering Student Ideas in Science Vol. 1	139-145	Human Body Basics (<i>about cells</i>)
	Uncovering Student Ideas in Science Vol. 3	117-123	Cells and Size
	Uncovering Student Ideas in Science Vol. 3	125-130	Sam's Puppy (?)
7.12D Differentiate between structure and function in plant and animal cell organelles including cell membrane, cell wall, nucleus, cytoplasm, mitochondrion, chloroplast, and vacuole			
7.12E Compare the functions of a cell to the functions of organisms such as waste removal			
7.12F Recognize that according to cell theory all organisms are composed of cells and cells carry on similar functions such as extracting energy from food to sustain life.	Uncovering Student Ideas in Life Science	63-68	Light and Dark
	Uncovering Student Ideas in Science Vol. 1	131-137	Is it Made of Cells?
	Uncovering Student Ideas in Science Vol. 3	125-130	Sam's Puppy (?)
7.13A Investigate how organisms respond to external stimuli found in the environment such as phototropism and fight or flight			
7.13B Describe and relate responses in organisms that may result from internal stimuli such as wilting in plants and fever or vomiting in animals that allow them to maintain balance.			
7.14A Define heredity as the passage of genetic instructions from one generation to the next generation.	Uncovering Student Ideas in Life Science	135-139	Eye Color
	Uncovering Student Ideas in Science Vol. 2	129-136	Baby Mice
7.14B Compare the results of uniform or diverse offspring from sexual reproduction or asexual reproduction.			
7.14C Recognize that inherited traits of individuals are governed in the genetic material found in the genes within the chromosomes in the nucleus.	Uncovering Student Ideas in Life Science	129-133	DNA, Genes, and Chromosomes
Living – vs – Nonliving, Needs of Living Things	Uncovering Student Ideas in Life Science	9-14	Cucumber Seeds
	Uncovering Student Ideas in Science Vol. 1	123-130	Is It Living?
	Uncovering Student Ideas in Science Vol. 1	147-153	Functions of Living Things
	Uncovering Student Ideas in Science Vol. 2	101-106	Needs of Seeds

8th Grade

TEK	Book Title	Page Number	Probe Title
8.5A Describe the structure of atoms including the masses, electrical charges and locations of protons and neutrons in the nucleus and electrons in the electron cloud.	Uncovering Student Ideas in Science Vol. 3	17-23	Pennies
	Uncovering Student Ideas in Science Vol. 4	39-43	Salt Crystals
8.5B Identify that protons determine an element's identity, and valence electrons determine the chemical properties including reactivity.			

8.5C Interpret the arrangement of the Periodic Table including groups and periods, to explain how properties are used to classify elements.			
8.5D Recognize that chemical formulas are used to identify substances and determine the number of atoms of each element in chemical formulas containing subscripts.			
8.5E Investigate how evidence of chemical reactions indicates that new substances with different properties are formed.	Uncovering Student Ideas in Science Vol. 2	71-75	Chemical Bonds
8.5F Recognize whether a chemical equation containing coefficients is balanced or not and how that relates to the law of conservation of mass.	Uncovering Student Ideas in Science Vol. 1	49-54	Ice Cubes in a Bag
	Uncovering Student Ideas in Science Vol. 1	55-60	Lemonade
	Uncovering Student Ideas in Science Vol. 1	61-65	Cookie Crumbles
	Uncovering Student Ideas in Science Vol. 1	67-72	Seedlings in a Jar
	Uncovering Student Ideas in Science Vol. 1	91-96	The Rusty Nails
	Uncovering Student Ideas in Science Vol. 4	23-29	Burning Paper
8.6A Demonstrate and calculate how unbalanced forces change the speed or direction of an object's motion.	Uncovering Student Ideas in Physical Science	43-46	Jut Rolling Along
	Uncovering Student Ideas in Physical Science	79-82	Force and Motion Ideas
	Uncovering Student Ideas in Science Vol. 3	63-69	Apple on a Desk
8.6B Differentiate between speed, velocity, and acceleration	Uncovering Student Ideas in Physical Science	47-50	Crossing The Finish Line (?)
	Uncovering Student Ideas in Physical Science	51-54	NASCAR Racing
	Uncovering Student Ideas in Physical Science	55-58	Roller Coaster Ride
8.6C Investigate and describe applications of Newton's law of inertia, law of force and acceleration and law of action-reaction, such as in vehicle restraints, sports activities, amusement park rides, Earth's tectonic activities, and rocket launches	Uncovering Student Ideas in Physical Science	99-102	Riding in the Parade
	Uncovering Student Ideas in Physical Science	111-114	Ball on a String
	Uncovering Student Ideas in Physical Science	115-118	Why Things Fall
	Uncovering Student Ideas in Physical Science	119-122	Pulling on a Spool
	Uncovering Student Ideas in Physical Science	123-125	Lifting Buckets
	Uncovering Student Ideas in Physical Science	127-130	Finger Strength Contest
	Uncovering Student Ideas in Physical Science	131-134	Equal and Opposite
	Uncovering Student Ideas in Physical Science	135-137	Riding in a Car
	Uncovering Student Ideas in Physical Science	167-170	Free-Falling Objects
	Uncovering Student Ideas in Science Vol. 3	71-76	Rolling Marbles
	Uncovering Student Ideas in Science Vol. 3	77-82	Dropping Balls
8.7A Model and illustrate how the tilted Earth rotates on its axis, causing day and night, and revolves around the sun causing changes in seasons.	Uncovering Student Ideas in Science Vol. 2	171-176	Darkness at Night
	Uncovering Student Ideas in Science Vol. 3	177-184	Summer Talk
	Uncovering Student Ideas in Astronomy	21-25	What Causes Day and Night?
	Uncovering Student Ideas in Astronomy	69-74	Shorter Days in Winter
8.7B Demonstrate and predict the sequence of events in the lunar cycle.	Uncovering Student Ideas in Science Vol. 1	177-181	Gazing at the Moon
	Uncovering Student Ideas in Science Vol. 1	183-187	Going through A Phase
	Uncovering Student Ideas in Science Vol. 4	161-165	Moonlight
	Uncovering Student Ideas in Astronomy	91-94	Seeing the Moon
	Uncovering Student Ideas in Astronomy	99-102	Does the Moon Orbit the Earth?
	Uncovering Student Ideas in Astronomy	103-107	Earth or Moon Shadow?
	Uncovering Student Ideas in Astronomy	119-122	Moon Spin
	Uncovering Student Ideas in Astronomy	123-126	Chinese Moon
	Uncovering Student Ideas in Astronomy	127-130	Crescent Moon
	Uncovering Student Ideas in Astronomy	131-134	How Long is a Day on the Moon?
Uncovering Student Ideas in Astronomy	135-138	Does the Earth Go Through Phases?	
8.7C Relate the position of the Moon and Sun to their effect on ocean tides.			
8.8A Describe components of the universe including stars, nebulae and galaxies, and use models such as the Hertzsprung -Russell diagram for classification	Uncovering Student Ideas in Science Vol. 2	177-182	Emmy's Moon and Stars
	Uncovering Student Ideas in Science Vol. 3	191-196	Where Do Stars Go?
	Uncovering Student Ideas in Astronomy	159-163	Is It a Planet or a Star?
	Uncovering Student Ideas in Astronomy	193-197	Where are the Stars in Orion?
	Uncovering Student Ideas in Astronomy	203-207	What are Stars Made of?
	Uncovering Student Ideas in Astronomy	209-213	What Happens to Stars When They Die?
	Uncovering Student Ideas in Astronomy	215-218	Do Stars Change?
	Uncovering Student Ideas in Astronomy	227-232	What is the Milky Way?

8.8B Recognize that the Sun is a medium-sized star near the edge of a disc-shaped galaxy of stars and that the Sun is many thousands of times closer to Earth than any other star.	Uncovering Student Ideas in Astronomy	33-36	Where Did the Sun Go?
	Uncovering Student Ideas in Astronomy	61-64	How Far Away is the Sun?
	Uncovering Student Ideas in Astronomy	189-192	Is the Sun a Star?
8.8C Explore how different wavelengths of the electromagnetic spectrum such as light and radio waves are used to measure distances and sizes in the universe.			
8.8D Model and describe how light years are used to measure distances and sizes in the universe.	Uncovering Student Ideas in Astronomy	223-226	Seeing Into the Past
8.8E Research how scientific data are used as evidence to develop scientific theories to describe the origin of the universe	Uncovering Student Ideas in Astronomy	233-237	Expanding Universe
	Uncovering Student Ideas in Astronomy	239-244	Is the Big Bang "Just a Theory"?
8.9A Describe the historical development of evidence that supports plate tectonic theory.			
8.9B Relate plate tectonics to the formation of crustal features.			
8.9C Interpret topographic maps and satellite views to identify land and erosional features and predict how these features may be reshaped by weathering.			
8.10A Recognize that the Sun provides the energy that drives convection within the atmosphere and oceans, producing winds and ocean currents.			
8.10B Identify how global patterns of atmospheric movement influence local weather using weather maps that show high and low pressures and fronts.	Uncovering Student Ideas in Science Vol. 3	171-176	Rainfall
8.10C Identify the role of the oceans in the formation of weather systems, such as hurricanes.			
8.11A Describe producer/consumer, Predator / prey, and parasite/host relationships as they occur in food webs in marine, freshwater and terrestrial ecosystems	Uncovering Student Ideas in Life Science	85-89	Is it a Consumer?
8.11B Investigate how organisms and populations in an ecosystem depend on and may compete for biotic and abiotic factors such as quantity of light, water, range of temperatures, or soil composition.			
8.11C Explore how short and long-term environmental changes affect organisms and traits in subsequent populations.	Uncovering Student Ideas in Life Science	103-107	No More Plants
	Uncovering Student Ideas in Life Science	109-115	Changing Environment
	Uncovering Student Ideas in Science Vol. 2	143-148	Habitat Change
	Uncovering Student Ideas in Science Vol. 4	113-118	Adaptation
8.11D Recognize human dependence on ocean systems and explain how human activities such as run off, artificial reefs, or use of resources have modified these systems.			
Miscellaneous – Chemistry	Uncovering Student Ideas in Science Vol. 1	85-90	Is It Made of Molecules?
Miscellaneous – Astronomy	Uncovering Student Ideas in Science Vol. 2	185-190	Objects in the Sky
	Uncovering Student Ideas in Science Vol. 4	167-171	Lunar Eclipse
	Uncovering Student Ideas in Science Vol. 4	173-177	Solar Eclipse
	Uncovering Student Ideas in Astronomy	219-222	Are We Made of Star Stuff?