

TCAP-ACH Grade 8 Science Framework

Inquiry and Technology & Engineering		%	# of Items
		11-14%	7-9
0807.Inq.1	Design a simple experimental procedure with an identified control and appropriate variables.		
0807.Inq.2	Select tools and procedures needed to conduct a moderately complex experiment.		
0807.Inq.3	Interpret and translate data into a table, graph, or diagram.		
0807.Inq.4	Draw a conclusion that establishes a cause and effect relationship supported by evidence.		
0807.Inq.5	Identify a faulty interpretation of data that is due to bias or experimental error.		
0807.T/E.1	Identify the tools and procedures needed to test the design features of a prototype.		
0807.T/E.2	Evaluate a protocol to determine if the engineering design process was successfully applied.		
0807.T/E.3	Distinguish between the intended benefits and the unintended consequences of a new technology.		
0807.T/E.4	Differentiate between adaptive and assistive engineered products.		
LS: Biodiversity & Change		%	# of Items
		17-23%	11-15
0807.5.1	Use a simple classification key to identify an unknown organism.		
0807.5.2	Analyze structural, behavioral, and physiological adaptations to predict which populations are likely to survive in a particular environment.		
0807.5.3	Analyze data on levels of variation within a population to make predictions about survival under particular environmental conditions.		
0807.5.4	Identify several reasons for the importance of maintaining the earth's biodiversity.		
0807.5.5	Compare fossils found in sedimentary rock to determine their relative age.		
PS 1: Chemical Reaction		%	# of Items
		22-28%	14-18
0807.9.2	Identify the common outcome of all chemical changes.		
0807.9.3	Classify common substances as elements or compounds based on their symbols or formulas.		
0807.9.4	Differentiate between a mixture and a compound.		
0807.9.8	Interpret the results of an investigation to determine whether a physical or chemical change has occurred.		

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0807.9.10	Identify the reactants and products of a chemical reaction.	
0807.9.11	Recognize that in a chemical reaction the mass of the reactants is equal to the mass of the products (Law of Conservation of Mass).	
0807.9.12	Identify the basic properties of acids and bases.	

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PS 2: Properties of Matter		%	# of Items
		17-23%	11-15
0807.9.1	Recognize that all matter consists of atoms.		
0807.9.5	Describe the chemical makeup of the atmosphere.		
0807.9.6	Compare the particle arrangement and type of particle motion associated with different states of matter.		
0807.9.7	Apply an equation to determine the density of an object based on its mass and volume.		
0807.9.9	Use the periodic table to determine the properties of an element.		
PS 3: Forces of Nature		%	# of Items
		19-25%	12-16
0807.12.1	Recognize that electricity can be produced using a magnet and wire coil.		
0807.12.2	Describe the basic principles of an electromagnet.		
0807.12.3	Distinguish among the Earth's magnetic field, a magnet, and the fields that surround a magnet and an electromagnet.		
0807.12.4	Distinguish between mass and weight using appropriate measuring instruments and units.		
0807.12.5	Determine the relationship among the mass of objects, the distance between these objects, and the amount of gravitational attraction.		
0807.12.6	Illustrate how gravity controls the motion of objects in the solar system.		