

TCAP-ACH Grade 4 Science Framework

*Inquiry and Technology & Engineering		
	*This is not a separate reporting category. These SPIs are embedded within each RC.	
	The total number of these items is 3-5 with no more than one ITE per RC. The SPIs are listed in each RC.	
LS 1: Cells, Flow of Matter & Energy, Heredity		%
		12-22%
		# of Items
		8-14
0407.1.1	Compare basic structures of plant and animal cells.	
0407.3.1	Determine how different organisms function within an environment in terms of their location on an energy pyramid.	
0407.4.1	Draw conclusions about the relationship between reproduction and the survival of a species.	
0407.4.2	Distinguish between complete and incomplete metamorphosis.	
0407.INQ.1	Select an investigation that could be used to answer a specific question.	
0407.T/E.1	Select a tool, technology, or invention that was used to solve a human problem.	
0407.T/E.2	Recognize the connection between a scientific advance and the development of a new tool or technology.	
LS 2: Interdependence, Biodiversity & Change		%
		8-17%
		# of Items
		5-11
0407.2.1	Recognize the impact of predation and competition on an ecosystem.	
0407.5.1	Determine how a physical or behavioral adaptation can enhance the chances of survival.	
0407.5.2	Infer the possible reasons why a species became endangered or extinct.	
0407.INQ.1	Select an investigation that could be used to answer a specific question.	
0407.T/E.1	Select a tool, technology, or invention that was used to solve a human problem.	
0407.T/E.2	Recognize the connection between a scientific advance and the development of a new tool or technology.	

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ES: The Universe, The Earth, The Atmosphere		%	# of Items
		19-28%	12-18
0407.6.1	Organize the phases of the moon in the correct sequence.		
0407.6.2	Infer that the moon's phases are caused by the revolution of the moon and earth around the sun.		
0407.7.1	Design a simple model to illustrate how the wind and movement of water alter the earth's surface.		
0407.7.2	Analyze how different earth materials are utilized to solve human problems or improve the quality of life.		
0407.8.1	Identify the basic features of the water cycle and describe their importance to life on earth.		
0407.8.2	Distinguish between weather and climate.		
0407.INQ.1	Select an investigation that could be used to answer a specific question.		
0407.T/E.1	Select a tool, technology, or invention that was used to solve a human problem.		
0407.T/E.2	Recognize the connection between a scientific advance and the development of a new tool or technology.		
PS 1: Matter and Energy		%	# of Items
		19-28%	12-18
0407.9.1	Choose an appropriate tool for measuring a specific physical property of matter.		
0407.9.2	Determine the mass, volume, and temperature of a substance or object using proper units of measurement.		
0407.9.3	Interpret the causes and effects of a physical change in matter.		
0407.10.1	Identify different forms of energy, such as heat, light, and chemical.		
0407.10.2	Determine which surfaces reflect, refract, or absorb light.		
0407.10.3	Determine whether a material is transparent, translucent, or opaque.		
0407.INQ.1	Select an investigation that could be used to answer a specific question.		
0407.T/E.1	Select a tool, technology, or invention that was used to solve a human problem.		
0407.T/E.2	Recognize the connection between a scientific advance and the development of a new tool or technology.		

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PS 2: Motion, Forces in Nature		%	# of Items
		19-28%	12-18
0407.11.1	Describe the position of an object relative to fixed reference points.		
0407.11.2	Identify factors that influence the motion of an object.		
0407.11.3	Determine the relationship between speed and distance traveled over time.		
0407.12.1	Identify how magnets attract or repel one another.		
0407.12.2	Determine how an electrically charged material interacts with other objects.		
0407.12.3	Determine the path of an electrical current in a simple circuit.		
0407.INQ.1	Select an investigation that could be used to answer a specific question.		
0407.T/E.1	Select a tool, technology, or invention that was used to solve a human problem.		
0407.T/E.2	Recognize the connection between a scientific advance and the development of a new tool or technology.		