DIOCESE OF HARRISBURG SCIENCE CURRICULUM KINDERGARTEN Physical Science								
Big Idea	**Essential Questions**	**Concepts**	**Competencies**	**Vocabulary**	**PA SAS Standards**	**Assessment Anchor Eligible Content**	**Text pages or supplementary material**	**Date Assessed**
Matter can be understood in terms of the types of atoms present and the interactions both between and within atoms.	How can one explain the structure, properties, and interactions of matter?	Different materials are suited to different purposes.	Analyze data from testing objects made from different materials to determine if a proposed object functions as intended.	Data Test	3.2.K.A1	S4.C.1.1.2 S4.A.1.1 S4.1.3.1 S4.A.2.1.4		
		A variety of objects can be built up from small parts.	Design an object built from a small set of pieces to solve a problem and compare solutions designed by peers given the same set of pieces.	Problem solving	3.2.2.A4	S4.A.3.2.B S4.A.3.2 A4.A.1.1 S4.1.3.1 S4.A.2.1.4		
Interactions between any two objects can cause changes in one or both.	How can one explain and predict interactions between objects within systems?	Pushes and pulls can have different strengths and directions. (PS2.A)	Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. (KPS2-1; KPS2-2)	Cause and effect Explanation Motion Push Pull Speed	3.2.3.B1 3.2.4.B1 3.2.4.A	S4.A.1.1 S4.C.3.1 S4.A.1.1 S4.1.3.1 S4.A.2.1.4		

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Interactions between any two objects can cause changes in one or both.	How can one explain and predict interactions between objects within systems?	Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (PS2.A)	Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. (KPS2-1; KPS2-2)	Cause and effect Explanation Motion Push Pull Speed	3.2.3.B1 3.2.4.A			
		Objects pull or push each other when they collide or are connected and can change motion. (PS2.B)	Analyze data to determine if a design solution works as intended to change the direction or speed of an object with a push or a pull. (K-PS2-1)	Cause and effect Design Speed	3.2.3.B1	S4.C.3.1 S4.A.1.1 S4.1.3.1 S4.A.2.1.4		
		A bigger push or pull makes things speed up or slow down more quickly. (PS3.C)	Plan and conduct a simple test to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. (K-PS2-1)	Investigation Speed	3.2.3.B1 3.2.4.B1	S4.C.3.1 S4.A.1.1 S4.1.3.1 S4.A.2.1.2 S4.A.2.1.4		

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Interactions between any two objects can cause changes in one or both.	How can one explain and predict interactions between objects within systems?	When objects touch or collide, they push on one another and can change motion. (PS3.B)	Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or pull. (K-PS2-1)	Data Design Solution	3.2.3.B1 3.2.6.B1	S4.C.3.1 S4.A.1.1 S4.1.3.1 S4.A.2.1.4		
Interactions of objects or systems of objects can be predicted and explained using the concept of energy transfer and conservation.	How is energy transferred and conserved?	The more an object is pushed or pulled makes things speed up or slow down. (PS3.C)	Carry out investigations to provide evidence that energy is being transferred or conserved by objects. (K-PS2-1)	Conserved Energy Investigation Transfer	3.2.4.B1 3.2.4.B2 2.2.4.B6	S4.C.3.1.1 S4.C.3.1.2 S4.3.1.3 S4.A.1.1 S4.1.3.1 S4.A.2.1.2 S4.A.2.1.4		
		The amount and position of mass affect how an object moves. (PS2.A)	Carry out investigations to provide evidence that energy is being transferred or conserved by objects. (K-PS2-1)	Balance Conserved Energy Investigation Mass Rotate Transfer	3.2.4.B1 3.2.4.B2	S4.C.3.1.1 S4.C.3.1.2 S4.3.1.3 S4.A.1.1 S4.1.3.1 S4.A.2.1.4		

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Waves are a repeating pattern of motion that transfers energy from place to place without overall displacement of matter.	How are waves used to transfer energy and information?	N/A	N/A	N/A	N/A	N/A		