

## Next Generation Science Standards for Podjects

Activity Title	NGSS	NGSS	NGSS	NGSS
Handwashing 101				
Gravity Drop	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 K-PS2-1	Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. 3-PS2-1		
Glue 101				
Compost Countdown	Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. 5-LS2-1			
Dancing Rice	Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. 1-PS4-1	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. 4-PS3-2		
Baking Soda Fizz	Conduct an investigation to determine whether the mixing of two or more substances results in new substances. 5-PS1-4			
Simple Sound Waves	Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. 1-PS4-1	Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. 4-LS1-1		
Will It Melt?	Make observations to determine the effect of sunlight on Earth's surface. K-PS3-1	Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot. 2-PS1-4		
The Magic Spoon	Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. 3-PS2-3	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. 4-PS3-2		
Marble Magic	Use evidence to construct an explanation relating the speed of an object to the energy of that object. 4-PS3-1	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. 4-PS3-2		

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Where Is It?	Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. 4-LS1-2	Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. 3-PS2-1		
Don't Melt the Ice	Apply scientific ideas to design, test, and refine a device that converts energy from one form to another. 4-PS3-4	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. 4-PS3-2		
The Acid Test	Develop a model to describe that matter is made of particles too small to be seen. 5-PS1-1	Make observations and measurements to identify materials based on their properties. 5-PS1-3		
Bottle Rockets				
Take a Whiff				
Planet Power				
Exploring Blubber	Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. 4-PS3-2			
Celery Science				
Paper Bridges	K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	K-PS2-1. 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.	3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	
Animal Homes	K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.			
Balloon Car 101	K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.			
Designing Instruments	1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.	4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.		

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Paper Cup Challenge	K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	
Paper Airplane Challenge	K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	3-5-ETS1- 3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.		
Can You Move It?	K-PS2-1. 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.	K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.
Marshmallow Challenge	K-PS2-1. 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.			
Spaghetti Tower	K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.		
Bird Nest Challenge	K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.			
Spider Web Challenge				
Make It Louder				