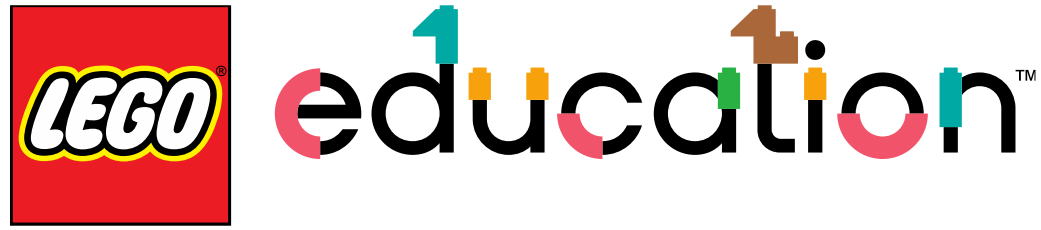
LEGO
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LEGO® Education Science: Pennsylvania Standards Overview

K	**STEELS Standards**	3.2.K.B 3.5.K-2.O 3.5.K-2.U	3.2.K.A 3.5.K-2.S 3.5.K-2.T	3.1.K.A 3.5.K-2.H 3.5.K-2.O	3.3.K.B 3.5.K-2.DD 3.5.K-2.J 3.4.K-2.A	3.3.K.C 3.5.K-2.T 3.5.K-2.U 3.4.K-2.C	3.3.K.D 3.5.K-2.A 3.5.K-2.T	3.3.K.E 3.5.K-2.E 3.5.K-2.BB 3.4.K-2.C	3.3.K.C 3.5.K-2.H 3.5.K-2.S 3.4.K-2.C	3.2.K.B 3.5.K-2.S 3.5.K-2.W	3.2.K.D 3.5.K-2.T 3.5.K-2.U 3.4.K-2.D	3.2.K.B 3.5.K-2.N 3.5.K-2.O	3.2.K.A 3.5.K-2.C 3.5.K-2.J 3.5.K-2.L	3.2.K.B 3.5.K-2.R 3.5.K-2.T	3.2.K.B 3.5.K-2.V 3.5.K-2.AA	3.2.K.A 3.5.K-2.U 3.5.K-2.V	3.2.K.B 3.5.K-2.Z 3.5.K-2.T	3.3.K.B 3.4.K-2.D 3.5.K-2.U 3.5.K-2.X
	Lesson Title	Dino Birthday	Muddy Rhino	Farm Friends Road Trip	Baby Bird Home	Animal Hotel	Bad Weather Bunny	Flower Friends	Forest Play Day	Feeding Time	Park Picnic	Ducks in a Row	Super Sweeper	Rough Road Ahead	Ride Revamp	Mealtime Mover	Winning Shot	Chicken Challenge
1	**STEELS Standards**	3.1.1.B 3.5.K-2.M 3.5.K-2.N 3.4.K-2.C	3.2.1.B 3.5.K-2.C 3.5.K-2.AA	3.1.1.C 3.5.K-2.B 3.5.K-2.G	3.2.1.D 3.5.K-2.A 3.5.K-2.N	3.3.1.A 3.5.K-2.N 3.5.K-2.W	3.3.1.B 3.5.K-2.AA 3.5.K-2.DD	3.1.1.A 3.5.K-2.BB 3.5.K-2.V 3.4.K-2.C	3.1.1.A 3.5.K-2.C 3.5.K-2.G	3.1.1.B 3.5.K-2.Q 3.5.K-2.AA	3.1.1.C 3.5.K-2.AA 3.5.K-2.DD	3.2.1.D 3.5.K-2.I 3.5.K-2.Y						
	Lesson Title	Best of Nests	Dim Dance Party	Flower Families	Light Monster	What the Sun Sees	Sunshine Parade	Perfect Hiding Spot	Worms for Dinner	Dragon Care	Monster Daycare	Secret Celebration						
2	**STEELS Standards**	3.2.2.A 3.5.K-2.P 3.5.K-2.V	3.2.2.B 3.5.K-2.V 3.5.K-2.M	3.2.2.A 3.5.K-2.C 3.5.K-2.D	3.2.2.C 3.5.K-2.Q 3.5.K-2.S	3.2.2.C 3.5.K-2.D 3.5.K-2.P	3.3.2.B 3.5.K-2.H 3.5.K-2.Q 3.4.3-5.B	3.3.2.C 3.5.K-2.W 3.5.K-2.Q 3.4.K-2.C	3.1.2.B 3.5.K-2.M 3.5.K-2.O	3.1.2.C 3.5.K-2.AA 3.5.K-2.DD 3.4.K-2.C	3.3.2.B 3.4.K-2.D 3.5.K-2.M	3.2.2.A 3.4.K-2.D 3.5.K-2.P 3.5.K-2.Q	3.2.2.B 3.5.K-2.O 3.5.K-2.G					
	Lesson Title	Kitty Greetings	Troll under the Bridge	Sort It Out	Jungle Adventure	Fun Place Space	Beach House Builder	Bird's Eye View	Hide the Seeds	Animal Rescue Team	Windy Weather	Penguin on the Go	Creative Car					
3	**STEELS Standards**	3.1.3.A 3.5.3-5.Q	3.1.3.B 3.5.3-5.Q	3.1.3.E 3.5.3-5.S	3.1.3.F 3.5.3-5.Q 3.5.3-5.X 3.4.3-5.A	3.1.3.G 3.5.3-5.Q 3.5.3-5.U 3.4.3-5.A	3.1.3.C	3.1.3.H 3.5.3-5.J 3.5.3-5.P 3.4.3-5.E	3.2.3.B	3.2.3.A 3.5.3-5.M 3.5.3-5.N	3.3.3.C 3.5.3-5.Q 3.5.3-5.V 3.4.3-5.B	3.2.3.A 4.5.3-5.Y 3.5.3-5.Z	3.2.3.B 3.4.3-5.F 3.5.3-5.S 3.5.3-5.T	3.2.3.A 3.5.3-5.L 3.5.3-5.M				
	Lesson Title	From Egg to What	Protect Baby Elephant	Fossil Detective	Spot the Bug	Home at Last	Fire and Horns	Hungry, Hungry Lionfish	Sweet Tooth Squirrel	Golfing Over the Edge	Teeny Tiny Home	Mover Mishap	Terrific Towers	Space Transport				
4	**STEELS Standards**	3.3.4.A 3.5.3-5.Q 3.5.3-5.AA	3.1.4.A 3.5.3-5.C 3.4.3-5.A	3.3.4.D 3.5.3-5.F 3.5.3-5.E 3.4.3-5.F	3.3.4.E 3.5.3-5.M 3.5.3-5.P 3.5.3-5.DD	3.1.4.A 3.5.3-5.C 3.4.3-5.A	3.1.4.B 3.5.3-5.C	3.2.4.A 3.5.3-5.M 3.5.3-5.P	3.2.4.B 3.5.3-5.M 3.5.3-5.Q	3.2.4.C 3.5.3-5.M 3.5.3-5.GG	3.2.4.G 3.5.3-5.M 3.5.3-5.O	3.2.4.D 3.5.3-5.M 3.5.3-5.N	3.1.4.A 3.5.3-5.W 3.5.3-5.U	3.1.4.A 3.4.3-5.E 3.5.2-5.Q 3.5.3-5.R	3.1.4.A 3.4.3-5.D 3.5.3-5.M 3.5.3-5.P	3.1.4.A 3.5.3-5.B 3.5.3-5.D		
	Lesson Title	Deep Down Underground	Plant Powers	Nature Party	Lemonade Shake	Ra-Ra-Rattlesnake	Navigating the Unknown	Energy Racer	Feel the Beat	Crush the Core	Control the Roll	Disco Snail	Puppy Playtime	Ocean Friends	Best Foot Forward	Animal Actions		
5	**STEELS Standards**	3.2.5.F 3.5.3-5.J 3.5.3-5.EE	3.2.5.G 3.5.3-5.C 3.5.3-5.CC	3.2.5.A 3.5.3-5.W 3.5.3-5.Z	3.3.5.E 3.5.3-5.E 3.5.3-5.F	3.3.5.E 3.5.3-5.E 3.5.3-5.G 3.4.3-5.B 3.4.3-5.F	3.2.5.A 3.5.3-5.W	3.2.5.D 3.5.3-5.W	3.2.5.B 3.5.3-5.W	3.1.5.B 3.5.3-5.CC 3.4.3-5.A 3.4.3-5.D	3.2.5.G 3.5.3-5.CC	3.3.5.E 3.4.3-5.B 3.5.3-5.H 3.5.3-5.I	3.3.5.F 3.4.3-5.A					
	Lesson Title	Down With Gravity	Sun Snack	Stink Squad	Desert Island Community	Twin Scoops	Slow Down Race	Snacking Seagull	Wheel of Properties	Circle of Soil	Energy Chain	Creating a Safe Path	Ocean Helper					
MS	**STEELS Standards**	3.1.6-8.I 3.5.6-8.FF 3.5.6-8.H 3.4.6-8.E	3.3.6-8.L 3.5.6-8.N 3.5.6-8.Z	3.2.6-8.E 3.5.6-8.BB 3.5.6-8.F	3.3.6-8.M 3.5.6-8.D 3.5.6-8.I 3.4.6-8.H	3.3.6-8.A 3.5.6-8.FF 3.5.6-8.Q	3.1.6-8.S 3.5.6-8.Q 3.5.6-8.K	3.3.6-8.N 3.5.6-8.D 3.5.6-8.E	3.2.6-8.G 3.5.6-8.H 3.5.6-8.M (ETS)	3.1.6-8.R 3.5.6-8.DD 3.5.6-8.JJ	3.1.6-8.E 3.5.6-8.FF	3.1.6-8.D 3.5.6-8.Q 3.5.6-8.K	3.1.6-8.F 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.B 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.B 3.5.6-8.Q 3.5.6-8.X			
	Lesson Title	Forest Showdown	Windy City	A Breath of Fresh Space	Save the Salmon	Building Space	Conceal the Meal	Population Pressure	Kicking on Command	Trait Selector	Big Fish in a Little Pond	Ostrich Dance	Supercharged Plants	Cell City	More than a Nucleus			
	STEELS Standards	3.1.6-8.I 3.5.6-8.Q 3.4.6-8.E	3.2.6-8.O 3.5.6-8.Q 3.5.6-8.X	3.2.6-8.G 3.5.6-8.V 3.5.6-8.BB	3.1.6-8.H 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.H	3.2.6-8.L 3.5.6-8.DD 3.5.6-8.M	3.2.6-8.H	3.1.6-8.K 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.U 3.5.6-8.JJ 3.5.6-8.P 3.4.6-8.H	3.1.6-8.J 3.5.6-8.Q 3.5.6-8.K	3.2.6-8.H 3.4.3-5.D 3.5.6-8.N (ETS) 3.5.6-8.P (ETS)	3.2.6-8.P 3.5.6-8.P (ETS) 3.5.6-8.Q	3.1.6-8.K 3.5.6-8.Q 3.5.6-8.X	3.2.6-8.R 3.5.6-8.U 3.5.6-8.V			
	Lesson Title	Fish Food	Kinetic Kicker	Push Power	Rapid Reaction	Bee-ware	Spinning and Winning	Double the Push	Move the Matter	Bats on the Brink	Rivals and Allies	Snack for Nessie	Cow Playground	Chickens in Space	Sensing Signals			
	STEELS Standards	3.2.6-8.H 3.5.6-8.W (ETS) 3.5.6-8.X	3.3.6-8.L 3.5.6-8.P 3.5.6-8.V	3.1.6-8.T 3.5.6-8.FF 3.5.6-8.X	3.1.6-8.N	3.3.6-8.M 3.5.6-8.Q 3.5.6-8.X	3.2.6-8.H 3.5.6-8.P (ETS) 3.5.6-8.AA	3.1.6-8.D 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.J	3.2.6-8.H	3.2.6-8.O 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.U	3.1.6-8.S					
	Lesson Title	Challenging Tasks	Shaking Signals	Frosty Fur and Frozen Feet	Aliens Alike and Not Quite	Food Festival Fix	Balancing Act	Feathers, Fur, and Family	Troll Stole My Soup	Hit It, Move It	Energy Booster	Blades and Barnacles	Polar Paws					

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K	STEELS Standards	3.2.K.B 3.5.K-2.O 3.5.K-2.U	3.2.K.A 3.5.K-2.S 3.5.K-2.T	3.1.K.A 3.5.K-2.H 3.5.K-2.O	3.3.K.B 3.5.K-2.DD 3.5.K-2.J 3.4.K-2.A	3.3.K.C 3.5.K-2.T 3.5.K-2.U 3.4.K-2.C	3.3.K.D 3.5.K-2.A 3.5.K-2.T	3.3.K.E 3.5.K-2.E 3.5.K-2.BB 3.4.K-2.C	3.3.K.C 3.5.K-2.H 3.5.K-2.S 3.4.K-2.C	3.2.K.B 3.5.K-2.S 3.5.K-2.W	3.2.K.D 3.5.K-2.T 3.5.K-2.U 3.4.K-2.D	3.2.K.B 3.5.K-2.N 3.5.K-2.O	3.2.K.A 3.5.K-2.C 3.5.K-2.J 3.5.K-2.L	3.2.K.B 3.5.K-2.R 3.5.K-2.T	3.2.K.B 3.5.K-2.V 3.5.K-2.AA	3.2.K.A 3.5.K-2.U 3.5.K-2.V	3.2.K.B 3.5.K-2.Z 3.5.K-2.T	3.3.K.B 3.4.K-2.D 3.5.K-2.U 3.5.K-2.X
	Topic	Push and Pull	Push and Pull	Push and Pull Needs	Animals Habitats	Habitats Animals Needs	Weather Weather Forecast	Environment Pollinators	Environment Animals	Push and Pull	Shade Sunlight	Push and Pull	Forces Push and Pull	Forces Push and Pull	Motion Forces	Forces Push and Pull	Forces Push and Pull	Survival Habitat
	Lesson Title	Dino Birthday Bash	Muddy Rhino	Farm Friends Road Trip	Baby Bird Home	Animal Hotel	Bad Weather Bunny	Flower Friends	Forest Play Day	Feeding Time	Park Picnic	Ducks in a Row	Super Sweeper	Rough Road Ahead	Ride Revamp	Mealtime Mover	Winning Shot	Chicken Challenge
1	STEELS Standards	3.1.1.B 3.5.K-2.M 3.5.K-2.N 3.4.K-2.C	3.2.1.B 3.5.K-2.C 3.5.K-2.AA	3.1.1.C 3.5.K-2.B 3.5.K-2.G	3.2.1.D 3.5.K-2.A 3.5.K-2.N	3.3.1.A 3.5.K-2.N 3.5.K-2.W	3.3.1.B 3.5.K-2.AA 3.5.K-2.DD	3.1.1.A 3.5.K-2.BB 3.5.K-2.V 3.4.K-2.C	3.1.1.A 3.5.K-2.C 3.5.K-2.G	3.1.1.B 3.5.K-2.Q 3.5.K-2.AA	3.1.1.C 3.5.K-2.AA 3.5.K-2.DD	3.2.1.D 3.5.K-2.I 3.5.K-2.Y						
	Topic	Survival Offspring	Light and Dark	Plants Traits	Communication	Sun Patterns	Sun Seasons	Biomimicry Camouflage	Animal Mimicry	Offspring Parents	Heredity Traits	Communication Sound						
	Lesson Title	Best of Nests	Dim Dance Party	Flower Families	Light Monster	What the Sun Sees	Sunshine Parade	Perfect Hiding Spot	Worms for Dinner	Dragon Care	Monster Daycare	Secret Celebration						
2	STEELS Standards	3.2.2.A 3.5.K-2.P 3.5.K-2.V	3.2.2.B 3.5.K-2.V 3.5.K-2.M	3.2.2.A 3.5.K-2.C 3.5.K-2.D	3.2.2.C 3.5.K-2.Q 3.5.K-2.S	3.2.2.C 3.5.K-2.D 3.5.K-2.P	3.3.2.B 3.5.K-2.H 3.5.K-2.Q 3.4.3-5.B	3.3.2.C 3.5.K-2.W 3.5.K-2.Q 3.4.K-2.C	3.1.2.B 3.5.K-2.M 3.5.K-2.O	3.1.2.C 3.5.K-2.AA 3.5.K-2.DD 3.4.K-2.C	3.3.2.B 3.4.K-2.D 3.5.K-2.M	3.2.2.A 3.4.K-2.D 3.5.K-2.P 3.5.K-2.Q	3.2.2.B 3.5.K-2.O 3.5.K-2.G					
	Topic	Properties	Properties Materials	Properties	Problem Solving	Conservation of Matter	Erosion Problem Solving	Maps	Seeds Animals	Habitat Biodiversity	Weather Hazardous Weather	Properties	Motion Properties					
	Lesson Title	Kitty Greetings	Troll under the Bridge	Sort It Out	Jungle Adventure	Fun Place Space	Beach House Builder	Bird's Eye View	Hide the Seeds	Animal Rescue Team	Windy Weather	Penguin on the Go	Creative Car					

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3	**STEELS Standards**	**3.1.3.A 3.5.3-5.Q**	**3.1.3.B 3.5.3-5.Q**	**3.1.3.E 3.5.3-5.S**	**3.1.3.F 3.5.3-5.Q 3.5.3-5.X 3.4.3-5.A**	**3.1.3.G 3.5.3-5.Q 3.5.3-5.U 3.4.3-5.A**	**3.1.3.C**	**3.1.3.H 3.5.3-5.J 3.5.3-5.P 3.4.3-5.E**	**3.2.3.B**	**3.2.3.A 3.5.3-5.M 3.5.3-5.N**	**3.3.3.C 3.5.3-5.Q 3.5.3-5.V 3.4.3-5.B**	**3.2.3.A 4.5.3-5.Y 3.5.3-5.Z**	**3.2.3.B 3.4.3-5.F 3.5.3-5.S 3.5.3-5.T**	**3.2.3.A 3.5.3-5.L 3.5.3-5.M**		
	Topic	Life Cycle Animals	Survival Animals	Fossils	Camouflage Natural Selection	Habitat Adaptation	Heredity	Invasive Species Environ-mental Change	Forces Motion	Motion	Hazardous Weather Solution Design	Forces	Forces	Forces Gravity		
	Lesson Title	From Egg to What	Protect Baby Elephant	Fossil Detective	Spot the Bug	Home at Last	Fire and Horns	Hungry, Hungry Lionfish	Sweet Tooth Squirrel	Golfing Over the Edge	Teeny Tiny Home	Mover Mishap	Terrific Towers	Space Transport		
4	**STEELS Standards**	**3.3.4.A 3.5.3-5.Q 3.5.3-5.AA**	**3.1.4.A 3.5.3-5.C 3.4.3-5.A**	**3.3.4.D 3.5.3-5.F 3.5.3-5.E 3.4.3-5.F**	**3.3.4.E 3.5.3-5.M 3.5.3-5.P 3.5.3-5.DD**	**3.1.4.A 3.5.3-5.C 3.4.3-5.A**	**3.1.4.B 3.5.3-5.C**	**3.2.4.A 3.5.3-5.M 3.5.3-5.P**	**3.2.4.B 3.5.3-5.M 3.5.3-5.Q**	**3.2.4.C 3.5.3-5.M 3.5.3-5.GG**	**3.2.4.G 3.5.3-5.M 3.5.3-5.O**	**3.2.4.D 3.5.3-5.M 3.5.3-5.N**	**3.1.4.A 3.5.3-5.W 3.5.3-5.U**	**3.1.4.A 3.4.3-5.E 3.5.2-5.Q 3.5.3-5.R**	**3.1.4.A 3.4.3-5.D 3.5.3-5.M 3.5.3-5.P**	**3.1.4.A 3.5.3-5.B 3.5.3-5.D**
	Topic	Fossils	Plants Animals	Environment Natural Resources	Earthquakes Natural Hazards	Survival Adaptation	Senses	Energy Speed	Energy Transfer	Energy Collision	Communi-cation Solution Diversity	Potential and Kinetic Energy Conversion of Energy	Adaptation	Adaptation Survival	Survival Adaptation	Animal Behavior Problem Solving
	Lesson Title	Deep Down Underground	Plant Powers	Nature Party	Lemonade Shake	Ra-Ra-Rattlesnake	Navigating the Unknown	Energy Racer	Feel the Beat	Crush the Core	Control the Roll	Disco Snail	Puppy Playtime	Ocean Friends	Best Foot Forward	Animal Actions
5	**STEELS Standards**	**3.2.5.F 3.5.3-5.J 3.5.3-5.EE**	**3.2.5.G 3.5.3-5.C 3.5.3-5.CC**	**3.2.5.A 3.5.3-5.W 3.5.3-5.Z**	**3.3.5.E 3.5.3-5.E 3.5.3-5.F**	**3.3.5.E 3.5.3-5.E 3.5.3-5.G 3.4.3-5.B 3.4.3-5.F**	**3.2.5.A 3.5.3-5.W**	**3.2.5.D 3.5.3-5.W**	**3.2.5.B 3.5.3-5.W**	**3.1.5.B 3.5.3-5.CC 3.4.3-5.A 3.4.3-5.D**	**3.2.5.G 3.5.3-5.CC**	**3.3.5.E 3.4.3-5.B 3.5.3-5.H 3.5.3-5.I**	**3.3.5.F 3.4.3-5.A**			
	Topic	Gravity	Food Chain	Particles	Environment Resources	Environment Resources	Particles	Conservation of Matter	Properties	Matter Ecosystems	Food Chain Energy	Environment	Environment Problem Solving			
	Lesson Title	Down with Gravity	Sun Snack	Stink Squad	Desert Island Community	Twin Scoops	Slow Down Race	Snacking Seagull	Wheel of Properties	Circle of Soil	Energy Chain	Creating a Safe Path	Ocean Helper			

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6-8	STEELS Standards	3.1.6-8.I 3.5.6-8.FF 3.5.6-8.H 3.4.6-8.E	3.3.6-8.L 3.5.6-8.N 3.5.6-8.Z	3.2.6-8.E 3.5.6-8.BB 3.5.6-8.F	3.3.6-8.M 3.5.6-8.D 3.5.6-8.I 3.4.6-8.H	3.3.6-8.A 3.5.6-8.FF 3.5.6-8.Q	3.1.6-8.S 3.5.6-8.Q 3.5.6-8.K	3.3.6-8.N 3.5.6-8.D 3.5.6-8.E	3.2.6-8.G 3.5.6-8.H 3.5.6-8.M (ETS)	3.1.6-8.R 3.5.6-8.DD 3.5.6-8.JJ	3.1.6-8.E 3.5.6-8.FF
	Topic	Ecosystems	Severe Weather	Chemical Reaction Conservation of Mass	Human Impact Environment	Earth Space	Traits Survival	Resources Population	Energy Transfer Conversion of Energy	Traits	Environmental Factors
	Lesson Title	Forest Showdown	Windy City	A Breath of Fresh Space	Save the Salmon	Building Space	Conceal the Meal	Population Pressure	Kicking on Command	Trait Selector	Big Fish in a Little Pond
	STEELS Standards	3.1.6-8.D 3.5.6-8.Q 3.5.6-8.K	3.1.6-8.F 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.B 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.B 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.I 3.5.6-8.Q 3.4.6-8.E	3.2.6-8.O 3.5.6-8.Q 3.5.6-8.X	3.2.6-8.G 3.5.6-8.V 3.5.6-8.BB	3.1.6-8.H 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.H	3.2.6-8.L 3.5.6-8.DD 3.5.6-8.M
	Topic	Animals Reproduction	Energy Photosynthesis	Cells	Cells	Resources Population	Kinetic Energy Energy Transfer	Collision Newton's Third Law	Sense Brain	Animals Inputs	Kinetic Energy
	Lesson Title	Ostrich Dance	Supercharged Plants	Cell City	More than a Nucleus	Fish Food	Kinetic Kicker	Push Power	Rapid Reaction	Bee-ware	Spinning and Winning
	STEELS Standards	3.2.6-8.H	3.1.6-8.K 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.U 3.5.6-8.JJ 3.5.6-8.P 3.4.6-8.H	3.1.6-8.J 3.5.6-8.Q 3.5.6-8.K	3.2.6-8.H 3.4.3-5.D 3.5.6-8.N (ETS) 3.5.6-8.P (ETS)	3.2.6-8.P 3.5.6-8.P (ETS) 3.5.6-8.Q	3.1.6-8.K 3.5.6-8.Q 3.5.6-8.X	3.2.6-8.R 3.5.6-8.U 3.5.6-8.V	3.2.6-8.H 3.5.6-8.W (ETS) 3.5.6-8.X	3.3.6-8.L 3.5-6-8.P 3.5.6-8.V
	Topic	Sum of Forces	Ecosystems Matter	Biodiversity Solution Design	Ecosystems Patterns	Balanced and Unbalanced Forces Motion	Forces Gravity	Ecosystems Energy	Properties of Light Iterative Testing	Kinetic Energy Energy Transfer	Natural Disasters
	Lesson Title	Double the Push	Move the Matter	Bats on the Brink	Rivals and Allies	Snack for Nessie	Cow Playground	Chickens in Space	Sensing Signals	Challenging Tasks	Shaking Signals
	STEELS Standards	3.1.6-8.T 3.5.6-8.FF 3.5.6-8.X	3.1.6-8.N	3.3.6-8.M 3.5.6-8.Q 3.5.6-8.X	3.2.6-8.H 3.5.6-8.P (ETS) 3.5.6-8.AA	3.1.6-8.D 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.J	3.2.6-8.H	3.2.6-8.O 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.U	3.1.6-8.S
	Topic	Natural Selection Traits	Reproduction Offspring	Environmental Impact	Balanced and Unbalanced Forces Motion	Animal Behavior Offspring	States of Matter	Forces Motion	Energy Energy Transfer	Biodiversity Solution Design	Traits Survival
	Lesson Title	Frosty Fur and Frozen Feet	Aliens Alike Not Quite	Food Festival Fix	Balancing Act	Feathers, Fur, Family	Troll Stole My Soup	Hit It, Move It	Energy Booster	Blades and Barnacles	Polar Paws

LEGO® Education Science: Pennsylvania Standards Outline

Kindergarten

STEELS Standards	3.2.K.B 3.5.K-2.O 3.5.K-2.U	3.2.K.A 3.5.K-2.S 3.5.K-2.T	3.1.K.A 3.5.K-2.H 3.5.K-2.O	3.3.K.B 3.5.K-2.DD 3.5.K-2.J 3.4.K-2.A	3.3.K.C 3.5.K-2.T 3.5.K-2.U 3.4.K-2.C	3.3.K.D 3.5.K-2.A 3.5.K-2.T	3.3.K.E 3.5.K-2.E 3.5.K-2.BB 3.4.K-2.C	3.3.K.C 3.5.K-2.H 3.5.K-2.S 3.4.K-2.C	3.2.K.B 3.5.K-2.S 3.5.K-2.W	3.2.K.D 3.5.K-2.T 3.5.K-2.U 3.4.K-2.D	3.2.K.B 3.5.K-2.N 3.5.K-2.O	3.2.K.A 3.5.K-2.C 3.5.K-2.J 3.5.K-2.L	3.2.K.B 3.5.K-2.R 3.5.K-2.T	3.2.K.B 3.5.K-2.V 3.5.K-2.AA	3.2.K.A 3.5.K-2.U 3.5.K-2.V	3.2.K.B 3.5.K-2.Z 3.5.K-2.T	3.3.K.B 3.4.K-2.D 3.5.K-2.U 3.5.K-2.X
Science Standard Description	**3.2.K.B** 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.	**3.2.K.A** 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.	**3.1.K.A** Use observations to describe patterns of what plants and animals (including humans) need to survive	**3.3.K.B** Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.	**3.3.K.C** Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	**3.3.K.D** Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.	**3.3.K.E** Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment	**3.3.K.C** Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	**3.2.K.B** 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.	**3.2.K.D** Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	**3.2.K.B** 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.	**3.2.K.A** 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	**3.2.K.B** 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.	**3.2.K.B** 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.	**3.2.K.A** 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.	**3.2.K.A** 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.	**3.3.K.B** Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
Lesson Title	Dino Birthday Bash	Muddy Rhino	Farm Friends Road Trip	Baby Bird Home	Animal Hotel	Bad Weather Bunny	Flower Friends	Forest Play Day	Feeding Time	Park Picnic	Ducks in a Row	Super Sweeper	Rough Road Ahead	Ride Revamp	Mealtime Mover	Winning Shot	Chicken Challenge
Lesson Description	Students will investigate the effects of pushes and pulls on the motion of an object.	Students will design a solution to change the direction of a moving object with a push or a pull, and then test if it works as intended.	Students will build a model to describe what animals and plants need to survive.	Students will create a model to show how animals can change the environment to meet their needs.	Students will build a model to show the different needs of different animals.	Students will use the information from a weather forecast to prepare for severe weather.	Students will create a solution that reduces the impact of humans on other living things in the local environment.	Students will use a model to represent the relationship between the needs of animals and the places they live	Students will conduct an investigation to compare the effects of different push strengths on the motion of an object.	Students will design and build a structure that will reduce the warming effect of the sunlight.	Students will determine if they need to use a push or pull to solve a problem	Students will develop a model that will need to push or pull objects to function as needed to solve a given problem.	Students will observe that a push or a pull can change the way an object is moving	Students will make observations about the pattern of motion when a force (push or pull) is applied.	Students will develop a model that will need to push or pull objects to function as needed to solve a given problem.	Students will make observations and analyze data to determine the effects of a push or pull on a model.	Students will develop a solution to carry the survival needs and wants of an animal to a new habitat.

LEGO® Education Science: Pennsylvania Standards Outline

First Grade

STEELS Standards	3.1.1.B 3.5.K-2.M 3.5.K-2.N 3.4.K-2.C	3.2.1.B 3.5.K-2.C 3.5.K-2.AA	3.1.1.C 3.5.K-2.B 3.5.K-2.G	3.2.1.D 3.5.K-2.A 3.5.K-2.N	3.3.1.A 3.5.K-2.N 3.5.K-2.W	3.3.1.B 3.5.K-2.AA 3.5.K-2.DD	3.1.1.A 3.5.K-2.BB 3.5.K-2.V 3.4.K-2.C	3.1.1.A 3.5.K-2.C 3.5.K-2.G	3.1.1.B 3.5.K-2.Q 3.5.K-2.AA	3.1.1.C 3.5.K-2.AA 3.5.K-2.DD	3.2.1.D 3.5.K-2.I 3.5.K-2.Y
Science Standard Description	**3.1.1.B** Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.	**3.2.1.B** Make observations to construct an evidence-based account that objects can be seen only when illuminated	**3.1.1.C** Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	**3.2.1.D** Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.	**3.3.1.A** Use observations of the sun, moon, and stars to describe patterns that can be predicted.	**3.3.1.B** Make observations at different times of year to relate the amount of daylight to the time of year.	**3.1.1.A** Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.	**3.1.1.A** Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.	**3.1.1.B** Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.	**3.1.1.C** Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	**3.2.1.D** Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.
Lesson Title	Best of Nests	Dim Dance Party	Flower Families	Light Monster	What the Sun Sees	Sunshine Parade	Perfect Hiding Spot	Worms for Dinner	Dragon Care	Monster Daycare	Secret Celebration
Lesson Description	Students will build a model to show how parent birds help their offspring survive.	Students will make observations to explain that objects in darkness can be seen only when illuminated.	Students will make observations to construct an account that young plants are like, but not exactly like, their parents.	Students will build a device that uses light to solve the problem of communicating over a distance.	Students will use a model to describe patterns of the sun that can be predicted	Students will use a model to explain the relationship between the amount of daylight and the time of year.	Students will design a solution to a human problem by mimicking how animals use their external parts to help them survive.	Students will design a solution to a human problem by mimicking how animals use their external parts to help them meet their needs.	Students will use a model to show patterns in behavior of parents and offspring that help offspring survive.	Students will use observations to explain that offspring are like, but not exactly like, their parents.	Students will use materials to build a device that uses sound to solve the problem of communicating over a distance.

LEGO® Education Science: Pennsylvania Standards Outline

Second Grade

STEELS Standards	3.2.2.A 3.5.K-2.P 3.5.K-2.V	3.2.2.B 3.5.K-2.V 3.5.K-2.M	3.2.2.A 3.5.K-2.C 3.5.K-2.D	3.2.2.C 3.5.K-2.Q 3.5.K-2.S	3.2.2.C 3.5.K-2.D 3.5.K-2.P	3.3.2.B 3.5.K-2.H 3.5.K-2.Q 3.4.3-5.B	3.3.2.C 3.5.K-2.W 3.5.K-2.Q 3.4.K-2.C	3.1.2.B 3.5.K-2.M 3.5.K-2.O	3.1.2.C 3.5.K-2.AA 3.5.K-2.DD 3.4.K-2.C	3.3.2.B 3.4.K-2.D 3.5.K-2.M	3.2.2.A 3.4.K-2.D 3.5.K-2.P 3.5.K-2.Q	3.2.2.B 3.5.K-2.O 3.5.K-2.G
Science Standard Description	**3.2.2.A** Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	**3.2.2.B** Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	**3.2.2.A** Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	**3.2.2.C** Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.	**3.2.2.C** Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.	**3.3.2.B** Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	**3.3.2.C** Develop a model to represent the shapes and kinds of land and bodies of water in an area.	**3.1.2.B** Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants	**3.1.2.C** Make observations of plants and animals to compare the diversity of life in different habitats.	**3.3.2.B** Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.	**3.2.2.A** Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.	**3.2.2.B** Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
Lesson Title	Kitty Greetings	Troll under the Bridge	Sort It Out	Jungle Adventure	Fun Place Space	Beach House Builder	Bird's Eye View	Hide the Seeds	Animal Rescue Team	Windy Weather	Penguin on the Go	Creative Car
Lesson Description	Students will investigate the properties of different materials.	Students will test different materials used to build a bridge and analyze how the properties of the materials impact the effectiveness of the bridge.	Students will describe and classify materials according to their observable properties.	Students will explain how an object made from a set of pieces can be disassembled and made into a new object.	Students will make observations to describe how an object made of a small set of pieces can be disassembled and made into a new object.	Students will compare solutions designed to slow or prevent water from changing the land.	Students will develop a model to represent the shapes and kinds of land and bodies of water in an area.	Students will use a model to describe how an animal can function to disperse seeds.	Students will create a model to describe the diversity of life in a single habitat.	Students will observe and analyze changes in the environment due to weather.	Students will analyze the properties of different designs to determine strengths and weakness within an environment.	Students will observe the patterns of motion of a vehicle when using different materials to make it move.

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Third Grade

STEELS Standards	3.1.3.A 3.5.3-5.Q	3.1.3.B 3.5.3-5.Q	3.1.3.E 3.5.3-5.S	3.1.3.F 3.5.3-5.Q 3.5.3-5.X 3.4.3-5.A	3.1.3.G 3.5.3-5.Q 3.5.3-5.U 3.4.3-5.A	3.1.3.C	3.1.3.H 3.5.3-5.J 3.5.3-5.P 3.4.3-5.E	3.2.3.B	3.2.3.A 3.5.3-5.M 3.5.3-5.N	3.3.3.C 3.5.3-5.Q 3.5.3-5.V 3.4.3-5.B	3.2.3.A 4.5.3-5.Y 3.5.3-5.Z	3.2.3.B 3.4.3-5.F 3.5.3-5.S 3.5.3-5.T	3.2.3.A 3.5.3-5.L 3.5.3-5.M
Science Standard Description	**3.1.3.A** Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.	**3.1.3.B** Construct an argument that some animals form groups that help members survive.	**3.1.3.E** Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.	**3.1.3.F** Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	**3.1.3.G** Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all	**3.1.3.C** Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.	**3.1.3.H** Make a claim supported by evidence about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.	**3.2.3.B** Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	**3.2.3.A** Make and communicate observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	**3.3.3.C** Make a claim supported by evidence about the merit of a design solution that reduces the impacts of a weather-related hazard.	**3.2.3.A** Make and communicate observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion	**3.2.3.B** Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.	**3.2.3.A** Make and communicate observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.
Lesson Title	From Egg to What	Protect Baby Elephant	Fossil Detective	Spot the Bug	Home at Last	Fire and Horns	Hungry, Hungry Lionfish	Sweet Tooth Squirrel	Golfing Over the Edge	Teeny Tiny Home	Mover Mishap	Terrific Towers	Space Transport
Lesson Description	Students will develop a model of the unique life cycle of an animal and compare some common aspects of all life cycles such as birth, growth, reproduction and death.	Students will use a model to construct an argument that living in a group helps elephants protect their offspring.	Students will analyze and interpret information from fossils to provide evidence of organisms and the environments in which they lived long ago.	Students will construct an explanation for how variations in the colors of the same species of insects may provide advantages for individuals that help them survive.	Students will make a claim about the likelihood of different animals surviving in a specific environment.	Students will use evidence to explain how traits are inherited from parents and can vary among offspring.	Students will make a claim about the merit of a solution to a problem caused when an invasive species changes an environment and the animals living in it.	Students will use evidence to explain the effect of balanced and unbalanced forces on an object.	Students will make observations of an object's motion to provide evidence that a pattern can be used to predict future motion.	Students will make a claim about the merit of a design solution that reduces the impacts of a local weather-related hazard.	Students will design a system to safely transport items and explain that objects in motion change their position and may change direction.	Students will investigate the effects of forces and energy transfer on buildings by creating a model of a spinning tower.	Students will explore and identify different forces to investigate the effects of these forces on objects.

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Fourth Grade

STEELS Standards	3.3.4.A 3.5.3-5.Q 3.5.3-5.AA	3.1.4.A 3.5.3-5.C 3.4.3-5.A	3.3.4.D 3.5.3-5.F 3.5.3-5.E 3.4.3-5.F	3.3.4.E 3.5.3-5.M 3.5.3-5.P 3.5.3-5.DD	3.1.4.A 3.5.3-5.C 3.4.3-5.A	3.1.4.B 3.5.3-5.C	3.2.4.A 3.5.3-5.M 3.5.3-5.P	3.2.4.B 3.5.3-5.M 3.5.3-5.Q	3.2.4.C 3.5.3-5.M 3.5.3-5.GG	3.2.4.G 3.5.3-5.M 3.5.3-5.O	3.2.4.D 3.5.3-5.M 3.5.3-5.N	3.1.4.A 3.5.3-5.W 3.5.3-5.U	3.1.4.A 3.4.3-5.E 3.5.2-5.Q 3.5.3-5.R	3.1.4.A 3.4.3-5.D 3.5.3-5.M 3.5.3-5.P	3.1.4.A 3.5.3-5.B 3.5.3-5.D
Science Standard Description	**3.3.4.A** Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time	**3.1.4.A** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	**3.3.4.D** Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	**3.3.4.E** Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	**3.1.4.A** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	**3.1.4.B** 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.	**3.2.4.A** Use evidence to construct an explanation relating the speed of an object to the energy of that object.	**3.2.4.B** Make and communicate observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	**3.2.4.C**Ask questions and predict outcomes about the changes in energy that occur when objects collide.	**3.2.4.G** Generate and compare multiple solutions that use patterns to transfer information.	**3.2.4.D** Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.	**3.1.4.A** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	**3.1.4.A** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	**3.1.4.A** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.	**3.1.4.A** Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
Lesson Title	Deep Down Underground	Plant Powers	Nature Party	Lemonade Shake	Ra-Ra-Rattlesnake	Navigating the Unknown	Energy Racer	Feel the Beat	Crush the Core	Control the Roll	Disco Snail	Puppy Playtime	Ocean Friends	Best Foot Forward	Animal Actions
Lesson Description	Students will use a model to explain that changes happen in a landscape over time.	Students will explain the function of external structures that support the survival and growth of plants and animals.	Students will explain that energy is derived from natural resources and describe how its use affects the environment.	Students will create and compare solutions to reduce the impact of earthquakes.	Students will construct an argument that animals have external structures that function to support survival.	Students will use a model to investigate how animals receive information through their senses and process it in order to respond to their environment.	Students will use evidence to explain that the faster an object moves, the more energy it has.	Students will make observations to provide evidence that energy can be transferred from place to place by sound.	Students will ask questions and predict outcomes about the changes in energy that occur when objects collide.	Students will generate and compare multiple solutions for transferring information to safely park airplanes at an airport.	Students will create, test and refine a device that converts energy from one form to another.	Students will compare and contrast adaptations by investigating how external structures and behaviors of living organisms contribute to their ability to meet needs and survive.	Students will explore the adaptations of two creatures and discuss why animals might struggle to live in the same habitat.	Students will explore how animals have structural and behavioral adaptations that help them survive in different environments.	Students will recognize how animals can exhibit behaviors to help meet their needs and how a behavior can communicate a need.

LEGO® Education Science: Pennsylvania Standards Outline

Fifth Grade

STEELS Standards	3.2.5.F 3.5.3-5.J 3.5.3-5.EE	3.2.5.G 3.5.3-5.C 3.5.3-5.CC	3.2.5.A 3.5.3-5.W 3.5.3-5.Z	3.3.5.E 3.5.3-5.E 3.5.3-5.F	3.3.5.E 3.5.3-5.E 3.5.3-5.G 3.4.3-5.B 3.4.3-5.F	3.2.5.A 3.5.3-5.W	3.2.5.D 3.5.3-5.W	3.2.5.B 3.5.3-5.W	3.1.5.B 3.5.3-5.CC 3.4.3-5.A 3.4.3-5.D	3.2.5.G 3.5.3-5.CC	3.3.5.E 3.4.3-5.B 3.5.3-5.H 3.5.3-5.I	3.3.5.F 3.4.3-5.A
Science Standard Description	**3.2.5.F** Support an argument that the gravitational force exerted by Earth on objects is directed down.	**3.2.5.G** Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	**3.2.5.A** Develop a model to describe that matter is made of particles too small to be seen.	**3.3.5.E** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	**3.3.5.E** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	**3.2.5.A** Develop a model to describe that matter is made of particles too small to be seen.	**3.2.5.D** Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.	**3.2.5.B** Make and communicate observations and measurements to identify materials based on their properties.	**3.1.5.B** Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	**3.2.5.G** Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	**3.3.5.E** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	**3.3.5.F** Generate and design possible solutions to a current environmental issue, threat, or concern.
Lesson Title	Down with Gravity	Sun Snack	Stink Squad	Desert Island Community	Twin Scoops	Slow Down Race	Snacking Seagull	Wheel of Properties	Circle of Soil	Energy Chain	Creating a Safe Path	Ocean Helper
Lesson Description	Students will support an explanation that gravity pulls objects down, toward the center of the Earth.	Students will use a model to describe that energy in animals' food was once energy from the sun.	Students will use and develop models to describe that smell is connected to bulk matter and is made of particles too small to be seen.	Students will model ways individuals and communities use scientific ideas to protect Earth's resources and the environment.	Students will explain how communities can use scientific ideas to protect Earth's resources and the environment.	Students will develop a model to describe particles in the air that are too small to be seen.	Students will make observations to provide evidence that regardless of the change that occurs when the elements of a model are mixed, the total weight is conserved.	Students will make observations to identify materials based on their properties.	Students will develop a model to describe the movement of matter among plants, animals and decomposers in an ecosystem.	Students will build a model to describe that energy in animals' food was once energy from the Sun.	Students will investigate the environmental impact of building a highway in a nature area, focusing on how wildlife responds to changes in their habitat.	Students will recognize how humans impact the ocean floor and develop a solution to clean up the ocean.

LEGO® Education Science: Pennsylvania Standards Outline

Grade 6-8

STEELS Standards	3.1.6-8.I 3.5.6-8.FF 3.5.6-8.H 3.4.6-8.E	3.3.6-8.L 3.5.6-8.N 3.5.6-8.Z	3.2.6-8.E 3.5.6-8.BB 3.5.6-8.F	3.3.6-8.M 3.5.6-8.D 3.5.6-8.I 3.4.6-8.H	3.3.6-8.A 3.5.6-8.FF 3.5.6-8.Q	3.1.6-8.S 3.5.6-8.Q 3.5.6-8.K	3.3.6-8.N 3.5.6-8.D 3.5.6-8.E	3.2.6-8.G 3.5.6-8.H 3.5.6-8.M (ETS)	3.1.6-8.R 3.5.6-8.DD 3.5.6-8.JJ	3.1.6-8.E 3.5.6-8.FF
Science Standard Description	**3.1.6-8.I** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	**3.3.6-8.L** Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.	**3.2.6-8.E** Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.	**3.3.6-8.M** Apply scientific principles to design a method for monitoring and minimizing human impact on the environment.	**3.3.6-8.A** Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.	**3.1.6-8.S** Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.	**3.3.6-8.N** Construct an argument supported by evidence for how increases in human population and per capita consumption of natural resources impact Earth's systems.	**3.2.6-8.G** Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.	**3.1.6-8.R** Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms.	**3.1.6-8.E** Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.
Lesson Title	Forest Showdown	Windy City	A Breath of Fresh Space	Save the Salmon	Building Space	Conceal the Meal	Population Pressure	Kicking on Command	Trait Selector	Big Fish in a Little Pond
Lesson Description	Students will support an argument that changes to the components of an ecosystem affect populations and will then evaluate design solutions for maintaining biodiversity.	Students will analyze an area and design solutions to forecast and mitigate the effects of a hurricane.	Students will use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved.	Students will design a method for monitoring and minimizing a human impact on the environment.	Students will develop and use a model of the Earth-Sun-Moon system to describe the cyclic pattern of eclipses of the Sun.	Students will construct an explanation that describes how variations of traits in a population increase some individual's probability of surviving in a specific environment.	Students will describe how genetic variations of traits in a population increase some individuals' probability of surviving in a specific environment.	Students will be able to explain how energy is transformed by analyzing the motion of objects.	Students will explain how humans can influence the inheritance of desired traits in organisms.	Students will construct an explanation for how environmental factors influence the growth of organisms.

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STEELS Standards	3.1.6-8.D 3.5.6-8.Q 3.5.6-8.K	3.1.6-8.F 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.B 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.B 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.I 3.5.6-8.Q 3.4.6-8.E	3.2.6-8.O 3.5.6-8.Q 3.5.6-8.X	3.2.6-8.G 3.5.6-8.V 3.5.6-8.BB	3.1.6-8.H 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.H	3.2.6-8.L 3.5.6-8.DD 3.5.6-8.M
Science Standard Description	**3.1.6-8.D** Use arguments based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants, respectively.	**3.1.6-8.F** Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.	**3.1.6-8.B** Develop and use a model to describe the function of a cell as a whole and the ways that parts of cells contribute to the function.	**3.1.6-8.B** Develop and use a model to describe the function of a cell as a whole and the ways that parts of cells contribute to the function.	**3.1.6-8.I** Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.	**3.2.6-8.O** Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	**3.2.6-8.G** Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.	**3.1.6-8.H** Gather and synthesize information about how sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.	**3.1.6-8.H** Gather and synthesize information about how sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.	**3.2.6-8.L** Construct and interpret graphical displays of data to describe the relationships of kinetic energy to the mass and speed of an object.
Lesson Title	Ostrich Dance	Supercharged Plants	Cell City	More than a Nucleus	Fish Food	Kinetic Kicker	Push Power	Rapid Reaction	Bee-ware	Spinning and Winning
Lesson Description	Students will use a model to explain how characteristic animal behaviors affect the probability of successful reproduction.	Students will construct an explanation for the role of photosynthesis in the flow of energy on Earth.	Students will develop and use a model to represent the ways parts of a cell contribute to the function of the whole cell.	Students will develop and use a model to describe the function of a cell as a whole and the ways parts of cells contribute to the function.	Students will analyze the effects of resource availability on different organisms and populations of organisms in an ecosystem.	Students will construct a device to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	Students will apply Newton's third law to design a solution to a problem.	Students will explain that senses respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.	Students will use a model to explain that sensory receptors respond to inputs by sending messages to the brain for immediate behavior or storage as memories.	Students will investigate and describe the relationships of kinetic energy to the mass of an object and to the speed of an object.

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STEELS Standards	3.2.6-8.H	3.1.6-8.K 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.U 3.5.6-8.JJ 3.5.6-8.P 3.4.6-8.H	3.1.6-8.J 3.5.6-8.Q 3.5.6-8.K	3.2.6-8.H 3.4.3-5.D 3.5.6-8.N (ETS) 3.5.6-8.P (ETS)	3.2.6-8.P 3.5.6-8.P (ETS) 3.5.6-8.Q	3.1.6-8.K 3.5.6-8.Q 3.5.6-8.X	3.2.6-8.R 3.5.6-8.U 3.5.6-8.V	3.2.6-8.H 3.5.6-8.W (ETS) 3.5.6-8.X	3.3.6-8.L 3.5-6-8.P 3.5.6-8.V
Science Standard Description	**3.2.6-8.H** Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	**3.1.6-8.K** Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	**3.1.6-8.U** Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	**3.1.6-8.J** Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	**3.2.6-8.H** Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	**3.2.6-8.P** Develop a model to describe that when the arrangement of objects interacting at a distance changes, different amounts of potential energy are stored in the system.	**3.1.6-8.K** Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	**3.2.6-8.R** Develop and use a model to describe how waves are reflected, absorbed, or transmitted through various materials.	**3.2.6-8.H** Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	**3.3.6-8.L** Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.
Lesson Title	Double the Push	Move the Matter	Bats on the Brink	Rivals and Allies	Snack for Nessie	Cow Playground	Chickens in Space	Sensing Signals	Challenging Tasks	Shaking Signals
Lesson Description	Students will plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	Students will plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	Students will evaluate competing design solutions to solve a problem related to maintaining biodiversity.	Students will describe patterns of interactions among organisms across multiple ecosystems.	Students will be able to describe the effects of unbalanced forces on the motion of an object.	Students will use a model to explain how forces act on an object and will describe the role of gravity as a force.	Students will develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.	Students will be able to explain how visible light and colors of light are absorbed, reflected, or refracted by utilizing a color sensor.	Students will be able to explain how energy is transformed from one form to another.	Students will develop a device to obtain data about earthquakes and mitigate their effects.

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STEELS Standards	3.1.6-8.T 3.5.6-8.FF 3.5.6-8.X	3.1.6-8.N	3.3.6-8.M 3.5.6-8.Q 3.5.6-8.X	3.2.6-8.H 3.5.6-8.P (ETS) 3.5.6-8.AA	3.1.6-8.D 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.J	3.2.6-8.H	3.2.6-8.O 3.5.6-8.Q 3.5.6-8.X	3.1.6-8.U	3.1.6-8.S
Science Standard Description	**3.1.6-8.T** Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.	**3.1.6-8.N** Develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.	**3.3.6-8.M** Apply scientific principles to design a method for monitoring and minimizing human impact on the environment.	**3.2.6-8.H** Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	**3.1.6-8.D** Use arguments based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants, respectively.	**3.1.6-8.J** Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.	**3.2.6-8.H** Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.	**3.2.6-8.O** Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	**3.1.6-8.U** Evaluate competing design solutions for maintaining biodiversity and ecosystem services.	**3.1.6-8.S** Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.
Lesson Title	Frosty Fur and Frozen Feet	Aliens Alike Not Quite	Food Festival Fix	Balancing Act	Feathers, Fur, Family	Troll Stole My Soup	Hit It, Move It	Energy Booster	Blades and Barnacles	Polar Paws
Lesson Description	Students will use a model to show how natural selection may lead to increases and decreases of specific traits in populations over time.	Students will develop and use a model to describe why asexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.	Students will design a method for minimizing and monitoring a human impact on the environment.	Students will be able to use a model to explain balanced and unbalanced forces acing on an object in motion.	Students will use models to support an explanation for how characteristic animal behaviors affect the probability of successful reproduction.	Students will develop a model that describes changes in particle motion, temperature, and state of a substance when thermal energy is added or removed.	Students will plan an investigation to provide evidence that the change in an object's motion depends on the sum of forces acting on the object and the mass of the object.	Students will use a model to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	Students will evaluate competing design solutions for maintaining biodiversity using agreed upon criteria and constraints.	Students will describe how genetic variations of traits in a population increase some individuals' probability of surviving in a specific environment.