LEGO® Education Science: England National Curriculum Overview

Year 1-3	Topic	Push and Pull	Push and Pull	Needs	Animals, Habitat	Animals, Habitat, Needs	Weather, Weather Forecast	Environment, Pollinators	Animals, Environment	Push and Pull	Shade, Sunlight	Problem Solving, Traffic	Problem Solving	Engineering Design, Transportation	
	Lesson Title	Dino Birthday Bash	Muddy Rhino	Farm Friends Road Trip	A Home for Baby Bird	Animal Hotel	Bad Weather Bunny	Flower Friends	Forest Play Day	Feeding Time	Park Picnic	Duck Crossing	Clean Machine	Roll or Fly	
	Topic	Offspring, Survival	Light and Dark	Plants, Characteristics	Communication	Sun, Patterns	Seasons, Sun	Biomimicry, Camouflage	Animal Mimicry	Offspring, Parents	Heredity, Characteristics	Sound, Communication	Problem Solving	Shapes, Problem Solving	Testing Solutions
	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 Kinder	Secret Celebration	Rocky Road Skateboard	Windy Valley	Car With Arms
	Topic	Greeting, Properties	Materials, Properties	Properties	Problem Solving	Problem Solving, Shapes	Conservation of Matter	Erosion, Problem Solving	Maps	Animals, Seeds	Habitat, Biodiversity	Problem Solving, Solution Diversity	Solution Diversity, Problem Solving	Comparing Solutions, Problem Solving	
	Lesson Title	Kitty Greetings	Troll Under the Bridge	Sort It Out	Jungle Adventure	Beach Chicken	Fun Place Space	Beach House Builder	Bird's Eye View	Hide the Seeds	Animal Rescue Team	Spin Spectacular	Puck and Bot	Mini Mixer	
Year 4-6	Topic	Life Cycle, Animals	Animals, Survival	Fossils	Natural Selection, Camouflage	Habitat, Adaptation	Heredity	Invasive Species, Environmental Change	Forces, Motion	Motion	Hazardous Weather, Solution Design	Criteria, Problem Solving	Solution Diversity, Criteria	Environment, Problem Solving	
	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	Truck Rally	Legs for Fetch	Grabber Arm	
	Topic	Fossils	Plants, Animals	Natural Resources, Environment	Earthquakes, Natural Hazards	Adaptation, Survival	Senses	Energy, Speed	Energy Transfer	Energy, Collision	Communication, Solution Diversity	Potential and Kinetic Energy, Energy transfer	Criteria, Constraints	Solution Design, Criteria	Fair Tests, Variables
	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	Turning Towers	Ocean Disco	Bug Bot Race
	Topic	Gravity	Food Chain	Particles	Environment, Resources	Resources, Environment	Particles	Conservation of Matter	Properties	Matter, Ecosystems	Food Chain, Energy	Wildlife, Criteria	Problem Solving, Criteria	Fair Tests, Prototype	
	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	Critter Crossing	Hungry Machine	Life on a New Planet	
Year 7-9	Topic	Ecosystems	Severe Weather	Chemical Reaction, Conservation of Mass	Human Impact, Environment	Earth, Space	Characteristics, Survival	Resources, Population	Iterative Testing	Characteristics	Environmental Factors	Animals, Reproduction	Energy, Photosynthesis	Cells	Cells
	Lesson Title	Forest Showdown	Windy City	A Breath of Fresh Space	Save the Salmon	Building Space	Conceal the Meal	Population Pressure	Game of Goals	Trait Selector	Big Fish in a Little Pond	Ostrich Dance	Supercharged Plants	Cell City	More than a Nucleus
	Topic	Resources, Population	Kinetic Energy, Energy Transfer	Collision, Newton's Third Law	Senses, Brain	Animals, Inputs	Kinetic Energy	Sum of Forces	Ecosystems, Matter	Biodiversity, Solution Design	Ecosystems, Patterns	Solution Design, Criteria	Solution Design, Criteria	Ecosystems, Energy	
	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	Loch Ness Express	Cow on the Roof	Chickens in Space	
	Topic	Solution Design, Iterative Testing	Solution Design, Iterative Testing	Natural Disasters	Natural Selection, Characteristics	Reproduction, Offspring	Environmental Impact	Solution Design, Criteria	Offspring, Animal Behaviour	States of Matter	Forces, Motion	Energy, Energy Transfer	Biodiversity, Solution Design	CharacteristicsSurvival	
	Lesson Title	Operate in Colour	Up Top Robot	Shaking Signals	Frosty Fur and Frozen Feet	Aliens Alike and Not Quite	Food Festival Fix	Robotic Restaurant	Feathers, Fur and Family	Troll Stole My Soup	Hit It, Move It	Energy Booster	Blades and Barnacles	Polar Paws	

LEGO® Education Science: England National Curriculum Overview

Year 1-3	**Domain**	**Forces and magnets**	**Forces and magnets**	**Plants and animals**	**Living things and habitats**	**Living things and habitats**	**Physical geography**	**Living things and habitats**	**Living things and habitats**	**Forces and magnets**	**Light**	**Design, technology and engineering**	**Design, technology and engineering**	**Design, technology and engineering**	
	Topic	Push and Pull	Push and Pull	Needs	Animals, Habitat	Animals, Habitat, Needs	Weather, Weather Forecast	Environment , Pollinators	Animals, Environment	Push and Pull	Shade, Sunlight	Problem Solving, Traffic	Problem Solving	Engineering Design, Transportation	
	Lesson Title	Dino Birthday Bash	Muddy Rhino	Farm Friends Road Trip	A Home for Baby Bird	Animal Hotel	Bad Weather Bunny	Flower Friends	Forest Play Day	Feeding Time	Park Picnic	Duck Crossing	Clean Machine	Roll or Fly	
	Domain	**Living things and habitats**	**Light**	**Light**	**Light**	**Light**	**Seasonal changes**	**Plants and animals**	**Plants and animals**	**Plants and animals**	**Plants and animals**	**Design, technology and engineering**	**Design, technology and engineering**	**Design, technology and engineering**	**Design, technology and engineering**
	Topic	Survival Offspring	Light and Dark	Plants Traits	Communication	Sun Patterns	Sun Seasons	Biomimicry Camouflage	Animal Mimicry	Offspring Parents	Heredity Traits	Communication Sound	Problem Solving	Problem Solving Shapes	Testing Solutions
	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 Kinder	Secret Celebration	Rocky Road Skateboard	Windy Valley	Car With Arms
	Domain	**Materials**	**Materials**	**Materials**	**Design, technology and engineering**	**Design, technology and engineering**	**Design, technology and engineering**	**Physical geography**	**Physical geography**	**Plants and animals**	**Living things and habitats**	**Design, technology and engineering**	**Design, technology and engineering**	**Design, technology and engineering**	
	Topic	Greeting Properties	Properties Materials	Properties	Problem Solving	Problem Solving Shapes	Conservation of Matter	Erosion Problem Solving	Maps	Seeds Animals	Habitat Biodiversity	Problem Solving Solution Diversity	Solution Diversity Problem Solving	Problem Solving Comparing Solutions	
	Lesson Title	Kitty Greetings	Troll Under the Bridge	Sort It Out	Jungle Adventure	Beach Chicken	Fun Place Space	Beach House Builder	Bird's Eye View	Hide the Seeds	Animal Rescue Team	Spin Spectacular	Puck and Bot	Mini Mixer	

LEGO® Education Science: England National Curriculum Overview

Year 4-6														
	Domain	**Living things and habitats**	**Plants and animals**	**Evolution and inheritance**	**Evolution and inheritance**	**Living things and habitats**	**Evolution and inheritance**	**Living things and habitats**	**Forces**	**Forces**	**Physical geography**	**Design, technology and engineering**	**Design, technology and engineering**	**Design, technology and engineering**	
	Topic	Life Cycle Animals	Survival Animals	Fossils	Camouflage Natural Selection	Habitat Adaptation	Heredity	Invasive Species Environmental Change	Forces Motion	Motion	Hazardous Weather Solution Design	Problem Solving Criteria	Solution Diversity Criteria	Problem Solving Environment	
	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	Truck Rally	Legs for Fetch	Grabber Arm	
	Domain	**Evolution and inheritance**	**Plants and Animals**	**Electricity**	**Physical geography**	**Plants and animals**	**Plants and animals**	**Forces**	**Sound**	**Forces**	**Design, technology and engineering**	**Design, technology and engineering**	**Design, technology and engineering**	**Design, technology and engineering**	**Design, technology and engineering**
	Topic	Fossils	Plants Animals	Environment Natural Resources	Earthquakes Natural Hazards	Survival Adaptation	Senses	Energy Speed	Energy Transfer	Energy Collision	Communication Solution Diversity	Potential and Kinetic Energy Conversion of Energy	Criteria Constraints	Solution Design Criteria	Fair Tests Variables
	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	Turning Towers	Ocean Disco	Bug Bot Race
	Domain	**Forces**	**Plants and animals**	**States of matter**	**Design, technology and engineering**	**Design, technology and engineering**	**Forces**	**Materials**	**Materials**	**Plants and animals**	**Plants and animals**	**Living things and habitats**	**Design, technology and engineering**	**Design, technology and engineering**	
	Topic	Gravity	Food Chain	Particles	Environment Resources	Environment Resources	Particles	Conservation of Matter	Properties	Matter Ecosystems	Food Chain Energy	Wildlife Criteria	Problem Solving Criteria	Fair Tests Prototypes	
	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	Critter Crossing	Hungry Machine	Life on a New Planet	

LEGO® Education Science: England National Curriculum Overview

Year 7-9	**Domain**	**Ecosystems**	**Severe Weather**	**Chemical Reaction, Conservation of Mass**	**Human Impact, Environment**	**Earth, Space**	**Characteristics, Survival**	**Resources, Population**	**Iterative Testing**	**Characteristics**	**Environmental Factors**	**Animals, Reproduction**	**Energy, Photosynthesis**	**Cells**	**Cells**
	Topic	Ecosystems	Severe Weather	Chemical Reaction Conservation of Mass	Human Impact Environment	Earth Space	Traits Survival	Resources Population	Iterative Testing	Traits	Environmental Factors	Animals Reproduction	Energy Photosynthesis	Cells	Cells
	Lesson Title	Forest Showdown	Windy City	A Breath of Fresh Space	Save the Salmon	Building Space	Conceal the Meal	Population Pressure	Game of Goals	Trait Selector	Big Fish in a Little Pond	Ostrich Dance	Supercharged Plants	Cell City	More than a Nucleus
	Domain	**Resources, Population**	**Kinetic Energy, Energy Transfer**	**Collision, Newton's Third Law**	**Senses, Brain**	**Animals, Inputs**	**Kinetic Energy**	**Sum of Forces**	**Ecosystems, Matter**	**Biodiversity, Solution Design**	**Ecosystems, Patterns**	**Solution Design, Criteria**	**Solution Design, Criteria**	**Ecosystems, Energy**	
	Topic	Resources Population	Kinetic Energy Energy Transfer	Collision Newton's Third Law	Sense Brain	Animals Inputs	Kinetic Energy	Sum of Forces	Ecosystems Matter	Biodiversity Solution Design	Ecosystems Patterns	Criteria Solution Design	Criteria Solution Design	Ecosystems Energy	
	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	Loch Ness Express	Cow on the Roof	Chickens in Space	
	Domain	**Solution Design, Iterative Testing**	**Solution Design, Iterative Testing**	**Natural Disasters**	**Natural Selection, Characteristics**	**Reproduction, Offspring**	**Environmental Impact**	**Solution Design, Criteria**	**Offspring, Animal Behaviour**	**States of Matter**	**Forces, Motion**	**Energy, Energy Transfer**	**Biodiversity, Solution Design**	**Characteristics, Survival**	
	Topic	Solution Design Iterative Testing	Solution Design Iterative Testing	Natural Disasters	Natural Selection Traits	Reproduction Offspring	Environmental Impact	Solution Design Criteria	Animal Behaviour Offspring	States of Matter	Forces Motion	Energy Energy Transfer	Biodiversity Solution Design	Traits Survival	
	Lesson Title	Operate in Colour	Up Top Robot	Shaking Signals	Frosty Fur and Frozen Feet	Aliens Alike and Not Quite	Food Festival Fix	Robotic Restaurant	Feathers, Fur and Family	Troll Stole My Soup	Hit It, Move It	Energy Booster	Blades and Barnacles	Polar Paws	

LEGO® Education Science: England National Curriculum Overview

Year 1-3

Domains	Forces and magnets	Forces and magnets	Plants and animals	Living things and habitats	Living things and habitats	Physical geography	Living things and habitats	Living things and habitats	Forces and magnets	Light	Design, technology and engineering	Design, technology and engineering	Design, technology and engineering
Curriculum Description	This lesson links to the following learning themes: forces (push and pull), moving objects, making gadgets, dinosaurs, birthday parties, presents	This lessons links to the following learning themes: forces (push and pull), changing direction, caring for animals, creating tools	Year 2 Plants and animals, including humans - find out and describe how plants need water, light and a suitable temperature to grow and stay healthy - find out about and describe the basic needs of animals, including humans, for survival (water, food and air)	This lesson links to the following learning themes: nests, birds, eggs, spring, animal homes, habitats	Year 2 Living things and their habitats - identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other	Key stage 1 Physical geography - identify seasonal and daily weather patterns in the United Kingdom and the location of hot and cold areas of the world in relation to the Equator and the North and South poles	Year 2 Living things and their habitats - identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other	Year 2 Living things and their habitats - identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other	This lesson links to the learning themes: forces (pushes), caring for animals, animal feeding, wildlife rescue	** Year 3 Light** - recognise that shadows are formed when the light from a light source is blocked by an opaque object	This lesson links to the learning themes: road safety, keeping safe, problem solving, helping wildlife	This lesson links to the learning themes: tidying, making a tool, product design, evaluation, improving ideas	This lesson links to the learning themes: transport, school travel, penguins, Antarctic, evaluation
Lesson Title	**Dino Birthday Bash**	**Muddy Rhino**	**Farm Friends Road Trip**	**A Home for Baby Bird**	**Animal Hotel**	**Bad Weather Bunny**	**Flower Friends**	**Forest Play Day**	**Feeding Time**	**Park Picnic**	**Duck Crossing**	**Clean Machine**	**Roll or Fly**
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 define a simple problem and solve it by developing an object or tool.	Students will develop a model to illustrate how the shape of an object helps it function as needed to solve a given problem.	Students will analyze different objects designed to solve the same problem to compare strengths and weaknesses.

LEGO® Education Science: England National Curriculum Overview

Year 1-3

Domains	Living things and habitats	Light	Light	Light	Light	Seasonal changes	Plants and animals	Plants and animals	Plants and animals	Plants and animals	Design, technology and engineering	Design, technology and engineering	Design, technology and engineering	Design, technology and engineering
Curriculum Description	This lesson links to the learning themes: nests, birds, eggs, caring for offspring, spring, wildlife	Year 3 Light - recognise that they need light in order to see things and that dark is the absence of light	Year 3 Light - recognise that they need light in order to see things and that dark is the absence of light - recognise that light from the sun can be dangerous and that there are ways to protect their eyes	This lesson links to the learning themes: communication, messages, light signals, codes, monsters	This lesson links to the learning themes: Sun, rotation of Earth, night and day	Year 1 Seasonal changes - observe changes across the four seasons - observe and describe weather associated with the seasons and how day length varies	This lesson links to the learning themes: adaptation (animal feeding), animals, animal body parts, giraffes, anteaters, anthills	This lesson links to the learning themes: adaptation (bird beaks), birds, bird feeding, wildlife, designing tools	This lesson links to the learning themes: needs of a baby, caring for offspring, looking after a baby, communicating needs, dragons	This lesson links to the learning themes: inheritance (of characteristics), animals and offspring, parents and offspring, families, home time	This lesson links to the learning themes: communication, making sounds, drums, celebrations, messages	This lesson links to the learning themes: skateboarding, design solutions, testing	Key stage 1 Technical knowledge - build structures, exploring how they can be made stronger, stiffer and more stable	Key stage 1 Technical knowledge - explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products
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 Kinder**	**Secret Celebration**	**Rocky Road Skateboard**	**Windy Valley**	**Car With Arms**
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.	Students will define a problem that can be solved through the development of an improved object and test their solution.	Students will develop a physical model to illustrate how the shape of a house impacts its function.	Students will analyze data from tests of two objects designed to solve the same problem to compare strengths and weaknesses of the two designs.

LEGO® Education Science: England National Curriculum Overview

Year 1-3

Domains	Materials	Materials	Materials	Design, technology and engineering	Design, technology and engineering	Design, technology and engineering	Physical geography	Physical geography	Plants and animals	Living things and habitats	Design, technology and engineering	Design, technology and engineering	Design, technology and engineering
Curriculum Description	Year 2 Uses of everyday materials - identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	Year 2 Uses of everyday materials - identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses	This lesson links to the themes: properties, sorting, classifying materials	This lesson links to the learning themes: recycling, helicopters, jungles, transport	This lesson links to the learning themes: transport, tractors, chickens, farm animals	This lesson links to the learning themes: reusing, indoor design	This lesson links to the learning themes: coastal erosion, landslide, problem-solving, designing solutions.	Key stage 1 Geographical skills and fieldwork - use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features; devise a simple map; and use and construct basic symbols in a key	Year 3 Plants - explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	Year 2 Living things and their habitats - identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other	This lesson links to the learning themes: theme park rides, design, problem-solving.	This lesson links to the learning themes: sport, hockey, goal-scoring, shape and function	This lesson links to the learning themes: baking, creating a tool, elves, moving loads
Lesson Title	**Kitty Greetings**	**Troll Under the Bridge**	**Sort It Out**	**Jungle Adventure**	**Beach Chicken**	**Fun Place Space**	**Beach House Builder**	**Bird's Eye View**	**Hide the Seeds**	**Animal Rescue Team**	**Spin Spectacular**	**Puck and Bot**	**Mini Mixer**
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 develop a physical model to illustrate how the shape of an object helps it function.	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 ask questions and make observations about a situation people want to change to define a simple problem that can be solved by developing an improved object.	Students will develop a simple model to illustrate how the shape of an object functions to solve a given problem.	Students will analyze tests from two objects designed to solve the same problem by comparing strengths and weaknesses of how each performs.

LEGO® Education Science: England National Curriculum Overview

Year 4-6

Domains	Living things and habitats	Plants and animals	Evolution and inheritance	Evolution and inheritance	Living things and habitats	Evolution and inheritance	Living things and habitats	Forces	Forces	Physical geography	Design, technology and engineering	Design, technology and engineering	Design, technology and engineering
Curriculum Description	Year 5 Living things and their habitats - describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird	This lesson links to the learning themes: animals, herds, caring for young, predators, prey, elephants, lions	Year 6 Evolution and inheritance - recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago	Year 6 Evolution and inheritance - identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution	This lesson links to the learning themes: habitats, desert, survival, camel, gorilla, walrus	Year 6 Evolution and inheritance - recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents	Year 4 Living things and their habitats - recognise that environments can change and that this can sometimes pose dangers to living things	This lesson links to the learning themes: balanced and unbalanced forces, pushes and pulls, friction, gravity	This lesson links to the learning themes: forces, motion, prediction, testing, golf	This lesson links to the learning themes: lakes, rivers, weather, rain, flooding, protecting homes	This lesson links to the learning themes: moving cargo, lorries, transport, speed, redesign	This lesson links to the learning themes: prostheses, speed, movement, problem-solving	This lesson links to the learning themes: clearing rubbish, submarines, ocean, pollution, ocean waste, creating a gadget
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**	**Truck Rally**	**Legs for Fetch**	**Grabber Arm**
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.	Define a simple design problem reflecting a want that includes specified criteria for success and constraints on materials and time.	Students will create solutions to a problem and test to compare how well they perform.	Students will plan and carry out tests to identify aspects of a model that can be improved.

LEGO® Education Science: England National Curriculum Overview

Year 4-6

Domains	Evolution and inheritance	Plants and Animals	Electricity	Physical geography	Plants and animals	Plants and animals	Forces	Sound	Forces	Design, technology and engineering	Design, technology and engineering	Design, technology and engineering	Design, technology and engineering	Design, technology and engineering
Curriculum Description	Year 6 Evolution and inheritance - recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago	This lesson links to the learning themes: plant features, animal features, attention, nutrition, protection, growth, survival.	This lesson links to the learning themes: renewable energy resources, wind turbines, solar panels, generator, water wheels	Key stage 2 Human and physical geography - describe and understand key aspects of physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle	This lesson links to the learning themes: predators, prey, adaptation, survival, defense mechanisms, rattlesnakes	The lesson links to the learning themes: senses, insects, beetles, navigating surroundings, antenna	This lesson links the learning themes: force, energy, speed, distance measurement, vehicle safety	This lesson links to the learning themes: sound, drumming	This lesson links to the learning themes: forces, bouncing, friction, goals	This lesson links to the learning themes: communication, signals, problem solving, aeroplanes, pilots	This lesson links to the learning themes: movement, ramps, problem solving, gadgets	This lesson links to the learning themes: architecture, tower-building, design criteria, design constraints	The lesson links to the learning themes: design solutions, criteria and constraints, problem solving, octopus, seahorse	This lesson links to the learning themes: robot animals, racing, prototypes, variables, testing
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**	**Turning Towers**	**Ocean Disco**	**Bug Bot Race**
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 define a simple design problem and develop a solution that includes specified criteria for success and constraints.	Students will generate and compare multiple solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	Students will carry out fair tests in which variables are controlled and failure points are considered in order to identify aspects of a prototype model that can be improved.

LEGO® Education Science: England National Curriculum Overview

Year 4-6

Domains	Forces	Plants and animals	States of matter	Design, technology and engineering	Design, technology and engineering	Forces	Materials	Materials	Plants and animals	Plants and animals	Living things and habitats	Design, technology and engineering	Design, technology and engineering
Curriculum Description	Year 5 Forces - explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	Year 4 Animals, including humans - construct and interpret a variety of food chains, identifying producers, predators and prey	This lesson links to the learning themes: smells, particles, air, gases	This lesson links to the learning themes: sustainability, city design, wind turbines, solar panels, water collection, community gardens	This lesson links to the learning themes: sustainability, car transport, public transport, commuting, factories, city planning	This lesson links to the learning themes: force, air-resistance, wind propulsion, particles	This lesson links to the learning themes: conservation of matter, conservation of mass, balance scale	Year 5 Properties and changes of materials - compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets	Year 4 Animals, including humans - construct and interpret a variety of food chains, identifying producers, predators and prey	Year 4 Animals, including humans - construct and interpret a variety of food chains, identifying producers, predators and prey	Year 4 Living things and their habitats - recognise that environments can change and that this can sometimes pose dangers to living things	This lesson links to the learning themes: Feeding pets, communicatio n, gadgets, problem solving, comparing solutions	This lesson links to the learning themes: space exploration, robots, prototypes, variables, testing
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**	**Critter Crossing**	**Hungry Machine**	**Life on a New Planet**
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 define a simple design problem that reflects a need with specified criteria for success.	Students will generate and compare multiple solutions to a problem based on how well each meets the criteria of the problem.	Students will plan and carry out fair tests in which variables are controlled and failure points are considered in order to identify aspects of a model or prototype that can be improved.

LEGO® Education Science: England National Curriculum Overview

Year 7-9

Domains	Ecosystems	Severe Weather	Chemical Reaction, Conservation of Mass	Human Impact, Environment	Earth, Space	Characteristics, Survival	Resources, Population	Iterative Testing	Characteristics	Environmental Factors	Animals, Reproduction	Energy, Photosynthesis	Cells	Cells
Curriculum Description	Science Biology - the interdependence of organisms in an ecosystem - how organisms affect, and are affected by, their environment	This lesson links to the learning themes: hurricanes, severe weather, forecast, mitigation, city design	Science Chemistry - conservation of mass and chemical reactions - chemical reactions as the rearrangement of atoms	This lesson links to the learning themes: electricity generation, renewable energy resources, hydro-electricity, environmental impacts, salmon	This lesson links to the learning themes: day-night, Earth rotation, solar eclipse, cyclical motion	Science Biology - the variation between species and between individuals of the same species means some organisms compete more successfully and reproduce, which can drive natural selection	This lesson links to the learning themes: population growth, resources, conservation, environmental impacts.	This lesson links to the learning themes: iterative testing, modification, mechanical engineering, automotive engineering	Science Biology - heredity as the process by which genetic information is transmitted from one generation to the next	Science Biology - how organisms affect, and are affected by, their environment, including the accumulation of toxic materials	This lesson links to the learning themes: animals, reproduction, courting rituals.	Science Biology - the reactants in, and products of, photosynthesis, and a word summary for photosynthesis - the dependence of almost all life on Earth on the ability of photosynthetic organisms.	Science Biology - the functions of the cell wall, cell membrane, cytoplasm, nucleus, vacuole, mitochondria and chloroplasts - the similarities and differences between plant and animal cells	Science Biology - the functions of the cell wall, cell membrane, cytoplasm, nucleus, vacuole, mitochondria and chloroplasts - the similarities and differences between plant and animal cells
Lesson Title	**Forest Showdown**	**Windy City**	**A Breath of Fresh Space**	**Save the Salmon**	**Building Space**	**Conceal the Meal**	**Population Pressure**	**Game of Goals**	**Trait Selector**	**Big Fish in a Little Pond**	**Ostrich Dance**	**Supercharged Plants**	**Cell City**	**More than a Nucleus**
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 construct an argument that explains how increases in human population impact Earth's resources.	Students will use a model to generate data for iterative testing and modification such that an optimal design can be achieved.	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.	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.

LEGO® Education Science: England National Curriculum Overview

Year 7-9

Domains	Resources, Population	Kinetic Energy, Energy Transfer	Collision, Newton's Third Law	Senses, Brain	Animals, Inputs	Kinetic Energy	Sum of Forces	Ecosystems, Matter	Biodiversity, Solution Design	Ecosystems, Patterns	Solution Design, Criteria	Solution Design, Criteria	Ecosystems, Energy
Curriculum Description	Science Biology - the interdependence of organisms in an ecosystem, including food webs and insect pollinated crops - how organisms affect, and are affected by, their environment	Science Physics - processes that involve energy transfer e.g. changing motion - comparing the starting with the final conditions of a system and describing increases and decreases in the amounts of energy associated with movements	Science Physics - forces as pushes or pulls, arising from the interaction between 2 objects - forces being needed to cause objects to stop or start moving, or to change their speed or direction of motion	This lesson links to the learning themes: stimuli, responses, reflex actions.	This lesson links to the learning themes: sensory input, sensory receptors, learnt behaviour.	This lesson links to the learning themes: kinetic energy, speed, mass.	This lesson links to the learning themes: resultant force, Newton's Second Law of motion.	This lesson links to the learning themes: ecosystem, cycling of matter, producer, consumer, decomposer.	This lesson links to the learning themes: biodiversity, population decline.	This lesson links to the learning themes: ecosystem, predatory relationship, competitive relationship, mutually beneficial relationship.	This lesson links to the learning themes: problem-solving, design-criteria, design-constraints, design-testing.	This lesson links to the learning themes: evaluation, problem-solving, design-criteria, design-constraints, systematic design-testing.	This lesson links to the learning themes: ecosystem, cycling of matter and energy flow, producer, consumer, decomposer.
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**	**Loch Ness Express**	**Cow on the Roof**	**Chickens in Space**
Lesson Description	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.	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 develop a model to describe the cycling of matter among living and nonliving parts of an ecosystem.	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 describe the components of a problem and design a solution by defining criteria and constraints including potential impacts on humans and the environment.	Students will evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of a given problem.	Students will develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

LEGO® Education Science: England National Curriculum Overview

Year 7-9

Domains	Solution Design, Iterative Testing	Solution Design, Iterative Testing	Natural Disasters	Natural Selection, Characteristics	Reproduction, Offspring	Environmental Impact	Solution Design, Criteria	Offspring, Animal Behaviour	States of Matter	Forces, Motion	Energy, Energy Transfer	Biodiversity, Solution Design	Characteristics, Survival
Curriculum Description	This lesson links to the learning themes: iterative testing, optimal design, colour sensor.	This lesson links to the learning themes: design-improvement, shape, function, testing.	This lesson links to the learning themes: earthquake detection, simulator, design-criteria, testing.	Science Biology -heredity as the process by which genetic information is transmitted from one generation to the next - the variation between species and between individuals of the same species meaning some organisms compete more successfully, which can drive natural selection	This lesson links to the learning themes: sexual reproduction, asexual reproduction, variation.	This lesson links to the learning themes: environment, human impact, outdoor festivals, problem-solving.	This lesson links to the learning themes: problem-solving, design-criteria, design-constraints, robot waiter.	This lesson links to the learning themes: parent behaviour, offspring survival.	Science Chemistry - the properties of the different states of matter (solid, liquid and gas) in terms of the particle model, including gas pressure - changes of state in terms of the particle model - energy changes on changes of state	Science Physics - forces as pushes or pulls, arising from the interaction between 2 objects - forces being needed to cause objects to stop or start moving, or to change their speed or direction of motion	Science Physics - processes that involve energy transfer e.g. changing motion - comparing the starting with the final conditions of a system and describing increases and decreases in the amounts of energy associated with movements	This lesson links to the learning themes: supporting biodiversity, offshore wind turbine design, design criteria, design constraints, evaluation.	Science Biology - the variation between species and between individuals of the same species meaning some organisms compete more successfully, which can drive natural selection - changes in the environment which may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce.
Lesson Title	**Operate in Colour**	**Up Top Robot**	**Shaking Signals**	**Frosty Fur and Frozen Feet**	**Aliens Alike and Not Quite**	**Food Festival Fix**	**Robotic Restaurant**	**Feathers, Fur and Family**	**Troll Stole My Soup**	**Hit It, Move It**	**Energy Booster**	**Blades and Barnacles**	**Polar Paws**
Lesson Description	Students will generate data through testing to help them plan an optimal design process.	Students will develop a model for iterative testing and modification such that an optimal design can be achieved.	Students will develop a device to obtain data about earthquakes and mitigate their effects.	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 define the criteria and constraints of a design problem, taking into account ways the environment may limit possible solutions.	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.