LEGO® Education Science: Australia Curriculum 9.0 Overview

Lower Primary (Year 1-2)	**Curriculum**	**AC9S1U03**	**AC9S1U03**	**AC9S1U01**	**AC9S1U01**	**AC9S1U01**	**AC9S1U02**	**AC9S1U01**	**AC9S1U01**	**AC9S1U03**	**AC9S1U02**	**AC9S1U03**	**AC9S2U03**	**AC9S2U03**	
	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	
	Curriculum	**AC9S1U01**	**AC9S1U02**	**AC9S5U03**	**AC9S2U02**	**AC9S1U02**	**AC9S1U02**	**AC9S1U01**	**AC9S1U01**	**AC9S1U01**	**AC9S1U01**	**AC9S2U02**	**AC9S1U03**	**AC9S1U03**	**AC9S1U03**
	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
	Curriculum	**AC9S1U03**	**AC9S2U03**	**AC9S1U05**	**AC9S1U05**	**AC9S1U03**	**AC9S2I01**	**AC9S1U02**	**AC9S1U02**	**AC9S2U01**	**AC9S2U01**	**AC9S1U03**	**AC9S1U03**	**AC9S1U03**	
	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	
Upper Primary (Year 3-6)	**Curriculum**	**AC9S3U01**	**AC9S3U03**	**AC9S3U01**	**AC9S3U02**	**AC9S3U01**	**AC9S3U01**	**AC9S3U01**	**AC9S3U01**	**AC9S4U03**	**AC9S4U03**	**AC9S4U02**	**AC9S4U03**	**AC9S4U03**	
	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	
	Curriculum	**AC9S4U03**	**AC9S3U01**	**AC9S4U01**	**AC9S4U04**	**AC9S4U03**	**AC9S4U02**	**AC9S4U02**	**AC9S4U03**	**AC9S2U02**	**AC9S4U03**	**AC9S4U04**	**AC9S4U03**	**AC9S4U03**	**AC9S4U03**
	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
	Curriculum	**AC9S4U03**	**AC9S4U01**	**AC9S4U01**	**AC9S5U04**	**AC9S5H02**	**AC9S5U02**	**AC9S5U04**	**AC9S5U03**	**AC9S4U04**	**AC9S6U01**	**AC9S6U01**	**AC9S6U01**	**AC9S5U01**	
	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	
Secondary (Year 7-10)	**Curriculum**	**AC9S7U04**	**AC9S7U02**	**AC9S7I04**	**AC9S9U07**	**AC9S7U02**	**AC9S7U03**	**AC9S10U02**	**AC9S8H03**	**AC9S7I04**	**AC9S10U01**	**AC9S7U02**	**AC9S9U02**	**AC9S8U02**	**AC9S8U01**
	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
	Curriculum	**AC9S8U01**	**AC9S7U02**	**AC9S8U05**	**AC9S7U04**	**AC9S9U01**	**AC9S9U01**	**AC9S8U05**	**AC9S7U04**	**AC9S7U02**	**AC9S7U02**	**AC9S7U01**	**AC9S8U05**	**AC9S8U05**	
	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	
	Curriculum	**AC9S7U02**	**AC9S8U05**	**AC9S8U05**	**AC9S8U03**	**AC9S10U02**	**AC9S10U02**	**AC9S8H03**	**AC9S8U05**	**AC9S9U02**	**AC9S7U05**	**AC9S7U04**	**AC9S8U05**	**AC9S7U02**	
	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	

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Lower Primary (Year 1-2)

Curriculum	**AC9S1U03**	**AC9S1U03**	**AC9S1U01**	**AC9S1U01**	**AC9S1U01**	**AC9S1U02**	**AC9S1U01**	**AC9S1U01**	**AC9S1U03**	**AC9S1U02**	**AC9S1U03**	**AC9S2U03**	**AC9S2U03**	
Topic	Push and Pull	Push and Pull	Needs	Animals Habitat	Habitat Animals Needs	Weather Weather Forecast	Environment Pollinators	Environment Animals	Push and Pull	Shade Sunlight	Traffic Problem Solving	Problem Solving Implement Innovations	Transportation Engineering Design	
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	Dino Birthday Bash
Curriculum	**AC9S1U01**	**AC9S1U02**	**AC9S5U03**	**AC9S2U02**	**AC9S1U02**	**AC9S1U02**	**AC9S1U01**	**AC9S1U01**	**AC9S1U01**	**AC9S1U01**	**AC9S2U02**	**AC9S1U03**	**AC9S1U03**	**AC9S1U03**
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
Curriculum	**AC9S1U03**	**AC9S2U03**	**AC9S1U05**	**AC9S1U05**	**AC9S1U03**	**AC9S2I01**	**AC9S1U02**	**AC9S1U02**	**AC9S2U01**	**AC9S2U01**	**AC9S1U03**	**AC9S1U03**	**AC9S1U03**	
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	

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Upper Primary (Year 3-6)

Curriculum	**AC9S3U01**	**AC9S3U03**	**AC9S3U01**	**AC9S3U02**	**AC9S3U01**	**AC9S3U01**	**AC9S3U01**	**AC9S3U01**	**AC9S4U03**	**AC9S4U03**	**AC9S4U02**	**AC9S4U03**	**AC9S4U03**	
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	
Curriculum	**AC9S4U03**	**AC9S3U01**	**AC9S4U01**	**AC9S4U04**	**AC9S4U03**	**AC9S4U02**	**AC9S4U02**	**AC9S4U03**	**AC9S2U02**	**AC9S4U03**	**AC9S4U04**	**AC9S4U03**	**AC9S4U03**	**AC9S4U03**
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
Curriculum	**AC9S4U03**	**AC9S4U01**	**AC9S4U01**	**AC9S5U04**	**AC9S5H02**	**AC9S5U02**	**AC9S5U04**	**AC9S5U03**	**AC9S4U04**	**AC9S6U01**	**AC9S6U01**	**AC9S6U01**	**AC9S5U01**	
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	

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Secondary (Year 7-10)														
	Curriculum	**AC9S7U04**	**AC9S7U02**	**AC9S7I04**	**AC9S9U07**	**AC9S7U02**	**AC9S7U03**	**AC9S10U02**	**AC9S8H03**	**AC9S7I04**	**AC9S10U01**	**AC9S7U02**	**AC9S9U02**	**AC9S8U02**	**AC9S8U01**
	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
	Curriculum	**AC9S8U01**	**AC9S7U02**	**AC9S8U05**	**AC9S7U04**	**AC9S9U01**	**AC9S9U01**	**AC9S8U05**	**AC9S7U04**	**AC9S7U02**	**AC9S7U02**	**AC9S7U01**	**AC9S8U05**	**AC9S8U05**	
	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	
	Curriculum	**AC9S7U02**	**AC9S8U05**	**AC9S8U05**	**AC9S8U03**	**AC9S10U02**	**AC9S10U02**	**AC9S8H03**	**AC9S8U05**	**AC9S9U02**	**AC9S7U05**	**AC9S7U04**	**AC9S8U05**	**AC9S7U02**	
	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	

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Lower Primary (Year 1-2)

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 analyse different objects designed to solve the same problem to compare strengths and weaknesses.
Curriculum	**AC9S1U03**	**AC9S1U03**	**AC9S1U01**	**AC9S1U01**	**AC9S1U01**	**AC9S1U02**	**AC9S1U01**	**AC9S1U01**	**AC9S1U03**	**AC9S1U02**	**AC9S1U03**	**AC9S2U03**	**AC9S2U03**
Curriculum Description	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)	Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs. (Year 1)	Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs. (Year 1)	Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs. (Year 1)	Describe daily and seasonal changes in the environment and explore how these changes affect everyday life. (Year 1)	Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs. (Year 1)	Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs. (Year 1)	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)	Describe daily and seasonal changes in the environment and explore how these changes affect everyday life. (Year 1)	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)	Recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces. (Year 2)	Recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces. (Year 2)

LEGO® Education Science: Australia Curriculum 9.0 Outline

Lower Primary (Year 1-2)

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 behaviour 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 analyse data from tests of two objects designed to solve the same problem to compare strengths and weaknesses of the two designs.
Curriculum	**AC9S1U01**	**AC9S1U02**	**AC9S5U03**	**AC9S2U02**	**AC9S1U02**	**AC9S1U02**	**AC9S1U01**	**AC9S1U01**	**AC9S1U01**	**AC9S1U01**	**AC9S2U02**	**AC9S1U03**	**AC9S1U03**	**AC9S1U03**
Curriculum Description	AC9S1U01: Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs. (Year 1)	Describe daily and seasonal changes in the environment and explore how these changes affect everyday life. (Year 1)	Identify sources of light, recognise that light travels in a straight path and describe how shadows are formed and light can be reflected and refracted. (Year 5)	Investigate the effect of light and sound on objects and explore how these forms of energy are transferred. (Year 2)	Describe daily and seasonal changes in the environment and explore how these changes affect everyday life. (Year 1)	Describe daily and seasonal changes in the environment and explore how these changes affect everyday life. (Year 1)	Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs. (Year 1)	Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs. (Year 1)	Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs. (Year 1)	Identify the basic needs of plants and animals, including air, water, food or shelter, and describe how the places they live meet those needs. (Year 1)	Investigate the effect of light and sound on objects and explore how these forms of energy are transferred. (Year 2)	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)

LEGO® Education Science: Australia Curriculum 9.0 Outline

Lower Primary (Year 1-2)

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 analyse 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 analyse tests from two objects designed to solve the same problem by comparing strengths and weaknesses of how each performs.
Curriculum	**AC9S1U03**	**AC9S2U03**	**AC9S1U05**	**AC9S1U05**	**AC9S1U03**	**AC9S2I01**	**AC9S1U02**	**AC9S1U02**	**AC9S2U01**	**AC9S2U01**	**AC9S1U03**	**AC9S1U03**	**AC9S1U03**
Curriculum Description	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)	Recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces. (Year 2)	Everyday materials can be physically changed or combined with other materials in a variety of ways for particular purposes. (1-2)	Everyday materials can be physically changed or combined with other materials in a variety of ways for particular purposes. (1-2)	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)	Recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces.	Describe daily and seasonal changes in the environment and explore how these changes affect everyday life. (Year 1)	Describe daily and seasonal changes in the environment and explore how these changes affect everyday life. (Year 1)	Recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces.	Recognise that materials can be changed physically without changing their material composition and explore the effect of different actions on materials including bending, twisting, stretching and breaking into smaller pieces.	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)	Describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape. (Year 1)

LEGO® Education Science: Australia Curriculum 9.0 Outline

Upper Primary (Year 3-6)

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 analyse 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 colours 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.
Curriculum	**AC9S3U01**	**AC9S3U03**	**AC9S3U01**	**AC9S3U02**	**AC9S3U01**	**AC9S3U01**	**AC9S3U01**	**AC9S3U01**	**AC9S4U03**	**AC9S4U03**	**AC9S4U02**	**AC9S4U03**	**AC9S4U03**
Curriculum Description	Identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	Compare characteristics of living and non-living things and examine the differences between the life cycles of plants and animals	Identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	Compare the observable properties of soils, rocks and minerals and investigate why they are important Earth resources	Identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	Identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	Identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	Identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects

LEGO® Education Science: Australia Curriculum 9.0 Outline

Upper Primary (Year 3-6)

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.
Curriculum	AC9S4U03	AC9S3U01	AC9S4U01	AC9S4U04	AC9S4U03	AC9S4U02	AC9S4U02	AC9S4U03	AC9S2U02	AC9S4U03	AC9S4U04	AC9S4U03	AC9S4U03	AC9S4U03
Curriculum Description	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify sources of heat energy and examine how temperature changes when heat energy is transferred from one object to another	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects

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Upper Primary (Year 3-6)

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.
Curriculum	**AC9S4U03**	**AC9S4U01**	**AC9S4U01**	**AC9S5U04**	**AC9S5H02**	**AC9S5U02**	**AC9S5U04**	**AC9S5U03**	**AC9S4U04**	**AC9S6U01**	**AC9S6U01**	**AC9S6U01**	**AC9S5U01**
Curriculum Description	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	Explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships	Explain the roles and interactions of consumers, producers and decomposers within a habitat and how food chains represent feeding relationships	Explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles	Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions	Describe how weathering, erosion, transportation and deposition cause slow or rapid change to Earth's surface	Explain observable properties of solids, liquids and gases by modelling the motion and arrangement of particles	Describe how changes to the states of matter and combinations of substances involve the addition or removal of heat, and identify which changes can be reversed or irreversible	Identify how forces can be exerted by one object on another and investigate the effect of frictional, gravitational and magnetic forces on the motion of objects	plan and conduct repeatable investigations to answer questions, including identifying variables and planning fair tests	plan and conduct repeatable investigations to answer questions, including identifying variables and planning fair tests	plan and conduct repeatable investigations to answer questions, including identifying variables and planning fair tests	examine how particular structural features and behaviours of living things enable their survival in specific habitats

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Secondary (Year 7-10)

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.
Curriculum	**AC9S7U04**	**AC9S7U02**	**AC9S7I04**	**AC9S9U07**	**AC9S7U02**	**AC9S7U03**	**AC9S10U02**	**AC9S8H03**	**AC9S7I04**	**AC9S10U01**	**AC9S7U02**	**AC9S9U02**	**AC9S8U02**	**AC9S8U01**
Curriculum Description	investigate and represent balanced and unbalanced forces, including gravitational force, acting on objects, and relate changes in an object's motion to its mass and the magnitude and direction of forces acting on it	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information	model the rearrangement of atoms in chemical reactions using a range of representations, including word and simple balanced chemical equations, and use these to demonstrate the law of conservation of mass	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	model cyclic changes in the relative positions of the Earth, sun and moon and explain how these cycles cause eclipses and influence predictable phenomena on Earth, including seasons and tides	use the theory of evolution by natural selection to explain past and present diversity and analyse the scientific evidence supporting the theory	examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations	select and construct appropriate representations, including tables, graphs, models and mathematical relationships, to organise and process data and information	explain the role of meiosis and mitosis and the function of chromosomes, DNA and genes in heredity and predict patterns of Mendelian inheritance	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	describe the form and function of reproductive cells and organs in animals and plants, and analyse how the processes of sexual and asexual reproduction enable survival of the species	analyse the relationship between structure and function of cells, tissues and organs in a plant and an animal organ system and explain how these systems enable survival of the individual	recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles

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Secondary (Year 7-10)

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.
Curriculum	**AC9S8U01**	**AC9S7U02**	**AC9S8U05**	**AC9S7U04**	**AC9S9U01**	**AC9S9U01**	**AC9S8U05**	**AC9S7U04**	**AC9S7U02**	**AC9S7U02**	**AC9S7U01**	**AC9S8U05**	**AC9S8U05**
Curriculum Description	recognise cells as the basic units of living things, compare plant and animal cells, and describe the functions of specialised cell structures and organelles	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	investigate and represent balanced and unbalanced forces, including gravitational force, acting on objects, and relate changes in an object's motion to its mass and the magnitude and direction of forces acting on it	compare the role of body systems in regulating and coordinating the body's response to a stimulus, and describe the operation of a negative feedback mechanism	compare the role of body systems in regulating and coordinating the body's response to a stimulus, and describe the operation of a negative feedback mechanism	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	investigate and represent balanced and unbalanced forces, including gravitational force, acting on objects, and relate changes in an object's motion to its mass and the magnitude and direction of forces acting on it	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	investigate the role of classification in ordering and organising the diversity of life on Earth and use and develop classification tools including dichotomous keys	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems

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Secondary (Year 7-10)

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.
Curriculum	**AC9S7U02**	**AC9S8U05**	**AC9S8U05**	**AC9S8U03**	**AC9S10U02**	**AC9S10U02**	**AC9S8H03**	**AC9S8U05**	**AC9S9U02**	**AC9S7U05**	**AC9S7U04**	**AC9S8U05**	**AC9S7U02**
Curriculum Description	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	use the theory of evolution by natural selection to explain past and present diversity and analyse the scientific evidence supporting the theory	investigate tectonic activity including the formation of geological features at divergent, convergent and transform plate boundaries and describe the scientific evidence for the theory of plate tectonics	use the theory of evolution by natural selection to explain past and present diversity and analyse the scientific evidence supporting the theory	use the theory of evolution by natural selection to explain past and present diversity and analyse the scientific evidence supporting the theory	examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	describe the form and function of reproductive cells and organs in animals and plants, and analyse how the processes of sexual and asexual reproduction enable survival of the species	use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of the substance	investigate and represent balanced and unbalanced forces, including gravitational force, acting on objects, and relate changes in an object's motion to its mass and the magnitude and direction of forces acting on it	classify different types of energy as kinetic or potential and investigate energy transfer and transformations in simple systems	use models, including food webs, to represent matter and energy flow in ecosystems and predict the impact of changing abiotic and biotic factors on populations