Learning Pathway

Goals in stages for Science

Each goal has a corresponding activity plan

Living Things and Their Habitats

Living Things and Their Habitats

Stages 1 & 2

Experience mini beasts on or close to them using senses.	Encounter and touch, stroke or smell animals.	Experience of tactile sensations and actions on different body parts.
Meet different age people & listens to their voices.	Experiences different environments.	Experience a range of plants through the senses.
Increase body awareness.		

Living Things and Their Habitats

Stage 3

Explores bulbs.	Explores leaves.	Explores roots and corms.
Experience making some mini beast movements with support.	Explore pet care equipment.	Imitate animal sounds with voice or switch.
Use parts of body for different actions e.g. hands to touch, feet to kick.	Experience a variety of voices from different people.	Explores seeds.

Living Things and Their Habitats

Stage 4

Match some animal sounds to animals.	Attempt to imitate body movements and actions themselves or using dolls/ computer program.	Plant seeds and watch/feel them grow- observe how not all seeds grow.
Match mini beast sound/ movement to mini beast.	Role play- put animals in habitats in play situation.	

Living Things and Their Habitats

Stage 5

Identifies main parts of a face on self or doll.	Knows names of four animals.	Sorts three different flowers.
Finds evidence that creatures have eaten leaves.	Sorts natural items.	Recognise self as part of family.
Investigate and understand plants need water and light to keep alive.	Create mini beast habitats.	Identifies where familiar creatures may be found.
Names two main features of the natural environment.		

Living Things and Their Habitats

Stage 6

Uses and understands 'grow'.	Places eyes, nose, mouth on model of face.	Sort plants and animals.
Knows two things about dinosaurs.	Identifies legs on some mini beasts and identifies some minibeasts with no legs.	Names 8 items from nature.
Match six animals to their young.	Identifies 3 different types of animal tracks.	Knows main features of an animal.
Identifies and places limbs, body and head on model of human body.	Names four features of the natural environment.	

Living Things and Their Habitats

Stage 7

Help create and understand a simple family tree.	Identify some similarities and differences between varieties of tree.	Sort fish, birds and mammals.
Identify 2 differences between fish, mammal and birds.	Match 4 animals to global habitat.	Ask questions about animals.
Match ears, nose, mouth and eyes to sense.	Identify some similarities and differences between varieties of plants and flowers.	Understand that plants grow and recognize changes in them.

Living Things and Their Habitats

Stage 8

Recognise and name main external parts of the body.	Matches natural item to different 3 natural environments e.g. shell to beach.	Awareness that dinosaurs no longer live on the earth.
Knows 3 things humans need.	Match four animals to global habitat.	Understand why some animals can survive in different habitats e.g. camels in desert, penguin in water and land.
Identify main parts of a tree e.g. roots, leaves, trunk.	Identify main parts of a plant e.g. roots, leaves, stem.	Knows that fruit and vegetables are good to eat.
Sequence four stages of a plant growing.		

Materials and Processes

Materials and Processes

Stages 1 & 2

Encounter and show a reaction to processes happening to different materials.	Responds differently to tactile sensory input from different materials.

Materials and Processes

Stage 3

Attends jointly to adult and object.	Actively explore materials with interest e.g. scrunch foil.	Participate with 1-1 in experiences that cause things to change.

Materials and Processes

Stage 4

Select different materials for different purposes from choice of 2 (1 suitable , 1 unsuitable).	Makes things change by applying a process.	Understands function of some objects and matches to usage.

Materials and Processes

Stage 5

Sequences before and after evidence of materials changing e.g. making paper.	Make a change to a material and relay that they observe the change e.g. ice to water.	Sorts materials by single attribute.

Materials and Processes

Stage 6

Identifies the action or material that caused a change.	Test which items float and sink and use vocabulary float and sink.	Sorts materials by properties e.g. hard, soft.
Identify a similarity and a difference between types of materials.	Uses different processes to alter the shape of some materials in a variety of ways.	Sequences a three part change after an experiment e.g. ice, hot, water.
Test and identify 4 things that you can do with paper.		

Materials and Processes

Stage 7

Makes simple prediction of a change of material e.g. what happens.	Select appropriate material for a simple task.	Use subject specific vocabulary e.g. bumpy, waterproof, and wet.
Uses some measuring devises in tests.	Understand and use vocabulary e.g. freezing, cold, melt.	Use vocabulary before and after.

Materials and Processes

Stage 8

Make or direct an adult to make some simple boats from different materials and predict which ones will float or sink.	Sequences a process using up to 6 photos.	Compares properties of materials and comment on findings.
Identifies 3 common materials e.g. wood, glass, plastic.	Test 4 materials for purpose in relation to one another? Identify the best one.	Describe changes to a material in a test.

Light, Sound and Electricity

Light, Sound and Electricity

Stages 1 & 2

Smiles/gestures enjoyment to certain light or sound stimulus.

Light, Sound and Electricity

Stage 3

Briefly tracks motivating visual stimulus.	Moves in response to strong sound beat but may not be in time.	Experience operating electrical equipment using a single switch.
Consistent preference for specific colour of lights.	Briefly tracks motivating auditory stimuli.	

Light, Sound and Electricity

Stage 4

Activates simple equipment to make things work.	Communicates response to changes in sounds.

Light, Sound and Electricity

Stage 5

Identifies items that reflect light.	Makes loud and quiet sounds in imitation.	Selects appropriate electrical appliance for a task. and uses e.g. hoover to clean.
Aware that a light beam comes from torch.	Uses sound making equipment to explore sound and volume.	

Light, Sound and Electricity

Stage 6

Explore making shadows and show patterns.	Understands vocabulary dark and light.	Identifies sound sources.
Identifies electrical items in the room and at home.		

Light, Sound and Electricity

Stage 7

Identify light sources.	Knows battery operated items do not work without the battery.	Know how shadows are made.

Light, Sound and Electricity

Stage 8

Associates some sounds with vibrations.	Knows that sound travels.	Tests light sources and makes comments on findings.
Create a simple battery powered circuit with help.		

Light, Sound and Electricity

Stage 9

Communicates changes in light/ colours using simple adjective.

Earth, Space and Weather

Earth, Space and Weather

Stages 1 & 2

Experience a range of different weather.	Explores a variety of rocks, stones and pebbles.	Show awareness of dark changing to light and vice versa.

Earth, Space and Weather

Stage 3

Experience the weather changing during a day.

Earth, Space and Weather

Stage 4

Discriminates a round shape from a star shape.	Identify that weather is outside e.g. where is the rain?	Use senses to explore different rocks and fossils.

Earth, Space and Weather

Stage 5

Knows that the sun appears in the sky.	Select appropriate /item clothing from choice of 2 for specific weather.

Earth, Space and Weather

Stage 6

Sort different rocks.	Can find a 'sun' or planet shape from a choice of three.	Record and name weather as occurs using symbols/pictures.
Knows the moon and the stars appear in the sky.		

Eartch, Space and Weather

Stage 7

Names two things found in soil.	Know the sun gives light and heat during the day.	Keep a weather chart/diary.

Earth, Space and Weather

Stage 8

Identify a rock containing a fossil relative to one that does not.	Understands why soil needs worms.	Identify how people would travel to the moon.
Understands that it is dangerous to look at the sun and why.		

States of Matter

States of Matter and Weather

Stages 1 & 2

Encounter and respond to solids changing to liquids or vice-versa.	Experience properties of water.

States of Matter and Weather

Stage 3

Explore solids and liquids actively.

States of Matter and Weather

Stage 4

Feel and compare solids and liquids.

States of Matter and Weather

Stage 5

Sequences 2 pictures of before and after of heating and cooling of material.

States of Matter and Weather

Stage 6

Sequence 3 photos to show change.

States of Matter and Weather

Predicts what will happen when some materials are heated or cooled.

States of Matter and Weather

Stage 8

Knows how to make water change from liquid to solid and vice versa.

Working Scientifically

Working Scientifically

Stages 1 & 2

Uses 2 hands to hold and explore things.	Co-actively reach out to make things move.	Smiles or gestures in response to certain stimuli.

Working Scientifically

Stage 3

Shows anticipation of favoured activity when given cue.	Experiences now and next board with 1-1 support.

Working Scientifically

Stage 4

Use simple equipment with support e.g. scales, magnifiers.	Manipulate objects to create very simple experiments.	Actively experience 2 different concepts e.g. fast and slow.

Working Scientifically

Stage 5

Know same action can cause same effect in same circumstances.

Working Scientifically

Stage 6

Sorts by clear very distinct features.	Identify which items are floating and which have sunk.	Knows how to use hand lenses and egg timers.
Uses trial and error.	Communicates what they have just done.	

Working Scientifically

Stage 7

Use some descriptive words used to describe results.	Tells whether their prediction was right.	Ask a range of questions related to scientific activities.
Uses past experiences to make generalisations.	Make simple predictions based on familiar experiences.	

Working Scientifically

Stage 8

Suggests actions to perform on objects to test them.	Makes a simple block graph to show results.	Make a test fair.
Asks and responds to how and why questions.		

Forces

Forces

Stages 1 & 2

Briefly tracks motivating moving stimulus.

Forces

Stage 3

Knows action on an object can make it move.	Reaches out to touch or move things.	Press hard objects into soft textures with support.

Forces

Stage 4

Plays with magnets and shows one thing that is attracted to them.	Pushes objects to make them move.	Pulls objects to make them move.
Communicates a response to changes in movements.		

Forces

Stage 5

Experiment placing items on to a boat to make it sink and identify moment it sinks.	Make an object/item stop and start deliberately on command.	Identify which 3 things are attracted to magnets from a selection of 6.

Forces

Stage 6

Identify 2 things whose shape has stayed changed by pushing or pulling.	Demonstrates the difference between a push and a pull.

Forces

Stage 7

Knows a bigger push will make something move faster and further.	Names actions of pushing and pulling.	Makes an object move and stop deliberately on command.
Use vocabulary slow and fast and stop, moving and go.		

Forces

Stage 8

Find 6 things that are magnetic and 6 things that are not and record the results.	Predict which things a magnet will attract.