

My Science Playr



Questions children might want you to think about when you bring them to My Science Playroom:

- Do you want me to be an independent confident learner?
- What can I see, feel (emotionally), touch and smell?
- Will I have time and freedom to explore uninterrupted?
- If I want you to, will you play with me?
- When I engage in schematic, repetitive fun play opportunities I consolidate information.
- Will you give me time to set my own goals?
- Who will give me the terminology and explain strange phenomenon to me?
- Will you set a positive example and encourage me to extend my language?
- How will understanding and higher level communication skills enhance my reasoning and problem solving skills?
- Will you recognise and praise my achievements for future motivation?

Living Creatures



Display areas to explore; Talk about their anatomy, habitats and special features.

- Animals, Polar bears (endangered species), Veterinary clinic, Bats ..NZ only native mammal
- Dinosaur display, Fossils to explore
- Birds and their beaks, Wetlands, Penguins,
- Insects, Bees
- My anatomy, Models of body parts, X-rays
- Healthy diets, Food groups
- Habitats
- Emotions

SENSORY AND PERCEPTUAL

Various sensory and perceptual activities and materials available in the babies and toddler room to explore:

- Sandbox with various pouring and scooping activities
- Loose parts to explore in schemas
- Tree ecosystem and food cycle to explore
- Cave and light with animal families to explore
- Heuristic play
- Dramatic play resources in a play house
- Puppets
- Pretend play opportunities
- Vegetable garden and felt vegetables
- Wooden fruit and 'shop' dramatic play
- 'fire engine' dramatic play
- Car
- Rocking horse
- Climbing, sliding, etc.
- Ball pit boat
- Books, music and stories
- Other games and activities



ARTS AND CRAFTS



Various open ended art materials are available to use freely:

Paints, pens, pencils, dye etc.

Collage materials and glue

Clay or play dough (if available)

Natural resources

Recycled boxes, lids and tubes

Wood off-cuts

Other more complex activities to enhance play with other resources e.g. creating parachutes, air balloons or airplanes origami etc.

Forces



Resources and activities on display that explore different forces:

- Vortex tubes (density, air forces on different materials)
- Air canon (velocity, heat dynamics)
- Air blower(velocity, gravity)
- Bernolli Blower (velocity, Thrust, gravity,)
- Water and oil tubes (gravity, pressure, density and velocity)
- Car race tracks (motion, velocity, acceleration, gravity and friction)
- Ball run (gravity)
- Ball race track (weight distribution, velocity, motion)
- Uneven pendulum of Newton(dynamics and synchrony)
- Magnetism and various magnetic resources

ELECTRICITY , ELECTRONICS AND SOLAR ENERGY



Some of the activities that can be explored:

- Resources and activities that explore the notion of electricity:
- Von Graff Machine
- Electronics Brainbox activities to explore circuits
- Solar power activities
- Lego activities
- MR Edison Robotics
- Conductive or isolator

Robots and Coding



- Bee-bot play, coding and problem solving activities.
- Create your own plan for Bee-Bot.
- We organise expert John Mellisop to do a workshop with a range of robots and coding when a group are requesting it.
- MR Edison Lego robot

BIOLOGY



Some of the activities that can be explored:

- What is in the egg?
- The ecosystem in, on and around a tree
- Sea Creatures to explore, sort and categorize
- Nudibranchs
- Looking at conservation
- Submarine play
- Dinosaurs play games and 'fossil'
- Animals play and games
- Plants, leaves , seeds and flowers
- Anatomy
- Fish swimming around a dome
- Microscope explorations
- Family play in various habitats

ENGINEERING

- ***Some of the open ended activities that can be explored:***
- Gears
- Pulley system and levers
- Airplanes
- Lego and Duplo
- Trains and tracks
- Cars and tracks
- Blocks, mirrors and colours
- Pipes, tubes, scarves, balls etc.
- Geometric shapes of various kinds
- Marble Run
- Mine and trains



CHEMISTRY



***Fun hands on Experiments might include:
Watching changes happen in matter when
exposed to heat, chemicals or other
manipulations.***

- Colour diffusions
- Density experiments
- Emulsions
- Mixtures such as slime, play dough with various matter
- ‘Explosions’ with Bicarbonate of soda and vinegar or yeast
- Ph experiments
- Bubbles
- Viscosity etc.

MATHS and PROBLEM SOLVING

- *Various resources to play with to enhance understanding:*
- Fractions
- Fibonacci Fractals
- Puzzles
- Weight and volume
- Geometric Shapes
- Cylinders: length, width, size, height.
- Sorting
- Matching
- Categorizing
- Counting



SOUND



To explore sound we have some fun music instruments for you to use:

Old Piano

Keyboard

Harp

Sono bars

Shakers

Rhythm sticks

Boom whackers

EARTH SCIENCE

Explore the following at display areas:



WEATHER

- Rain cycle model and video song
- Seasons
- Adverse weather phenomenon pictures and videos

SPACE

- 'Rocket ship'
- Planets
- Matariki

EARTH:

- Earthquakes
- Volcanoes
- Rocks, fossils, pebbles and minerals
- Reduce, reuse and recycle (we encourage the reuse of materials)
- Sustainability (We prefer to use less plastic and more wood for our resources and reuse materials where possible).
- Augmented topography sandpit to create your own landscape

LIGHT



- Fun activities to explore the reflection of light.
- Concave and convex mirrors
- Optical illusions
- Fluorescent light and colours with dress ups
- Light box and resources
- Light prisms and light box
- Coloured geometric shapes for building
- Large Colour changing globe
- Fluorescent light
- Light box
- Light prisms and light

THERMODYNAMICS

- Play with various resources that generate heat in front of the thermal camera and see the image.
- Open the little freezer and play with some of the resources and see what happens to the colours on display.
- Augmented Topography landscape sandpit (create your own landscape and story with resources)

