

Changes

NEW ENTRANT AND YEAR 0 – 1 TO PLAY WITH THE VARIOUS ACTIVITIES AT THE DISPLAYS AND LEARN NEW TERMINOLOGY AND IDEAS ABOUT CHANGES THAT HAPPEN IN THEIR WORLD.

YEAR 2 AND 3 TO PLAY WITH THE VARIOUS ACTIVITIES AT THE DISPLAYS, LEARN NEW TERMINOLOGY, FORM A HYPOTHESES, EXPLORE AND ANALYSE THEIR HYPOTHESES, THEN FORM AN OPINION ON THEM THAT ARE VALID AND SHOWS SOME UNDERSTANDING OF UNDERLYING THEORIES ABOUT CHANGES THAT HAPPENS IN THEIR WORLD.

Changes that happen over time in living creatures.

1. Animals, birds, insects, fish change over time

look at life cycles near the insects display at the Monarch Butterfly, Eggs, Caterpillar and Chrysalis in their various stages of life.

2. Felt sets on the life cycles of the caterpillar and the bee.

3. Fish in the aquarium. Lugi's and Plec are hiding in the shipwreck, ground feeder change the environment to be habitable for the other fish by eating the algae.

4. Various creatures come from eggs in What's in the egg display and will give you clues to the range of creatures that could come out of an egg as part of their life cycle changes.

5. Food chain: Look at the tree and the various creatures that live in the tree. How will each one's life benefit the other? How will all of them benefit the tree?

6. Classify and sort the different categories of whales and sharks and look at the differences they have. They all have changes as they mature. Can you think of a few changes? (Clues: they grow in size,, change eating habits from suckling to eating, some might have babies and nurture them in various ways)

Changes in ecosystems

1. Weather changes: do you know what is a hurricane, cyclone and tornado? Look at the pictures and see if you can name some of them.
2. Look at the definitions on the pictures or look at the short video's on the notebook to inform yourself about changes in weather and weather phenomenon.
3. What happens if it stops raining? What is your hypotheses? Let the picture of drought be a clue.
4. Describe the water cycle while looking or touching the display or poster of the water cycle.
5. What happens if there is a flood? Look at the pictures and share your hypotheses on what might have happened.
6. Look at Fibonacci code as a guidance to note the similarities in the pictures and objects and state what you find that is similar and what changes you can see / or think might happen over time. (Clue: weather systems moving, stars systems moving round and round, leaves, flowers and seeds developing in a tight small bundle that expands as it grows.
7. Why do we 'reduce, reuse and recycle?' Can you see how a turtle might mistake a plastic bag for a jellyfish? What changes can we make for use of rubbish to protect the environment. Look at the displays and tell someone.

DO NOT TOUCH	BEWARE: DO NOT TOUCH THE VON GRAFF generator if you have heart problem, hearing aid or pacemaker.
Play	Play with the Von Graff machine and see what static electricity does to paper, feather, to your hair etc.
Play	Play with the Plasma Ball and see what changes the gases inside it undergo when you add the heat of your hand to it.

Changes to electricity

Changes to Forces

- ▶ Play with the Air Blower and experiment with balls and scarves to form a hypotheses of what is happening. Once you understand how it works you can get creative and add balls, scarves and other ways to enhance the experience by making up your own games with it.
- ▶ Play with the air canon and see how the little adjustments you make to the control handle changes the direction of a blast of air.
- ▶ Play with party fog in the air canon and see how cold air changes the warm fog circle as it gyrates through the air towards your target.
- ▶ Play with the Bernoulli Blower and see the changes air pressure and the weight distribution of various objects changes the velocity and thrust of it as moves around in the air.
- ▶ Play with cars on a track with varying levels of gravity and friction. See how gravity and friction, momentum and velocity changes the acceleration of the cars. Through systematic analysis and elimination figure out which car and which track is the fastest. Make a hypotheses and say why you think it is.
- ▶ Play with various sized balls, tins with weights and weight distributed cylinders to find out which ones are the fastest. Make a hypotheses and test it.
- ▶ Play with the different vortexes filled with air and various objects and see how they change their state once the force of the air moves them around.
- ▶ Play with the force of air moving through different densities of fluids and see the changes it brings in the liquids.
- ▶ Magnetism: Play with the various kinds of magnetic objects: magnetic sand in a cylinder and on a flat surface. Play with magnetic spheres and magnetic sticks. Catch magnetic fish. Play with the Maglev train. What changes can a positive and negative magnet bring to train movements?
- ▶ Examine various rock samples and see if you can find lava rocks, pumice, fossils, crystals, pebbles etc. and explain the changes that happened to them over time.

Changes to sound

- ▶ Explore sound tonal ranges, rhythms, melodies, stories, creating your own music in our large sound area with various kinds of instruments.
- ▶ Look at the piano hammers and various strings that produces various sounds.
- ▶ Play with the sound differentials in the Rocket Ship.
- ▶ (Older children only) Play with the Oscilloscope and microphone to look at sound patterns you can create.

Changes in the anatomy of various living creatures

- ▶ Play you are a veterinarian and examine each different living creature that is in the clinic. Use the patient cards to record the details of the different kinds of creatures.
- ▶ Build the skeleton of a human and match the various x-rays on top of it. Name the various body parts.
- ▶ Look at your facial expressions and name your facial features that change when you smile. Name the various expressions you can make when looking at those on display.
- ▶ (Sometimes we have face paints to extend this activity)
- ▶ Look at the various models of the heart, eye, plant and human cells.
- ▶ Can you name the changes that takes place in your body when you breathe?
- ▶ Can you name the changes that takes place in your body when you eat?
- ▶ Look at your fingernail under the microscope and compare it to someone else's. What can you see? What changes to an object can you see with your eye and then when you look under the microscope?

Changes in geometry

Play

Play with shapes, name them, feel them, build with them and get familiar with their qualities.

Build

Build tessellation constructions with shapes.

Use

Use mirrors and reflections to add interest to your constructions.

Play around

Play around with fractions and shapes and see how they match, fit and change shapes.

Use

Use symmetry to build constructions.

Use

Use equilibrium in designing and constructing structures that can reflect light.

Changes brought by light

- ▶ Play with the dark lights in the darkroom and experiment with dress ups in white and fluoro colours in design, dramatization, dance, music and songs.
- ▶ Play with the light box and different coloured lenses, shapes and geometric shapes to build and design structures, create light effects and rainbows.
- ▶ Read the poster for clarification.
- ▶ Play with the colour wheel and turn it fast to see what happens.
- ▶ Look at the big globe and see the changes different colours in light can make in the dark.
- ▶ Play around with the various light box resources in the basket. Be creative and create a picture.
- ▶ Tell a story using the shadow props in the light box theatre.

Changes through art

Create and make

You can create and make changes you like to a picture or art piece with various art materials such as paint, drawing materials, wood, natural resources, collage, and sometimes clay.

Explore

Explore changes in colours through mixing of paints or dyes.

Explore

Explore changes to paint with wet and dry paints and adding materials to press into it to form patterns or shapes to your backgrounds.

Changes in matter

1

Come and join us at the experiment table to explore the changes in matter through hands on experiments that explore gasses, liquids and solids.

2

Learn new words such as density, mixtures, emulsions, diffusions, evaporation, etc.

3

Play with the toys in the freezer to explore the qualities of thermodynamics.

Changes to plants

- ▶ Life cycles of a bean growing in a enclosed space.
- ▶ Seasonal changes to plants in their growing cycle. Look at various plants in the centre and what they look like. (e.g. bulbs growing)
- ▶ Explore changes to leaves during photosynthesis changes in gases, looking at changes in condensation on the plastic bag with leaves from our growing beans.
- ▶ Changes to flowers after pollination see poster and look at flowers under the microscope.
- ▶ Look at colour exchanges to see how plants suck up water into all parts of the flower in a colour experiment with white flowers.
- ▶ Match various leaves to their shapes on the display and talk about the changes of shapes, textures and colours you can see and feel.

Changes to Birds

- ▶ Look at the adaptations of birds beaks to the food they eat at the display. Can you match them to certain tools?
- ▶ Can you look at different bird's feet and match them to their habitats? (Webbed feet, long toes, short sharp toes, claws).
- ▶ Can you name some native birds?
- ▶ Which bird is our national bird? Look at its anatomy at the Veterinary clinic and see if you can write its features on the Patient Card.
- ▶ What is the greatest threat to Kiwi's?
- ▶ How can we save our Kiwi? (Clue: conservation areas without dogs, cats and possums).