

## For the Love of SCIENCE

Why is the grass green?

Is the moon far away?

How does a volcano erupt?

What will happen if all the bees die?

As we know, every day, minute by minute, there is always a continual flow of questions from our inquisitive 3 and 4 year olds at Preschool! Our NZ Early Childhood Curriculum, Te Whariki confirms that children are born scientists – they are innately curious about their physical environment and constantly seek to make meaning of their explorations and conversations with others. With this forefront in our minds as teachers, we ensure that a basic introduction to all aspects of science is experienced at Preschool.

Young children are motivated to learn about science – it is a natural part of their discoveries in daily life, and with minds ready to absorb new facts and ideas, it is our role to ensure this is capitalised. Eshach and Fried (2005) suggest that positive early science experiences help children to develop scientific concepts and reasoning, positive attitudes toward science, and a better foundation for scientific concepts to be learnt and studied later in their education.

At our Preschool, children experience real **Chemistry** (material world) through scientific experiences – mixing colours with water and paint, bubbling volcanoes with baking soda, vinegar and dye in the sandpit, melting and dissolving ice cubes, dancing milk with dye and dishwashing liquid, messy play with various textures – cornflour and water – hard and squishy, baking muffins for morning tea – weight, measurement – how will they rise in the oven, exploring the effects of vinegar and baking soda as a rocket ship explodes in the air, tissue paper and dye, mixing primary to secondary colours – trying experiments whether they fail or succeed is all about trial and error and extending the curiosity factor.

Learning about **Biology** (living world) entails many things including growing seeds to plant in our garden and watching them grow before picking them to eat for the children's meals; making lemonade by squeezing and mixing, after growing them on our own lemon tree; sprouting potatoes in the potato plot, feeding our scraps to the worm farm and making compost to be used in the

garden. There are pets and animals we house each year, with the children gaining empathy as they care for them through feeding, cleaning them out and nurturing them. Piglets, sheep, frogs, turtles, leopard geckos, axolotl, life cycles of chicks as we watch them hatch from eggs to chicks. The never-ending quest for learning with a genuine and real hands on approach is paramount. Bugs and creepy crawlies always a delight to young children – with magnifying glasses to get closer to a spider's 8 legs or the spots on a ladybug as it creeps from its ladybug house on the wall. A real beehive with leaf cutter bees to hatch and pollinate our bee garden of flowers. Essential science process skills like observing, classifying and sorting all begin at Preschool.

The world of **Physics** (physical world) includes forces, light and sound. Does a light bulb work when the electrons are joined to a potato or only metal? What floats? Will a stone or feather float or sink? Let's try in a bowl of water. Boats with sails are made in our 'extension time' and we take them to the school pool to watch them sail or sink. Magnets pick up ball bearings, while hidden in a box; magnetic sand floats off the end of a magnet wand – all causing squeals of delight from the ever investigative children. Mirrors and reflections, big and small, and images in the crazy shaped mirrors bring laughs and enquiries why?

**Geology** (planet earth) is continued throughout all facets of the programme – researching 'dinosaur' fossils on the internet before mixing plaster of Paris with hidden bones in to dry, before digging them out with tools and safety goggles – real life archaeologists, impromptu trips to One Tree Hill to see the crater and how it is formed with the rocks, volcanoes with eruptions and how earthquakes occur – with regular practices of emergency evacuation drills, putting a practical effect in preparation should this ever occur in Auckland.

**Astronomy** and the world beyond brings visits to Stardome to experience the observatory and back at Preschool, we learn about planets and stars as we black out an area to represent Outer Space for a life like experience. We research answers to the children's questions about why we can only see half the moon some nights and then a full moon other nights. We celebrate Maori New Year – Matariki, and learning about the importance of the seven stars with visits to Auckland Museum.

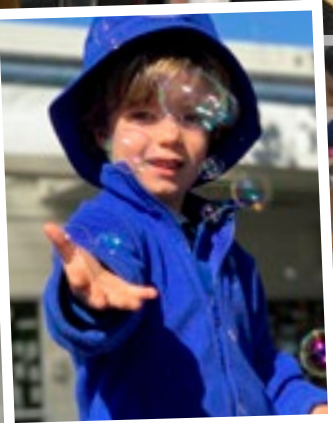
Science is not just an inquiry- based instructional approach at Preschool but an effective, practical, researched and excellent means of ensuring our youngest children understand and are **excited by basic scientific principles as they ready themselves for school.**

Our teachers LOVE teaching and we teach children who LOVE learning – the future belongs to the curious. The ones that are not afraid to try it, explore it, research it and question it!

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Mrs Sue Nash  
Preschool Director





## Budding Young Scientists!

Have you ever seen a raisin dance? Or maybe even milk?

Our preschoolers have so much to discover and science is one of the many exciting areas that brings their learning to life. Dancing raisins was just one of many experiments the children have tried. So just how do you make a raisin dance? Ask our preschoolers! They will tell you that if you add an alka seltzer tablet to water, the raisins will 'dance' on the surface of the water as the carbon dioxide bubbles attach to them. And, if you want to watch milk 'dance,' add food colouring followed by a little detergent -and watch the swirling, whirling action on the surface!

Preschool children are both inquisitive and open-minded - the perfect traits for budding young scientists! The children took part in more than 20 learning activities that introduced different aspects of science, learning how chemistry, biology, physics, geology and astronomy play a part in their everyday world. They enjoyed watching things fizz, pop, explode and slime as they tested their theories using different materials and liquids.

Science continues to be a vital part of teaching at the Preschool as it helps the children to develop important life skills such as problem-solving, communication and research. Maybe there is a budding Einstein, Newton,

## Chicken Whisperers!

With the arrival of an incubator to keep fertilised chicken eggs warm, our children kept a close eye on the eggs, waiting for the first 'pip.' Within three days, eleven new chicks were born! Placed under a heat lamp, it didn't take long for the bedraggled newborns to fluff up into very appealing, fluffy wee chicks! Cue chicken whisperers! Our preschoolers moved in keeping watch on the growing chicks, taking it in turns to feed and handle them. As fluff was replaced by feathers, the chickens were ready to be moved outdoors and proved a constant source of fascination for the children.

Caring for animals helps develop a sense of compassion and our young chicken whisperers certainly showed their caring nature as they nurtured the new arrivals. Once full size, the birds were moved on to free-range at Sue's parents' lifestyle block in Kumeu. The children are waiting for their first taste of free-range eggs!







## A Visit to the Zoo

On a beautiful, sunny day 52 children accompanied by 26 adults boarded a bus for a trip to Auckland Zoo. Whilst many of the big animals were fast asleep in the heat, the children still had a great time spotting animals and learning new facts.

From the safari walk with the giraffe, zebra and ostriches, to the cheeky meerkats and beautiful flamingos, and onto the NZ bird enclosure, the children were kept busy. A favourite was watching the elephants undertaking tasks with their keepers, before having lunch in the shade beside the seals.

On return to Preschool, the proliferation of artwork inspired by the trip was amazing! The sleep room became a safari space with monkeys hanging from leaves and birds flying high, with lions and tigers of every size prowling along the walls. It was a very worthwhile trip to extend the children's learning.

## Caring for Piglets

To tie in with the Chinese Year of the Pig, Jacko and Lucy, two kune kune piglets, arrived at Preschool. The children immediately took them into their care, bottle feeding them twice a day, spoiling them with fresh vegetables and fruit, and bathing them regularly.

The children loved having the piglets around and enjoyed playing with them in their outdoor area. After five weeks of caring for the young animals, they returned to their kune kune farm where Lucy became a show pig and Jacko continued to be a pampered pet at the home of the President of the Kune Kune Association.



## Who Let the Dogs Out?

Children's book, 'Hairy Maclary' by Lynley Dodd was brought to life last term. Inspired by their passion for books and reading, the children created 'Hairy Maclary' art, puppets, soft toys, books and puzzles that filled the Preschool.

A whole area was transformed into a 'Hairy Maclary dog park' with amazing artworks on the walls and a series of Hairy Maclary books scattered around for the children to read. The children absolutely loved it and even put together their own Preschool illustrated book of 'Hairy Maclary from Donaldson's Dairy.' Books with rhyme and nonsense words encourage fun and delight for children in the learning of literacy, which is an integral part of our learning at Preschool.







## Peace Begins with Me

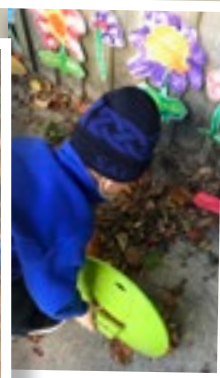
Our 4-year-olds were part of a special event that focused on the importance of contributing to make a happier and more peaceful world. The Sri Chinmoy Oneness Peace Run International Runners visited the Boys' School to share their motto, 'Peace Begins with Me' and to encourage the students to exercise kindness and love.

Each child made their own peace dove which they held throughout the event and did a number of dove drawings which they donated to the runners to take back to Rome. The event was exciting for both the children and staff as they were able to touch the torch which was carried by Preschool dad and Tall Black, Tom Abercrombie.



## Celebrating Autumn!

After a windy autumn night, the Preschool was ankle-deep in brown and red leaves. There's nothing like the change of seasons! The youngsters raked up the leaves and put them into piles, then scuffed through them, enjoying the crackle and rustle, before throwing handfuls in the air to watch float away on the wind!



## Joining in Celebration

Dressed in tartan sashes, our preschoolers enjoyed the Scottish festivities at our primary schools. The girls joined in with Flora MacDonald Day at the Girls' School while the boys headed to the Boys' School for Celtic Day, both marching behind the College Pipes and Drums and proudly waving to their parents!

