Why is science important in our students’ lives?

At a glance
Science involves a lot of communication with other people.
Science develops patience and perseverance in kids.
It can help kids form a healthy dose of scepticism.
Science teaches kids about the world around them.
Science can spark in kids' minds that they, too, can help solve the world's big problems.

Science helps answer all those tough questions kids ask, like ‘Why is the sky blue?’ and ‘Where do stars come from?’

Science teaches kids about life
Science involves a lot of talking and listening to others; it develops patience. Add to the mix are skills for life such as perseverance, problem-solving and researching.
It can teach children to form their own opinions, rather than taking those of others.
It helps kids to think about what could happen before they do it, to create a hypothesis in their mind. Kids learn that not everything works the first time. Some experiments fall in a heap and you have to find out what went wrong, and try again.
Science in school also teaches kids about the way the world works eg, how clothes are made or why volcanoes erupt. It can spark ideas in kids' minds that they, too, may one day be capable of creating solutions to big problems such as reducing poverty through the improvement of seed genetics to grow stronger crops or solving the issues around improving the quality of drinking water for the people in third world countries.
Australian notes and coins were our focus in the beginning half of this term. Our students were able to use real and play money to recognise Australian coins and notes and many extended their knowledge to ordering, counting small collections, and even beginning to give change! Our students also enjoyed doing rubbings of coins as well as exploring the animals and people who feature on our currency. Our classroom became a shop on a few occasions and everything was for sale, including, on one occasion, the teacher!

We have moved on to exploring fractions for the remainder of the term and have been amazed at the level of knowledge and willingness to learn. Students have been able to recognise and record whole, half and quarters of shapes and many are expanding their knowledge to thirds, eighth’s and beyond!

We have enjoyed sharing our knowledge with Mrs Castleton’s class during our buddy class sessions as they too have been exploring fractions. During our Buddy Class Pizza making session, many students made the connection of what we had been learning in class, to divide their pizza’s into halves and quarters once it was cooked. It was fantastic to see a transfer of knowledge.

Room 7 has focused on different areas in Maths throughout the term. At the beginning of the term we focused on Time and connected the days of the week to familiar events and actions. We distinguished the difference between morning, afternoon and night and discussed different activities we may perform during these times. The students thought it would be very silly to eat breakfast in the afternoon or go to bed in the morning! We organised our daily routines and began to use the terms ‘before’, ‘during’ and ‘after’ to describe out actions.

Through the middle of the term we changed our Numeracy focus to Measurement and began to explore which is longer, heavier and which holds more. We enjoyed exploring with the many different forms of measurement and experimenting with items such as the scales, volume containers with sand and water and using pop sticks, counters and our own hands to measure items around the classroom. We compared objects directly, by placing one object against another to determine which is longer and also by pouring sand or water from one container into the other to see which one holds more. The following question was asked; “When I measured my foot I needed 8 counters but only 5 match sticks, why are the results different?” This question was met with many different answers; however, after some careful research and exploring we were able to explain the following answer; “the match sticks are longer then the counters so they take up more room.”

For the last part of the term we are focusing on Number Patterns, Ordinal Numbers and Sharing. We now understand and use terms such as ‘first’ and ‘second’ to represent position, this was best learnt through line order and playing competitive games. Week 9 and 10 will see us explore practical strategies for adding small groups of numbers and sharing items between friends.
The students in Mrs Greenwood’s Maths group have been working on the area of geometry and measurement. At the beginning of the term we looked at and sorted 2D shapes based on their properties. We drew and looked for 2D shapes in natural and made spaces, we found that squares and rectangles were very common around the school. Shapes like hexagons and octagons were harder to find, but if you looked closely they could be found.

In our unit on Measurement we have explored analogue time, looking at the features of a clock. We made our own clocks and used these to make o’clock times and half past times. We explore length of time, one minute is a long tie compared to one second. We investigated the different things we can do in 1 second, 1 minute and one hour.

We have in the last few weeks been investigating units of measurement such as length, weight, and capacity. We have learnt how to measure how long and wide something is by using string, counters, blocks and frieze tape. We have used balance scales to measure how heavy or light something is and just recently we have investigated how much space is inside different containers.

As we have been investigating these different measurements we have been comparing two items together, we have discovered that to make it a fair test, we need to use the same things to measure and compare. For example if we wanted to know how heavy a glue stick is compared to scissors then we needed to use the same unit to measure both these items, we can’t use blocks for one and counters for the other because that would not be fair and we can’t compare the two. We have discovered that two containers may look larger or smaller, but when we measure the inside space with the same unit they actually hold the same number of items inside.

Numeracy in Term 3 has focused on 2D shape, 3D shape, fractions, time and money. Currently, students in Miss Pilla’s Maths group are learning to tell time in both analogue and digital form, to the quarter past and quarter to. We have used different tools and equipment to help us to tell the time, and are investigating the many ways we can record time. For example, **12:30, half past twelve, half past 12, ½ past 12, twelve thirty, 12 hours and a half, 12 hours and thirty minutes**, etc. Gee, time can be tricky!

In our fractions work, we discovered that a circle can be divided into three equal thirds, but it really difficult! We had to find some calculations and handy hints to work out the thirds.

Learning to count by 5s to tell the minutes.

Making paper clocks with Mrs Riggs!

Making thirds on our ‘yummy’ paper plate pizzas!

Making 3D shapes from nets.
Room 6
Outdoor Nature Based Play

Room 7 - Measurement

Room 4 Fractions and money
Mrs Taylor’s Learner Wave - Shape and Fractions Work

Mrs Greenwood’s Measurement lessons

Room 1 with their fraction and time work
Students in the Learner Wave group have spent recent weeks learning about shapes and fractions. By the end of the unit, they were expected to name, describe, compare and draw various 2D and 3D shapes. Within the group, students worked at their own level depending on their prior knowledge. Students created 2D and 3D shape pictures, symmetrical patterns with various shapes, reflection art and played barrier games in which they gave instructions to a partner to draw a particular design and then compared their pictures to check accuracy. When it came to constructing 3D shapes, students were not allowed to use a ‘net’. They had to examine 3D shapes and determine the 2D shapes that form them e.g. a rectangular prism is formed with 4 connected rectangles and 2 squares. Many students were able to make cubes, square based pyramids and rectangular prisms. Some students chose to take on a challenge and try to construct a sphere and although they were not successful, they were able to learn from their mistakes.

Declan and Will’s first attempt at making a sphere

During the fractions unit, students were working on naming and describing various fractions and recording fractions visually and numerically. They learnt to draw equivalent fractions, add fractions with the same denominator and find fractions of collections. Some students were able to find fractions of hundreds numbers. After the post unit assessment, students used their test results to set their own goals for the remaining fortnight.

In Numeracy this term Room 1 students have been learning about fractions, data collection and display and time. In our fraction learning we started by cutting shapes in halves and quarters and then we moved onto halving and quartering numbers. We learned that halving numbers is the same as sharing between two and quartering numbers is the same as sharing between 4. After this some of us progresses to finding thirds of shapes and numbers although we found this much trickier as we could not just fold the paper like we could with halves and quarters.

During our data collection and display unit we learned how to draw a table and make tally marks when we collected our data. We collected data on favourite colours, food and hair colour. One group also went out into the school car park to collect data on car colour. Once our data was collected in our tables we then drew bar graphs to show our results. We learned that in order to be an accurate representation our graphs must be evenly spaced between numbers and that we must use a ruler when drawing our lines. As a part of our learning we also looked at how to read different kinds of graphs such as pictographs where one picture can represent several objects and bar graphs.

During our unit on time we began by looking at analogue clocks showing o’clock and half past before moving onto quarter past and quarter to. Some of us then progressed further, counting round in 5 minutes and working out the differences between two given times. We worked out how to calculate the amount of seconds in a given amount of minutes and the amount of minutes in a given number of hours.
In Mr Short’s Maths wave group we have covered the two topic areas, Measurement and Location Transformation, Shape and Geometric reasoning.

At the beginning of term 3, measurement was the focus of the children’s work. There was a large focus on time at the beginning of this topic where the students looked at the conversions between analogue notations to 24hr-digital notation. As the children progressed the focus moved from converting time to being able to read timetables and calculating elapsed time for real life situations. Following on from times, the students then looked at different ways of measuring objects and distances, such as length, area and volume. Using this knowledge the children finally looked at how they could apply this knowledge to real life problems, allowing the students to realise the importance of this area of Maths in their everyday lives.

During the second half of term 3, the pupils have mean working on Location Transformation, Shape and Geometric reasoning. Using the pre-test results as a guideline, the focus of this topic in our wave has been shape and symmetry. To begin with the children learnt about the term ‘polygon’ and how you can decipher an irregular polygon from a regular polygon. As the children have felt more comfortable with shapes, we have moved from 3D shapes and how we know their names by their properties, to being able to draw our own nets of 3D shapes. To end term 3 the class will visit the topic of symmetry, which will include transforming and tessellating of shapes.

In Miss Nolan’s Maths class the students are working on the topic- Location Transformation, Shape and Geometric reasoning. As always, we begin by using a pre-test to group the students and this helps the teacher work at a specific level for each child’s knowledge and understanding.

To begin with the students were identifying different properties that make a polygon irregular or regular. Things the students were able to investigate themselves were- the pattern between the sides and angles. They have also been constructing 3D prisms and pyramids using 2D nets.

The lessons are structured by starting with Quick Maths which is aids as a way for students to check where their misunderstandings still are and gives them a chance to revisit previous learnt concepts. We then move onto core learning where a new concept is taught to the students and time is allowed for them to investigate this, we then finish with personal learning and this a chance for students to further develop their skills on the topic by undertaking a personal project, this topic it is Geometry Town. The students are loving the chance to give a birds eye view on a town by adding in different geometric concepts they have learnt.

To finish off the term the students will be moving onto transforming shapes using a Cartesian planes and finding angles of different regular and irregular polygons.
The primary years students have had a focus on ‘Shape, Location, Transformation and Geometric Reasoning’ for the past few weeks and until the end of term 3.

For those students who work in Room 12 with Zoe and I for maths waves, our core learning has been spent on understanding the properties of 2D and 3D shapes. This includes the names of these 2D shapes and 3D solids, the connection between the two, and pyramids and prisms.

This week, students started investigating the nets of 3D solids. Our first step was to predict what the nets of these shapes may be using our knowledge of 2D shapes and pyramids and prisms.

Students then chose the net of 3D solids to construct.

After construction, we had a group discussion based on our findings and were able to confirm the shapes using our knowledge of 2D shapes and pyramids and prisms. The next challenge is to find as many nets of a cube as possible!

In addition to our work on shape, students have been excited by their personal maths projects. The basis of this project is for students to create a bird’s eye view of a town using their knowledge of geometry. On the graph paper, students are including things such as parallel roads, perpendicular roads, intersecting roads, different shaped buildings with creative names e.g. Triangular Taco Shop, angles including acute, right, obtuse and reflect as well as grid references.