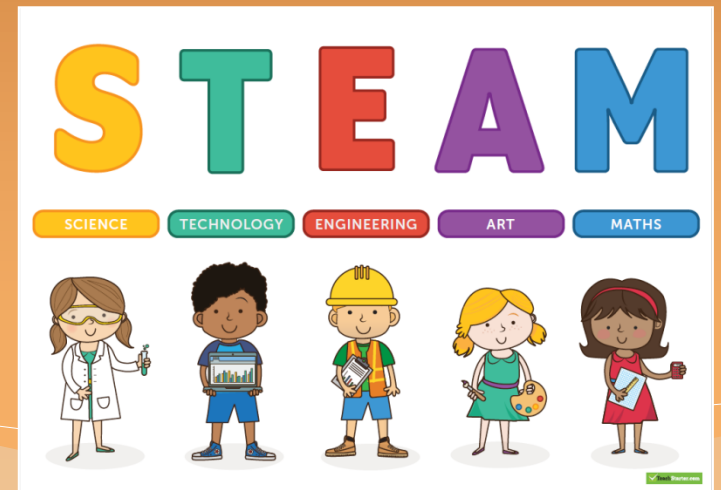


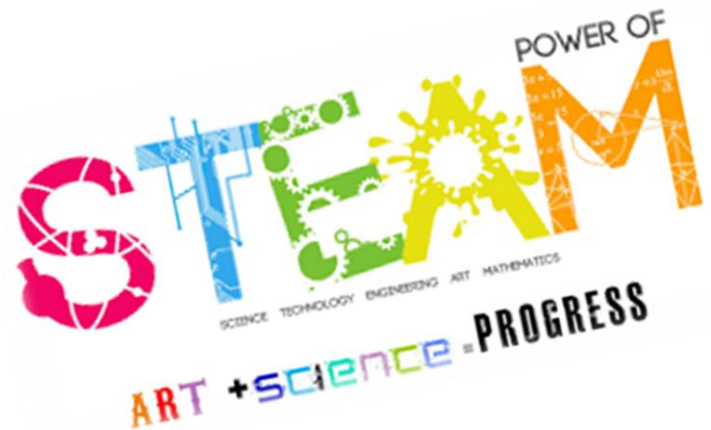
# STEAM in Pre-Primary



# What does it look like?

**STEAM is incorporated into our Pre-primary program in multiple ways:**

- STEAM challenges
- STEAM projects
- Embedded within the Indoor environment
- Embedded within the Outdoor environment



# STEAM Challenges

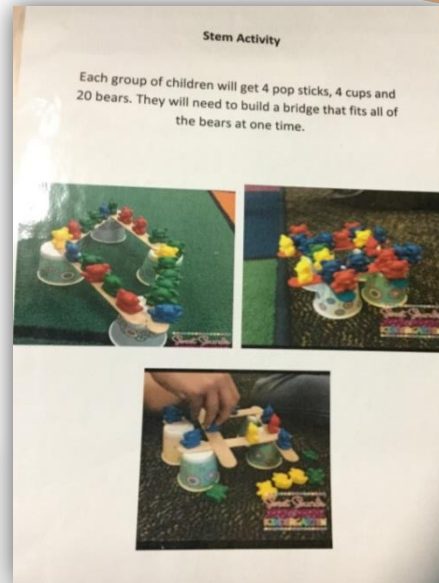
- Students work on STEAM challenges as a team.
- Students explain strategies used to complete task.
- Encouraged to consider what did and did not work.
- Provide time to apply new understanding.
- Complete the challenge at a subsequent time.

Students develop:

- leadership skills
- group work
- problem solving and
- critical thinking skills during these challenges.



# STEAM Challenges



*Who can build the tallest cup tower?  
Students must work together to build a tower as tall as possible.  
However it must be strong enough to stay standing!*



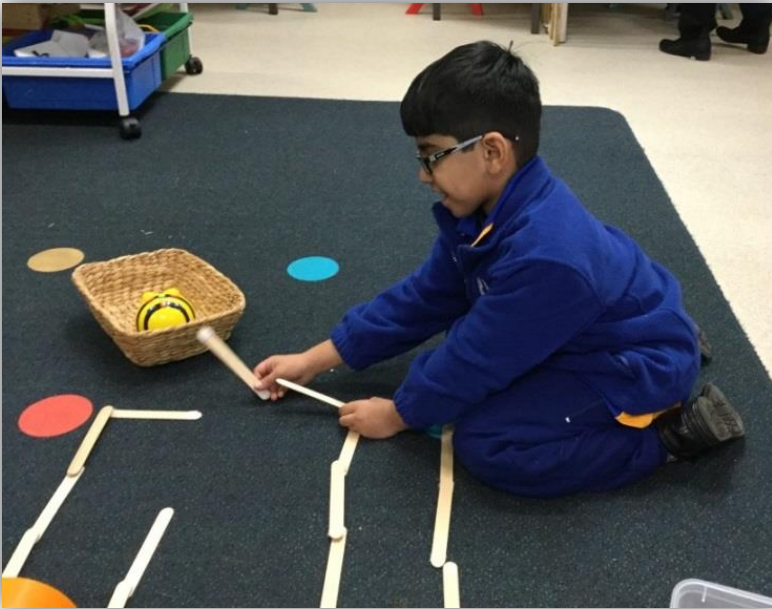
**Creating the  
Tallest Cup Tower:  
A STEM Challenge**



# STEAM Challenges

Digital Technologies incorporated through Bee-Bot challenges.

Students use iPads to gather photo evidence to share with their peers .



# STEAM Challenges



## STEAM challenge

Students must work together to build a working balance scale using a range of materials.



# STEAM Projects: The Zoo



After attending the Zoo as part of an inquiry project students designed our own Zoo and created a map. Each student chose their favourite animal and in small groups researched their animal's needs. They then applied this information to build a habitat for their animal.



# STEAM Projects: Boats

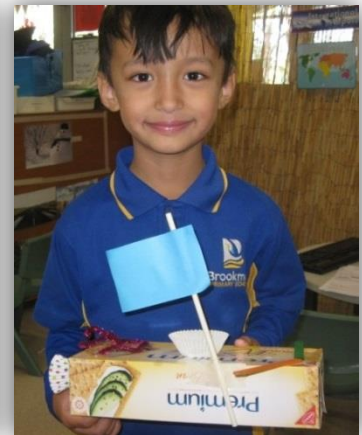
We linked boats into our inquiry projects.

- Who Sank the Boat
- Thailand floating markets (Multicultural theme)

Students provided with a set of criteria outlined on design sheets to consider when building their boats.



Boat	Boat
<i>My Design</i>	<i>My Design</i>
<i>Materials What did you use?</i>	<i>Materials What did you use?</i>
<i>Result Did your project meet the criteria?</i> The boat floated <input type="checkbox"/> The boat was strong enough to hold all the animals (Cow, donkey, pig, sheep, mouse) <input type="checkbox"/>	<i>Result Did your project meet the criteria?</i> The boat floated <input type="checkbox"/> The boat was strong enough to hold 3 pieces of fruit <input type="checkbox"/>



# STEAM Projects: Farm Enclosures

## Farm Animal Enclosure

My Design



Materials *What did you use?*

Result *Did your project meet the criteria?*

Is there somewhere for the farm animal to keep safe and warm?

Is the farm animal able to breathe?

Is the farm animal able to eat?

Is the farm animal able to drink?

Following a whole school farm incursion we investigated farms.

As part of our theme we researched the needs of farm animals and created enclosures.



# STEAM Projects: Snail home

## Snail House

### My Design



### Materials *What did you use?*

### Result *Did your project meet the criteria?*

Can the house keep the snail safe? (somewhere to hide in the house AND cannot escape and get stepped on).

Is the snail able to breathe?

Is there something for the snail to eat?

Is there water for the snail to drink?

As part of an investigation we created a home for snails on our science table.

We also built individual homes that catered for all the snail's needs.



# STEAM Projects: Rocket Building

## My Rocket Ship STEAM Project

### My Design



### Materials What did you use?

### Result Did your project meet the criteria?

- Is there somewhere to store food?
- Is there somewhere to store water?
- Is there somewhere to store oxygen?
- Does it have all the parts a rocket needs to launch?



A SciTech visit built on the students interest in space and rockets.

We investigated; watching videos; shared books and learning all that we could.

We then set students a challenge to build a rocket that would include everything we would need in order to survive in space. We also took the focus outside and build a rocket using the big blocks.

They were all very engaged in the theme and began building rockets in both the indoor and outdoor area of their own accord.



# STEAM: Indoor Environment



STEAM is incorporated into other inquiry areas within the classroom to access during investigations. Prompts are placed within the areas to encourage students to extend their thinking. Teachers and EAs become facilitators, supporting students play by making links to skills they have learnt during explicit learning; providing provocations to extend their play; focussing on using effective questioning to elicit new direction in their play; and to simply 'be available' to the students.



# STEAM Table

Once the students have experienced a STEAM Challenge we place it on the STEAM table. It is then readily available for children to access during our *'Investigations Time'*. Investigations Time allows students to access inquiry areas set up within the indoor environment. Children enjoy completing the challenges again and pushing themselves intrinsically to discover how they can complete the challenge at a higher level.



# Outdoor STEAM

In our outdoor environment there are many opportunities for children to engage in STEAM activities.

Building blocks, loose parts play, tinkering table and Bush camp.

