QUALITY TEACHING, LEARNING & LEADING

SCIENCE *Curriculum*

At Tambrey Primary School, students engage in the four key areas of Science Understanding;

- Chemical Science
- Biological Science
- Earth and Space Science and
- Physical Science

Each week students participate in hands on inquiry-based projects that are focused on the local environment, industry, landforms and flora and fauna of the Pilbara and Western Australia. We incorporate Aboriginal perspectives and traditional knowledge into our term plans and activities. Students work in small groups to apply the information and skills they learn to come up with better solutions to solve real world problems.

Students are encouraged to show:

- Innovation in problem solving
- Commitment to learning
- Cooperation in group work
- Creativity through diversity
- Data analysis skills

For **National Science Week** Tambrey students in Year 1-6 participated in STEM sessions. This year our theme was Innovation: Powering Future Industries. Classes worked together to plan and design, build and evaluate a renewable-energy powered piece of playground equipment and WOWZERS did they come up with some fabulous designs!! Some of the winning prototypes included;

- A fun park made from recycled material that runs off solar energy and creates no pollution
- A solar powered flying fox that transports you back to the start and includes a specially designed seat for smaller kids
- An aquarium where kids turn rollers to see the fish swim around the tank
- A human powered rock-climbing wall that lights up as you climb it
- A water powered slide where the sandpit filters the water
- A seesaw that uses human power to charge your e-scooter
- A bubble machine operated using solar power
- A human powered swing that plays music where the higher you swing the louder the volume is!!

We definitely have some future engineers in our midst!

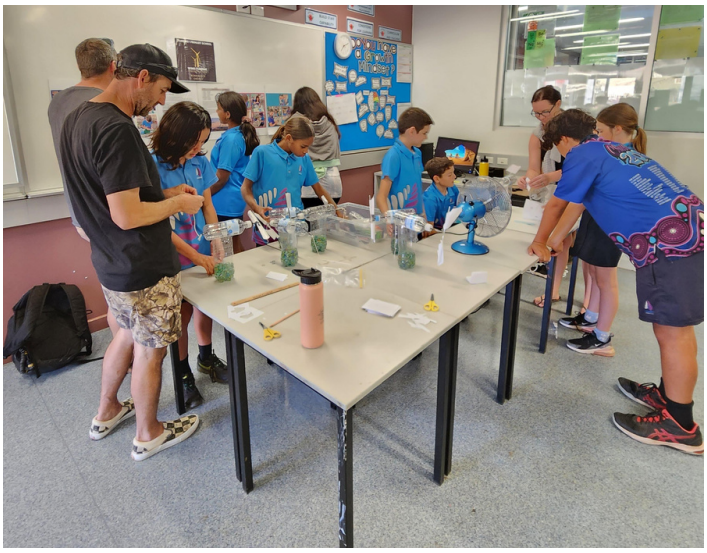
A big thank you to Headspace Karratha for sharing their Smoothie Bike with us and IGA Good Grocer for the donation of fruit so our students could use human power to make a fruit smoothie.

SCIENCE Community Partnerships

During Term 2 we had a visit from **Scitech**. The shows were all about Chemical Science and were so exciting! Our junior kids were mixing things together to make puff paint, lava lamps and exploding bubble bath while the senior kids were mesmerized by the assassin's teapot, the illusion wheel and holograms.

Year 5 and 6 students attended the two hour Bright Future STEM Program sponsored by the **Australian Resources & Energy Employer Association**. Students listened to an industry role model presentation and had so much fun using Virtual Reality headsets, snap circuits, coding Turing Tumbles, playing Dr. Eureka and figuring out the Gravitrax puzzles!!

In celebration of **Earth Science Week** some of the Year 2 and 4 classes had a visit from **Australian Earth Science Education**. We learned all about fossils and even got to make our own Ammonite fossil! It was VERY exciting when Sally brought out her Megalodon tooth! The Year 2 students went on a rock journey discovering the different types of rock and how they are formed. Students got to keep their very own pet rock and create a journey story of its own.



Selected Year 6 students worked super hard after school on their **Science Fair** projects! They ran a stall at **Karratha Senior High School** to explain and demonstrate how to test a rotor blade design for a wind turbine. Students encouraged participants to design and test the best design blade to lift the most amount of washers.

We also welcomed the **Pilbara Ports Authority** to enlighten our Year 6 students about the fascinating world of mangrove ecosystems! The knowledgeable Mangrove Mates team shared insights into the importance of mangroves and their role in coastal ecosystems, sparking curiosity among our budding environmental enthusiasts. The highlight was when our students got their hands dirty, planting their very own mangrove seeds, adorned with personalized name tags!

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Tambrey took part in the **CSIRO's Living STEM program** in 2023. Mrs Sinclair designed a 4 week On Country investigation around mangroves that involved looking at adaptations, food webs, bush foods and used a range of tools to measure pH levels, turbidity, temperature and tidal movement of water. With the support of local Ngarluma man, **Clinton Walker from Ngurrangga Tours**, Mrs Sinclair, Miss Tash our AEIO and some Year 5 and 6 students were taken on a fascinating tour of the mudflats and reef, observing the abundance of plant and animal life along the way. Some of the big highlights of the afternoon were tasting razor clams, finding pearls, being shown where the stingrays bury down into the sand and having an osprey watch over us!

At the commencement of the investigation Mrs Sinclair, Mrs Hobart and Mrs Whitbread attended the Living STEM conference in Dampier to celebrate our involvement with CSIRO's Two Way Science program. Schools attended from all over WA and we were lucky enough to hear about some amazing work happening in the Two Way Science space across the state, from the Ngaanyatjarra Lands School to Wiluna in addition to the amazing things happening in our own Karratha Education network. Mrs Sinclair presented to all these people about the Two Way Science work she has been doing on mangroves & we were proud and privileged to be a part of this initiative.