

**Mathematics In
Indigenous Contexts
Years K-2**



St Michael's School Nowra

Diocese of Wollongong



St Michael's School, Nowra



- A 3 stream school, with a Learning Centre for children with special needs.
- A population of 560 children and 43 staff.
- 34 children identified as Indigenous.



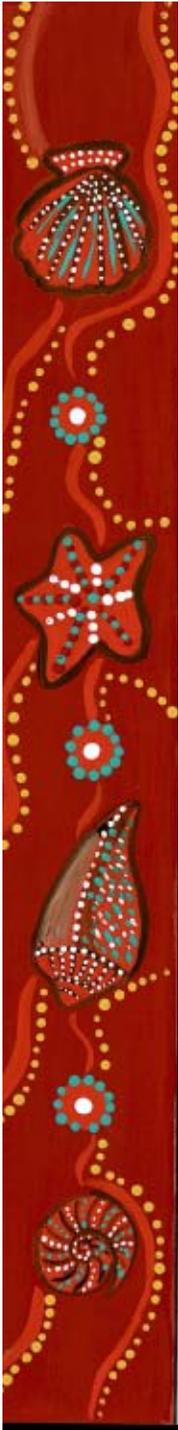
Terminology

- Indigenous- People of Aboriginal and Torres Strait Islander heritage.
- Aboriginal - People of Aboriginal heritage.
- Elder- Key people, highly regarded within their community.
- Aboriginal English- the dialect of Standard Australian English that is spoken in the Aboriginal Community. Also described as 'home language', there are many regional dialects.

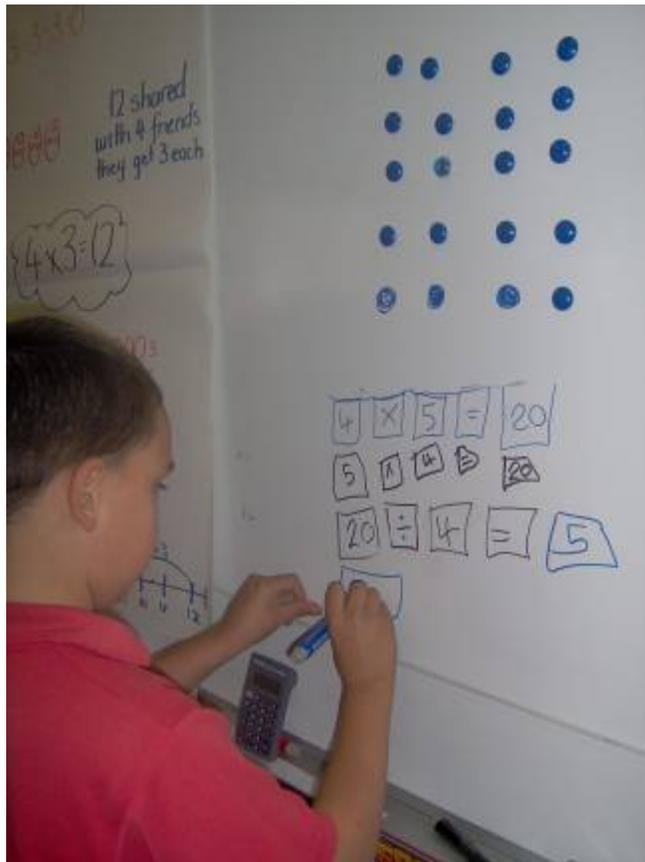


Our Aboriginal Community

- Yuin Nation
- Students drawn from these significant communities:
 - Roseby Park, Orient Point (known as Jerringa people)
 - Wreck Bay, Jervis Bay
 - Nowra / Bomaderry
- Most families refer to themselves as Kooris
- Local community resources accessed by the school:
 - Elders
 - Aboriginal guest speakers
 - National Parks
 - Cultural Centre
 - City Council
 - Bomaderry Homes.
 - Cultural organizations
(Laddie Timbery)
- Margaret Simoes-
Indigenous Education Officer.



Why be involved?



- Increasing awareness.
- To develop appropriate mathematic learning activities.
- To develop links between schools, parents and community.
- To develop an understanding of the particular issues for Aboriginal students.
- To explore the potential of learning teams.

Our Expectations

- Improve mathematics teaching.
- Improve learning outcomes of the students.
- Familiarise ourselves with Count Me In Too strategies and framework.
- Provide opportunities to look closely at the learning needs of students.
- Establish an educational network within the local area.



Into Action

Teachers

Review on CMIT Framework

Identify four target children in each class.

Identify needs and strengths of the students.

Conduct SENA 1 and interview targeted children.

Coordination/ communication with the team.



Aboriginal Education Assistant/ Executive

Contact relevant Aboriginal Community members.

Liaise with all team members.

Arrange home visits to follow up letter.

Invite parents to attend a meeting. -demonstrating maths games/ activities.

Consultation

Suzanne Ziems- Project Officer BOS

Margaret Simoes-Indigenous Education Officer

Shirley Brady- Education Officer

Ongoing consultation with relevant staff.



Implications of community input

Strategies

- Make 'connections' between mathematical ideas and home language.
- Authentic to all students, putting maths teaching into real and familiar situations.
- Student's recording.
- Make links to real life.
- Giving students choice.



Reflecting With The Community.

- Aboriginal Culture and community members need to be recognised and valued.
- Mathematical concepts need to relate to their own lives ie. 'purposeful.'
- Allow for small informal group work.
- Give a briefing outlining what will happen in a meeting or a lesson.
- Best learning occurs when community members can manipulate the world around them.



Changes To Classroom Practice and Learning Environment

- Begin each maths lesson, sharing language content.
- Provide access to a variety of materials and activities.
- Encourage and explicitly teach the children to record their work in a variety of ways.
- Use the interests of the children to engage them in the learning experiences.
- Focus on tasks that can be joint projects - 'teamwork'
- Question class not individuals.
Give thinking time.



Strategy To Reality

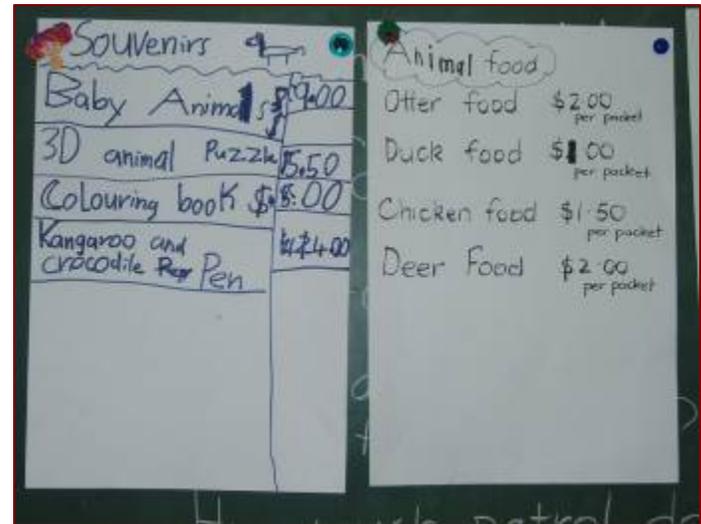
Go back to the curriculum and our term plan and programme maths with these implications in mind.

Term 2 "Shelters In Our Environment"

Embedding the following specific activities into our integrated unit:

1. Graphing/tallying the shelters in the local community.
2. Inviting community members into the classroom, to speak to the class explaining the use of mathematics in construction of a traditional/modern shelter.
3. Planning and budgeting for a trip to Mogo Zoo for a group of three friends.





Mogo Zoo



Term 3 and Beyond....

Term 3

- Setting the term outline.
- Focus on the use of mathematical language.
- Programming
- 'What's The Difference?'
- Reporting to our staff.
- Open classroom for wider school community.



Term 4

- Maths Task day with community members.
- Diocesan Expo presentation.

Plans for 2007



What Did We Observe?

- All students were developing positive, enthusiastic attitudes to maths.
- Aboriginal students were responding in a positive way to being 'the experts' in their area of interest.
- Students are more articulate and creative in their mathematical thinking and explanations.
- Self confidence developing.



Significant Learning

- Engagement with the community.
- Valuing the culture and heritage.
- Classroom Observation
- Discussion and reflection.
- Photos and video evidence
- Talk, talk, talk!
- Risk taking





Community

Home Language

Connections & Links

The value of
knowing....

Abilities

Content

Student needs

Mathematical language