



UNIVERSITY OF  
CANBERRA

# Celebrating success:

Numeracy in remote Indigenous contexts



What makes  
for successful  
numeracy  
education in  
remote Indigenous  
contexts: An  
ethnographic case  
study approach

Stories on remote  
indigenous  
mathematics  
successes  
compiled by  
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## Building a Learning culture

### *Wyndham District High School*

Wyndham is a small town with a population of approximately 800 people, most of whom are Indigenous. It is 2,200 kms north of Perth. The town was initially established in 1886 as a port and trading centre following the discovery of gold in Halls Creek a year earlier. By mid 1886 the town was thriving with six pubs established in the town. By the time of decline of the gold rush, Wyndham's economy also declined and the town's economy shifted to serving the pastoral industry. By 1912, the economy was so poor that purchases were made through promissory notes. The town was attacked by Japanese aircraft a number of times during the second world war. In the 1960s, the significance of the town as a service centre was central for the development of the Ord River Diversion Dam. Kununurra overtook Wyndham in population so that by the 1980s, the significance of Wyndham as a service centre again declined. However, in more recent times, the mining industry has created a resurgence in the economy of the town, again re-establishing the port as a site of economic growth.

Wyndham is split into two main parts. The old town is close to the port and is now a small part of the Wyndham area. The Three Mile Area is now the hub of the town and provides the main shopping and service areas for the town. Upon entering Wyndham, visitors are met with a large crocodile, a symbol of the town. Visitors are also greeted by large flags displaying the "Wyndham Way" embraced by Wyndham District High School.

Wyndham District High represents the diversity of the broader Wyndham population. As a remote school, the school offers a wide range of programs that support their students to participate in a range of events to build capacity and interests including performing arts, computing, radio, and sports. The school has three main foci – literacy, numeracy and attendance. In addition, secondary students focus on employment preparation. The school has adopted a concerted approach to build a whole school culture.





# Defining Success

Wyndham District High has achieved good NAPLAN results in numeracy in recent years. In 2012, Grade 5 and Grade 7 students performed better in numeracy than did students at similar schools; and in 2013, Grade 5 students performed significantly better in numeracy than did students at similar schools.

The whole-school attendance rate is 76%, but a group of students attend 100%. By the time the students are in Year 9, most of the students who are regular attenders achieve at standard (C grade) or above.

## Initiatives

Underpinning the success at Wyndham DHS is an ethos based on the importance of having a very positive learning environment so that learning can take place. In Wyndham, as in many similar communities, children may be exposed to significant trauma and violence. For this reason, it is vital that school is a safe and happy place. When children are happy and safe, and have a good relationship with teachers, they are able to learn. Considerable effort has gone into building a happy and safe environment so that learning, including in mathematics, can occur. This story focuses first on the building of this culture. After discussing the learning culture of the school, this report addresses curriculum and staff factors that assist with mathematics learning. In particular, planning and differentiation are significant components of mathematics teaching. In addition, AIEOs perform important roles in mathematics teaching.







# Building a Positive Learning Culture

## Initial Change Process

Since the current leadership took over the school more than 5 years ago, there has been a strong focus on building a very strong learning culture at the school. Soon after the principal arrived at the school, an external consultant conducted a SWOT analysis and presented his findings regarding areas of concern to the leadership team, school community and wider community. Upon the consultant's recommendation, the school has adopted a program, referred to as the "6 kinds of best" (described later), that they saw as simple and effective, and one that the whole school and wider community could take on board. People felt ownership of the change process and felt that they had been listened to, and this perception fostered commitment to the change process. The consultant has been actively involved with the school as they have managed the change process, and people trust him. Having an external person to help drive the change process gave credibility to the changes being implemented.

## Family Engagement

Families' perceptions of the school are important in determining whether students attend school. Consequently, although it was difficult to get input from the families, this input was viewed as critical, and strategies have been implemented to build parental knowledge and engagement. Previously, parents would drop their children at the front gate and not enroll them. In contrast, there is now an induction process for families coming to the school. Students can attend school only if they are enrolled. Parents are given a parent information package about the school which provides them with a welcome to the school and an overview. In addition, the Deputy Principal takes parents on a tour of the school, explains the values of the school, and discusses school lunches (e.g., discusses the option for parents to pay for meals through Centrelink).





# Rebranding the School

With the change process, there was a significant rebranding of the school. New uniforms were introduced. Everything that was associated with bad press about the school was put to one side and the impetus was on moving forward.

A significant part of the rebranding of the school was the adoption of the “6 kinds of best,” which is a commercial program. The school informally refers to the program as “the Wyndham way.” The six principles of this approach are built around the term “kind,” as this is easily understood by the students. As in all District High School contexts it is vitally important that initiatives, where possible, take place on a whole school basis. The Wyndham Way has become a driving force of in High School under the guidance of the new Deputy Principal who started in the mid-2013. The six principles are:

- I am the learning kind
- I am the community kind
- I am the achieving kind
- I am kind to the environment
- I am kind to others
- I am kind to myself

There is a strong presence of the “6 kinds of best” approach throughout the school and the wider community. The principles that underpin the approach are displayed in many places: on flags at the entrance to the town, on the school notice board, on Bali banners at the entrance to the school, on a large carpet mat in the reception area of the main office, on pottery crocodiles on the school front desk, on flags at the basketball court, and on posters around the buildings and in classrooms.

Each of the “kinds” is associated with certain behaviours, and materials around the school provide cues to remind students of these behaviours. For example, a poster for the “achieving kind” reminds students to do their best, communicate, set goals, manage money, use their talents, and try different things. These prompts help students to understand what the goal is about.





## Embedding the Principles into Practice

Students are given reward coupons for showing behaviours that align with the “kinds” of the school. There are large boxes in the front office where the appropriate coupon is placed. There are regular draws for prizes for each of the categories. In addition, when students display all the different attributes for a particular “kind” they are given a badge of the colour associated with that kind. This process is referred to as “earning your colours.” When students get all their colours they not only receive a badge and a certificate, they are also able to select a prize from the school “shop.”

In the high school a “traffic light” behaviour system relates to the “6 kinds of best.” This system involves a points tally and three behaviour cards. Each student begins the term with 10 points. A Green Credit, which adds two points to a student’s tally, is awarded for students who display attributes relating to the “6 kinds of best.” A Yellow Warning Card, which deducts four points from the tally, is given to a student after three warnings or a failure to submit homework or complete an assessment or when they walk out of class or the school grounds without permission. A Red Demerit is given to a student when they are suspended. This takes the student’s tally to zero. Prizes are awarded for 30, 40, 50, 60, and 70 points.

## Attendance

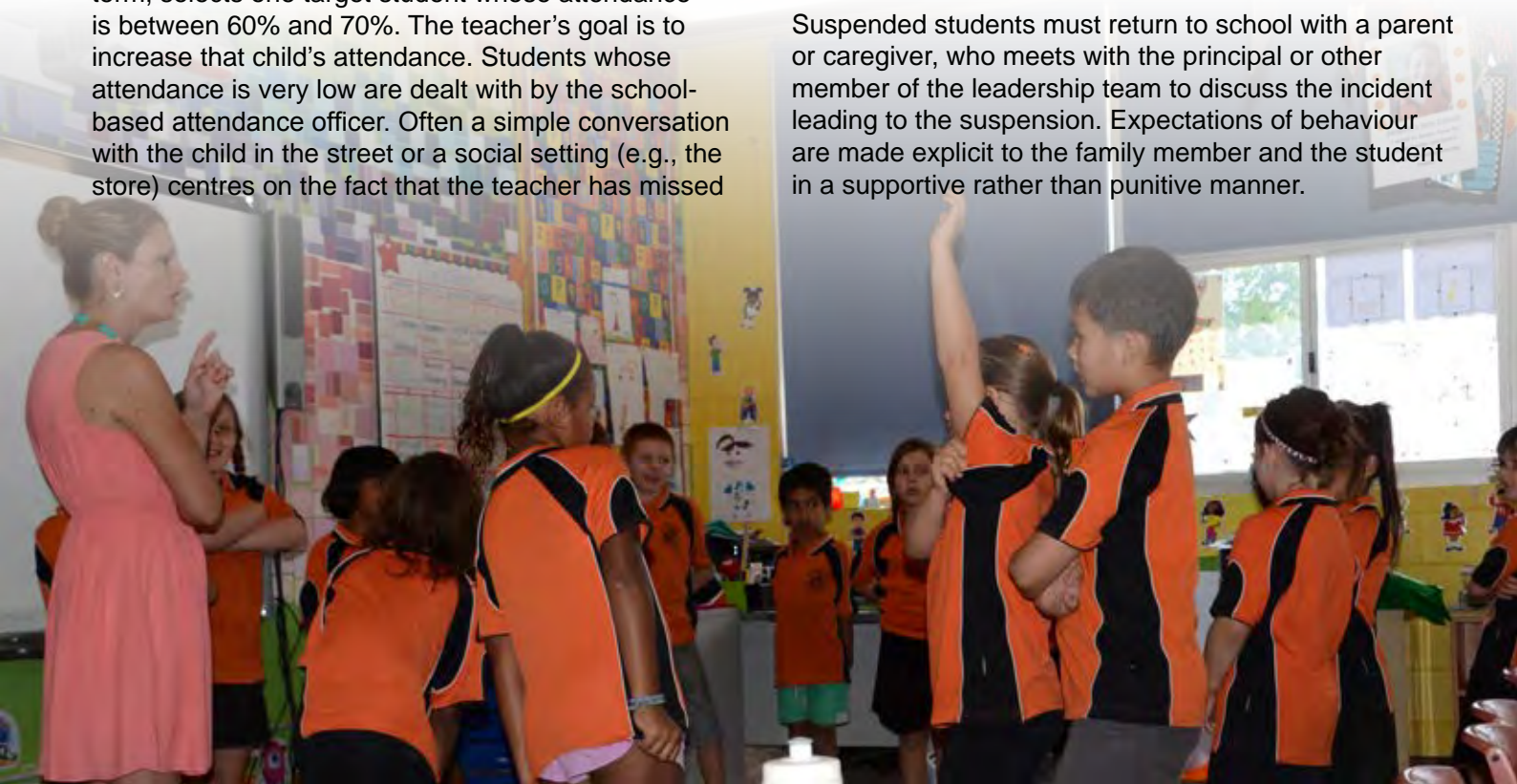
Attendance is everyone’s responsibility. The teacher identifies students who are low attenders and, each term, selects one target student whose attendance is between 60% and 70%. The teacher’s goal is to increase that child’s attendance. Students whose attendance is very low are dealt with by the school-based attendance officer. Often a simple conversation with the child in the street or a social setting (e.g., the store) centres on the fact that the teacher has missed



the student at school, rather than a punitive message. Every teacher sets realistic attendance goals and is expected to build relationships with families to enhance attendance. Teachers undertake home visits, starting with a positive visit, and are able to build various reward systems for attendance.

Staff aim to make school a happy place to be, so that all students, including those whose families are not supportive of school, feel welcome and wanted. As a result, many students whose families are not supportive of school bring themselves to school. The school has a very friendly atmosphere and visitors are welcomed with “Welcome to Wyndham, the friendliest school in Australia” and this ethos filters through the school. Staff at other schools have noticed that Wyndham students who have transferred to their schools are very friendly, out-going, and well mannered.

Suspended students must return to school with a parent or caregiver, who meets with the principal or other member of the leadership team to discuss the incident leading to the suspension. Expectations of behaviour are made explicit to the family member and the student in a supportive rather than punitive manner.







## Good Morning and Good Byes

The leadership team stand at the front gate at the commencement of each day and the closure to the day. They shake students' hands or high-five the students/families as they enter or leave the school. At the start of the day, this procedure aims to welcome students to the school, recognise their attendance, and wish them a great day. At the end of the day, the aim is to let students know that they have done a great job, and that the staff care for them and look forward to seeing them the next day. For many of the students, going back to the community can mean difficult times, so the school is keen for the students to know that regardless of what happened at the school during the day, tomorrow is a new day and the staff are looking forward to seeing them again. This is seen to help students feel that school is a good place to be.

## Dealing with Trauma

As in many remote communities, many children in Wyndham may have experienced severe trauma. The school has adopted several strategies to address trauma and build a safe environment. For example, the school has created a healing garden where students can sit and feel safe. When the school pastor passed away, a memorial chair for him was placed in the garden. The garden has been planted with bush foods. In addition, totems in the garden have been tiled by students so that they have ownership of the garden.

The school also is part of the Stephanie Alexander Garden project. There is a chicken coop that the students can access, and often students who are experiencing problems seek solace with the birds.





## Being Part of the Wider Community

Teachers are encouraged to be actively involved in spheres outside the school. For example, one teacher is a voluntary ambulance driver, and another is a volunteer fire fighter. This builds a stronger connection to the community.

## Building a Culture within the School Among the Staff

The school has regular social functions. One function was a dinner on the pier, catered by one of the local cafes. Staff had to dress up for the event. In addition, staff photos have been taken with a theme – circus, pirates – to create a sense of belonging among the staff.





# Mathematics Learning

## Planning

The school had a full day of professional development to design yearly planners based on the national curriculum. During this PD, teachers planned when to teach each of the descriptors for the national curriculum. Teachers use this planning to devise their weekly planning schedules.

There is a strong accountability culture within the school, and accountability is built into the performance management process used by the school. Although there is no whole-school approach to mathematics, teachers are expected to teach in accordance with the planning undertaken at team levels. Each term, teachers are required to submit their planning document to the leadership team, and a person from the leadership team visits each class once a week. This ensures that there is a strong standard maintained at the school while giving teachers latitude to teach in their preferred style.

## Differentiation

There is considerable student diversity in the school and, when planning activities, teachers need to consider extending the students, wherever they are on the learning continuum. Accordingly, teachers assess students regularly (both formally and informally) so that they can plan activities that cater for each student's needs. Some students in the junior secondary school attend regularly (substantially above 80%) and are achieving at levels commensurate with their urban

peers. It is important to ensure that these students continue to achieve at level or above. In contrast, other students in the same year levels are working in early years of schooling, often at the level of counting, and it is important that these students are also catered for.

In such diverse classrooms, whole-class teaching fails to meet the needs of all students. Consequently, students at Wyndham are grouped according to their learning needs, and there may be up to four groups within a class. All students work on the same topic, but activities are differentiated across groups. In the secondary school, the classes have been divided into two groups on the basis of attendance and ability, which correlates with mathematics level. The "B" group has an attendance average of 83%. This group works to the Australian curriculum and achieves at level. The "A" group has an attendance average of 58% and learns basic skills and maths for life.

## AIEOs

At Wyndham DHS, the AIEOs support teachers by partnering with them or working with groups, often the low-achieving students. In the lower grades, they take the lower-level students out for one-on-one work, and this enables the teachers to move the rest of the class along. The AIEOs all have good literacy and numeracy skills and good SAE, so they provide strong role models to the students. Many of them have been working at the school for long periods and are strongly connected to the community. This also helps with the positive learning environment at the school.







## High Expectations

As do many communities, Wyndham subscribes to the value of having high expectations – of students, of teachers, of families, and of community. One teacher sets homework and expects that this will be done. If the students do not think that they will do it at home, they are able to stay back with the teacher to complete the homework before they leave school.

## Working with Junior Secondary

The learning culture that has a strong foothold in the school is very evident by the time the students are in junior secondary. The lessons run smoothly with students generally on task. In maths, the lower achievers work with an AIEO – a man from the region who is known to the families and community. Having the AIEO in the classroom allows the teacher to work across all groups, while ensuring that those who need help receive support and are kept on task.

Junior secondary lessons are fast paced with a number of activities involved, and there remains a focus on the use of materials to support learning.

During the warm up, the teacher uses a range of activities to orientate the students to maths – usually the activities are associated with mental maths or maths strategies and they are often displayed on the interactive white board. This gets students' minds active and ready for maths. The teacher then writes the intended outcomes for the lesson so that the students are aware of the purpose of the lesson and what is expected of them. Students copy this into their books.

Students who are working well are allowed to select music from YouTube to be played in the background. Often students select quite loud and rowdy music in the mornings, and this seems to wake them up and keep them on task. The lesson is then broken into two smaller parts, both focused on the same learning outcome, but with a break in the middle during which a maths-related game is played. Then students are sent back to the task. There is a plenary session at the end of the lesson, during which students talk about their learnings and the teacher requests clarification, challenges thinking, or prompts the use of SAE. Establishing this routine took the teacher several weeks, but since becoming familiar with it, the students have engaged with it.





## Benefits for Learning and Learners

Creation of a positive environment for learning has allowed teachers to move on with the job of teaching rather than managing behaviour. Partly as a result of the "6 kinds of best" program, students come to school happy and willing to learn. School is seen to be a good place where particular behaviours are valued and rewarded.

As the system has been in place for some time (and is still evolving) a culture has developed at the school. Teachers remarked that it is now easy to get on with the task of teaching mathematics since the behaviour of students is now conducive to learning and engaging. This makes the joy of teaching much more evident and easy to achieve. It helps to create fulfilled teachers.

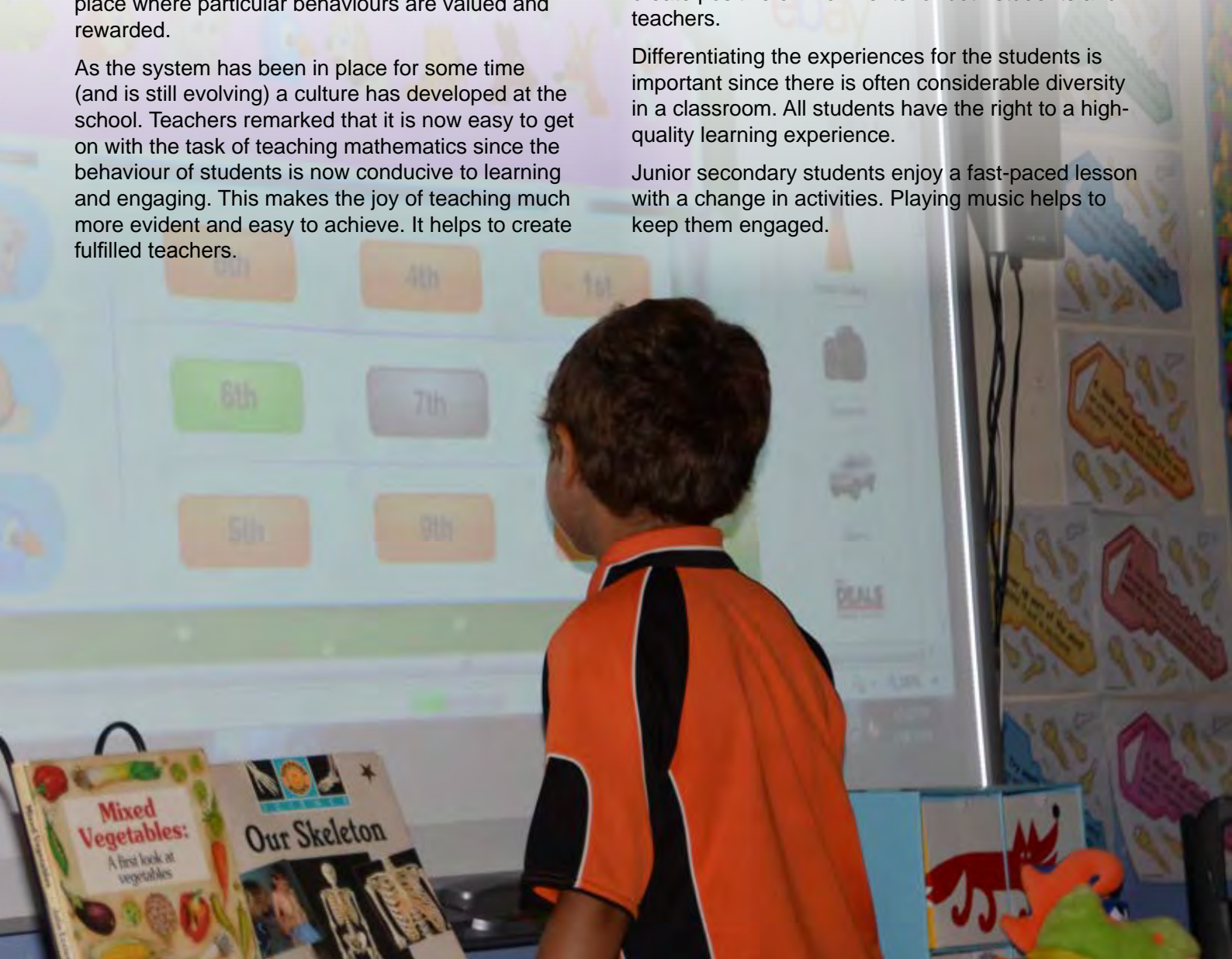
## Advice to Teachers

A priority is to build a school-wide approach to learning. A safe and friendly school creates a place for students to learn.

Change can take time, so be prepared to work hard, persevere after failures, and keep trying to implement the reforms. If reforms are well founded, they can create positive environments for both students and teachers.

Differentiating the experiences for the students is important since there is often considerable diversity in a classroom. All students have the right to a high-quality learning experience.

Junior secondary students enjoy a fast-paced lesson with a change in activities. Playing music helps to keep them engaged.





The background of the slide features a photograph of a school building with a wide, covered walkway. In the foreground, several tall, colorful flags are planted in the ground. The flags are green, orange, blue, and purple, each with text and graphics. The green flag says 'KIND TO ENVIRONMENT', the orange flag says 'LEARNING', the blue flag says 'ACHIEVING', and the purple flag says 'THE COMMUNITY'. The scene is set outdoors on a sunny day with trees in the background.

# Points of Differentiation

Wyndham has taken many steps to build a culture that is embedded deeply across the school. It has moved from rhetoric to embodiment of the program. All teachers refer to the “6 kinds of best” principles and build these into their curriculum planning. Reference is made to the principles throughout the day, and students receive rewards for achievement of the principles. In addition, the “6 kinds of best” approach is built into the more formal aspects of teaching, as teachers’ integration of the principles in classrooms is assessed during performance management.

The highly visual nature of the “6 kinds of best” in classrooms, the school, and the wider community ensures all parties are reminded of the strategy. The colour associated with the approach helps to create a happy and friendly environment.

Significant funds were used to secure the input and ongoing support of the designer of the “6 kinds of best” approach. After 3 years of use of the program, many of the teachers had left, and new teachers had received only in-school PD. Consequently, the school invested in another round of PD to help support teachers to develop strong knowledge of the program rather than the watered-down knowledge that can occur when there is a trickle-down approach to PD.



# Key Messages – Summary

Building a strong culture takes time, so it is critical that leadership teams and teachers remain in community for long periods of time. The current leadership team have been at Wyndham for 5 years. It takes this amount of time to embed the practice effectively. The leadership team see their successes as being approximately half-way complete.

Change is not easy, so it is important to persevere. There may be obstacles, but these should not derail the change. They are learning points.

Creating learning environments that cater for the needs of the learner are critical.

Having high expectation of learners is very important. It is not acceptable to believe that Aboriginal children cannot learn due to social issues. If children can be taught to codeswitch language, then they can be taught

to codeswitch behaviour. When they come through the gates at Wyndham, they are expected to behave in the “Wyndham Way”.

It is important to have high expectations of families. Families are asked to take responsibility for the children, for example, by getting them to sleep early, and ensuring they are fed well. If students do not have lunches, a teacher assistant visits parents/families to let them know that their child does not have lunch.

Differentiating learning to meet the needs of the diversity in remote communities is critical. Teaching to the middle or low achievers fails to cater for the high achievers and limits the possibilities for the learners. Identifying where students are on the mathematics curriculum and then providing scaffolding to extend from this point builds success.

## School Demographics

Year range	K-12	FTE teaching staff	19.2
Total enrolments	148	Non-teaching staff	17
Location	Very Remote	FTE non-teaching staff	14
ICSEA (school)	769	Indigenous students %	66%
ICSEA (distribution of students) (bottom quarter to top quarter)	69%   19%   9%   2%	Enrolments: Girls/Boys	79/69
Teaching staff	20	Language background other than English	63%
		Student attendance rate %	79%