



Milestone Report 1

9th May, 2017.

I have much pleasure in presenting the first milestone report for NZAMT Maths Week for 2017.

This year there is again an emphasis on using mathematics with challenges and games which appeal to all students. Maths Week links with the curriculum and is written to retain the interest of students and teachers in this most important subject.



The Aims of Maths Week.

- To help Teachers give mathematics an identity within their school.
- To help make maths attractive, useful, practical, interesting and fun.
- To give extra and useful resources to teachers.
- To provide resources to challenge students with their technology aids.

While the Maths Week Challenges and Games are accessible to students of all ability levels there are lots of material here to challenge gifted and talented students.

Much of the material written in the Survivor Series sections is a guide-line for teachers and the ideas can easily be extended.

Resources will be kept easily available via the Maths Week site <https://www.mathsweek.org.nz/> for all maths teachers to use for the whole year.

This year Maths Week is interactive again. In the Challenge section the very popular Maths Millionaire has been written as interactive. There are four Levels of this including a Level for families to try.

The Challenges can be obtained easily from the internet by students and teachers. Students can then write working and answers into their writing books for mathematics which all students should have.

The Games section is interactive but no points are collected. It continues to be popular with students and some games are quite addictive and challenging mathematically. Some of the games have been updated and modernised this year.

There is no collection of Maths Week Dollars and consequently no auction or prizes offered for this year. Teachers may of course arrange this within their own classes or school.

There is a new section which has a question each day. On the Friday students may send their results in and a Maths Week Certificate will be issued for those students with five correct answers. The purpose here is to encourage students to work on the Challenges for the whole week.

The Challenge section has several major sections this year.

- **Survivor Series for all five Levels of students each day.**
- **Daily Dollar section for all five Levels of students each day.**
- **Four interactive Levels of Maths Millionaire for each day.**
- **Four semi-interactive Trips.**
- **Two interactive Levels of Finance problems each day.**

The material is being tested with students and adjustments made to the topics and their levels of difficulty.



Again, this year I have received assistance from two senior and experienced Primary Teachers. These teachers are writing for Year 1, 2, 3, and 4 students in the Survivor Series section. Their work is particularly valuable for teachers of these younger students.



Also, this year there is an interactive section on Finance that has been written by a funded group Young Enterprise Trust. It is aimed at Years 7, 8, 9, 10, 11 students and will be well received by teachers and students. The interactive part will increase its popularity.

Registration of students, schools, and Teachers.

The number of students who were registered last year is given here. The numbers came from 1978 Schools and 3766 Teachers spread from the very north to the very south of New Zealand. The number of students were down but the number of Teachers and schools were up significantly. I suspect several Teachers didn't register their student's numbers. Hopefully we can overcome this in 2017.

Level 1	36,599
Level 2	45,809
Level 3	50,101
Level 4	48,153
Level 5	50,196
TOTAL	230,858

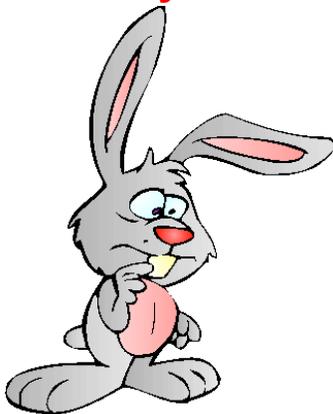
The numbers are quite outstanding and show that Maths Week is having a major influence in what is being taught in maths classes in New Zealand.

The fact that it is easily accessible by tablets, iPad, iPhone, smartphones, laptops, home computers, is a huge advancement in Maths Education.

A small number of schools were registered from other countries. There is a market outside of New Zealand too. It needs publicity! Perhaps through Maths Associations in other countries.

This year registration will be like last year where Teachers register their classes. Teachers who register will get access to the Teacher Section of the Challenges before Maths Week and receive helpful comments, suggestions, and the answers!

Publicity.



Maths Week requires a great deal of publicity and information to teachers. Teachers who registered last year will have two notices sent out to them about this year's Maths Week. Two notices will be published in the Education Gazette – one in July and one in August.

We need to have a better way of encouraging Teachers who haven't registered before. This is where a NZAMT publicity group is needed.

The Games Section will again be popular with students. To do these students do not need to register. This year some of the more popular games will be able to be accessed by iPad and iPhone. There are no prizes in the Games Section.

Web Site Management.

The site is set up by The Design Company which is a Christchurch based web site development and design company. The expertise and support we have had from this firm is outstanding.

www.thedesigncompany.co.nz

Total Team is a Christchurch based provider which hosts and supports the Maths Week site. Their help is invaluable.

<http://www.totalteam.co.nz/>

The Challenges are being written in Word and then changed to PDF.

There will be a site for students to go to www.mathsweek.org.nz and a separate site for teachers which will include comments, suggestions, and answers.

Survivor Series.

This gives teachers the popular classroom resource it has been for several years. It is written for teachers to use in class and gives the opportunity to expand if they wish into much larger activities.

This year much of Survivor Series can best be done by students using tablets, laptops, and other devices.

The level of difficulty has been carefully adjusted in each of the Survivor Series tasks to allow all students in a class to be able to do and enjoy them. Teachers are encouraged to work with different levels in class if the need arises.

The aim is that all students should be able to do and enjoy the Survivor Series. It is possible and Teachers are encouraged to have different Levels being worked at by students in the same class. Some of the activities in the Survivor Series will take time to work through in class.

Each day the tasks are written on a different maths subject.

Level 1 is written by Mrs Kate Simmonds, Teacher, Waimairi School, Christchurch.

These tasks have not been completed yet.

Level 2 is written by Mrs Tamara Jones, Teacher, University of Auckland, and formally Farm Cove Intermediate School, Auckland.

The tasks have been written and are being tested now by Teachers and their Year 3 and 4 classes.

Level 3.

These tasks haven't been written yet.

Level 4.

These tasks are being written now.

Level 5.
Monday.

Tying a Neck Tie.

Here is an activity students know little about, and yet it is something they will experience in life. Four types of knots are shown and students are challenged to tie them. In class this has created great interest and fun!



Tuesday. The Calendar.

In the Western World, there have been three types of Calendars used in the last two thousand years.

The Roman Calendar. 753BC to 46BC.

The Julian Calendar. 46BC to 1582.

The Gregorian Calendar. 1582 to 2017.

This task shows the mathematics and history about each calendar. It is complicated, but something most people do not know much about.

September						
Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Wednesday. Calendar Problems.

Four problems!

- The Boy in Salisbury Cathedral.
- What year was Sir Isaac Newton born?
- George Washington's Birthday date.
- The October Revolution in Russia or was it November?

Thursday. The Maths Chaser.

This is based on the very popular TV programme. Most students know the game and this maths version goes really well in class. The questions are all here!

Friday. Birthday Investigation.

Amanda's birthday is 3 - 12 - 1985.

This year, 2017 $3 + 12 + 17 = 32$ she will be 32 years old.

Next year, 2018 $3 + 12 + 18 = 33$ she will be 33 years old.

In 2028 $3 + 12 + 28 = 43$ she will be 43 years old.

Does this always happen?

Which birthdays does it happen for?

Do you know someone who has a birthdate like this?



Maths Millionaire.

This section is modelled on the very popular T.V. programme, except the questions are mathematical or have some connection with maths.

The year it is completely interactive games at four Levels.

Junior-Junior for Year 1 to Year 5 pupils.

Junior for Year 5 to Year 8 students.

Senior for Year 8 to Year 11 students.

Family for all family members to enjoy at home.

Each set involves 11 questions which gradually get harder but are still able to be understood by students. Teachers who register are given the questions and the answers for Maths Millionaire before Maths Week.

Students may need help from computer research or from their teacher or from their friends. Some of the harder questions have been written so that it is difficult to get the answer easily from Google.



Like the T.V. program dollars are awarded for each stage successfully answered.

“Tell your students it’s imagination money!
It doesn't exist..... It's invisible!”

The “helps” as in the real Millionaire of “ask a friend”, “ask the audience”, “50-50” could be added by the teacher as a class thing and this is quite entertaining!

Maths Millionaire is usually the most popular section of the Maths Week Challenges.

Trips.

This follows on from the successful Train Trips of 2015. I ran out of trains so this year it is quite general but with a world perspective.

It is set up with multi-choice answers which students should record into their maths books.

- **To Egypt on a Maths trip. A young person’s O.E. dream!**
- **To unusual places in New Zealand.**
- **To the latest movies that feature mathematicians.**
- **To the Auckland Islands!**



Daily Dollar Questions.

This is a very popular section of Maths Week and seems to be the entry into the week for several classes. The section has not been completed yet. This year the questions will be of the problem type.

Money, Money, Money.

This section has been written by The Young Enterprise Trust. This is a large funded group developing and encouraging young people throughout New Zealand.

This year this section will be interactive with multi-choice answers. Each topic is brief within the abilities of students. There will be a topic written at two Levels for each day.

Games.

The Games Section is being redone and will look fresh to attract the hordes of players it does. It is planned that it will be easily accessed by all popular computers and iPhone.

The points, students gain here are not recorded.

Conclusion.

I believe this year's Maths Week will again be popular with students and teachers and will fill the aims set up and mentioned at the beginning of this report.

Bill Ellwood
Writer of Maths Week.
9th May, 2017.

