



Outline of Workshops

Workshop 1: 10 – 11 am

Workshop 1A: U-learn- the flipped maths classroom

Name of presenters: Cathryn McCready and Angela Stensness of Papamoa College
cmccready@papamoacollege.school.nz

Workshop 1B: Practical activities for engaging students (Years 9-13)

When I go to a workshop I like to “do” the activities otherwise they don’t tend to get used in my classroom. I will be getting you to try some activities that I have developed and some I saw at NZAMT conference. This is a “hands on” workshop looking at activities related to:

Year 9/10 Geometric reasoning – mix and match

Year 12/13 Risk and Relative risk – cooperative problem solving

Year 13 Probability Distributions – summary mix and match

Year 9/10/11 Algebra Equations (Can be adapted to any level) – Mathanopoly game

Plus some others, depending on time.

These resources are all available electronically so bring your USB.

Name of presenter: Rebecca Astwood, Head of Mathematics and Statistics at Katikati College
rastwood@katikaticollege.school.nz

Workshop 1C: Developing Perseverance

Problem Solving in mathematics every day, for every student. This causes interest and achievement.

Name of presenter: Jim Hogan, Mathematics Facilitator, Team Solutions
j.hogan@auckland.ac.nz

Workshop 1D: Teaching statistical report-writing for Level 3 internal assessments

Maths teachers don't usually have to worry too much about essays, so the report-writing in the new statistics curriculum can be a real challenge. In this hands-on workshop we will look at what makes report-writing difficult for students and teachers and explore some activities that you can use in your teaching. This presentation was given at the NZAMT13 Conference in Wellington.

Name of presenter: Dr Nicola Ward Petty, director of Statistics Learning Centre
n.petty@statslc.com

Workshop 1E: Fun and Practical ideas for Level 2 (and 3) Experiments (AS91583)

Practical ideas for teaching Level 2 (and 3) Experiments by example, with a focus on experiments that can be done in the classroom. We will also look at ways of managing the assessment and adding some awesome sauce to this fascinating topic!

This workshop is a repeat of a workshop presented at the AMA Stats Day earlier this week.

Name of presenter: Michael Shadbolt, Asst. Head of Mathematics at Otumoetai College
mshadbolt@otc.school.nz

Workshop 2: 11.30am – 12.30pm

Workshop 2A: What's the real story behind Mathematics Education at Years 7 and 8?

Have you ever wondered what messages are being given to teachers and students about teaching and learning at year 7 and 8? How can you support students with their transition to secondary school and acknowledge their prior learning? After 5 years of facilitating in the intermediate sector I'd like to share my knowledge and learning. Be prepared for some challenges.

Name of presenter: Ann Leach, Facilitator for Institute of Professional Learning, University of Waikato
aleach@waikato.ac.nz

Workshop 2B: Our Lesson in Flipping Lessons.

Two regular BOP Maths teachers' experiences this year in 'flipped lessons'. The technical aspects, the educational opportunities and the challenges.

Name of presenters: Justin Harper and Joe Tyler-Cole, Trident High School
HarperJ@trident.school.nz

Workshop 2C: Problem-solving using simplification

This workshop on problem solving using simplification is aimed at the more academic students. He will be demonstrating two examples but would also welcome other examples from the floor.

Name of presenter: Gary Coston, Otumoetai College
GCoston@otc.school.nz

Workshop 2D: Introducing the Probability Distributions (Level 3 Statistics)

When I introduce the five Probability Distributions I do so by generating some data that can be modelled by each distribution. I will share these activities. Please bring along your own ideas to share too plus your graphics calculators.

Name of presenter: Helen Adams, Head of Mathematics at Rotorua Girls' High School
hadams@rghs.school.nz

Workshop 2E: Critical Path Analysis for Beginners (Level 3 Calculus)

The content in AS 3.4 Critical Path Analysis has never been covered in NZ schools before this year and is new to most teachers.

The workshop will cover the basic principles (rather like a CPA 101-style lecture) and show how this area of the curriculum could be interpreted – in particular in developing efficient schedules for projects. Animations for the critical path method will be demonstrated.

Name of presenter: David Barton, Pearson
David.barton@pearsoned.co.nz

Workshop 3: 1.30 – 2.30pm

Workshop 3A: Using language, symbols and text at Years 9 and 10

Many students struggle with the language of mathematics, both written and oral; and in contextualised problems. Effective teachers shape mathematical language by modelling appropriate terms and communicating their meaning in ways students understand. This workshop will provide tools for teachers of years 9 and 10 to support students with the development of this key competency in the mathematics and statistics learning area.

Name of presenter: Ann Leach, Facilitator for Institute of Professional Learning, University of Waikato
aleach@waikato.ac.nz

Workshop 3B: 100 Minutes of Maths: Heaven or Hell?

Are you glad that it's the end of that 60 minute lesson with 9F or desperately wishing for a longer block of time with them? I'll be sharing my journey as a classroom teacher from teaching in 60min blocks to 100min blocks. I will be looking at the interweaving of those educational ideas of being culturally and emotionally responsive, culturally relevant, modelling the thinking (Numeracy Project) and problem-solving with higher order thinking in preparation for NCEA exams. I am planning to create discussion time within the hour to hear your thoughts and I bet you, I'll be wanting a 100 minutes to do it in!

Presenter: Caroline Willis, LoL Opotiki College
carolinw@opotikicol.school.nz

Workshop 3C: Accelerating Multiplicative Thinking

This is a repeat of a workshop that Jim ran at the recent NZAMT conference.

Name of presenter: Jim Hogan, Mathematics Facilitator, Team Solutions
j.hogan@auckland.ac.nz

Workshop 3D: Beyond Khan Academy: On-line materials for teaching statistics

The internet abounds with resources for teaching statistics, but finding them and evaluating them is time-consuming and tedious. In this workshop we will examine what to look for in resources, and how they can be used to enable learning and make better use of teachers' time. This will include theory behind multi-media learning and an introduction to the concept of the "flipped classroom". The materials produced by Statistics Learning Centre will be showcased as part of the presentation. This presentation was given at the NZAMT13 Conference in Wellington.

Name of presenter: Dr Nicola Ward Petty, director of Statistics Learning Centre
n.petty@statslc.com

Workshop 3E: Electronic resources for Year 13 Maths and Stats – The *Delta Teaching Resource* and the *Sigma Teaching Resource*

A completely customisable way to teach Level 3 Mathematics. A TR contains two versions of the textbook and workbook in eBook format, as well as a suite of extra resources. The first version is suitable for viewing in the classroom, using a data projector or interactive whiteboard. Tips and advice on how to get the most out of an electronic resource. A demonstration of animations and other goodies provided in the resource – including worked solutions and other features. The second version of the text/workbook combination is for teacher viewing, and has additional links to hundreds of author comments on the material covered, as well as worked solutions to harder questions and blackline masters where appropriate. All the PDF files in this teaching resource have been user-enabled, so a Maths department can add its own notes, comments, and hyperlinks to other resources as required.

Presenter: David Barton, Pearson
David.barton@pearsoned.co.nz