



NEW ZEALAND EDGE

A NEW WAY OF THINKING
ABOUT OUR IDENTITY, STORIES,
ACHIEVEMENTS AND PLACE
IN THE WORLD



LEARNING ABOUT AND CELEBRATING THE ACHIEVEMENTS OF NEW ZEALANDERS - BOTH PAST AND PRESENT

www.nzedge.com - an inspirational website

- In this, the third of a series of web based social studies projects, we again use the inspiration provided by the New Zealand Edge website. Using www.nzedge.com will take your students on a radically optimistic journey as it celebrates our people, our stories, our achievements and the culture of New Zealand.
- Culture and Heritage is the relevant social studies strand for this study with emphasis being placed upon the objective of learning about people in New Zealand's history and how these people have contributed to New Zealand's identity in the world.

Alexander Aitken - 1895 - 1967

the human computer

- In this journey we introduce students to Alexander Aitken - one of the most remarkable mathematical brains of all time but also a brilliant teacher, writer, poet, and a champion high jumper.
- Students will not only be inspired by his feats of memory but will be encouraged to learn that at school he was once so bored with arithmetic that he did very badly at it!
- www.nzedge.com > heroes - scroll down to Mathematicians



INTRODUCTORY ACTIVITIES

Read students this list of words at one second intervals and ask them to memorise as many words (in order) as possible.

Head. Green. Water. Sing. Dead. Long. Ship. Make. Woman.
Friendly. Bake. Ask. Cold. Stalk. Dance. Village. Pond. Sick. Pride.
Bring. Ink. Angry. Needle. Swim. Go

Repeat this process four times. What is the best result by any class member? Tell students that the New Zealander they will study took only four readings to remember all of these words in the correct order. How remarkable is this? Do they think there is any way they could train their mind to reach this accuracy?

Tell students that this New Zealander, Alexander Aitken, born in Dunedin and a student of Otago Boys High School, was not famous for remembering words, but was regarded as one of the most brilliant mathematicians of all time.

QUESTIONS & ACTIVITIES FOR RESEARCH AND DISCUSSION

- Discuss the merits of making mental arithmetic part of the school mathematics programme. Have students identify when they use mental arithmetic. Should they use it more?
- Identify the mental arithmetic feats that Aitken performed that support him being described as *'the greatest mental calculator for whom there is any reliable record'*.
- Have students speculate on the meanings of the mathematical terms in the article. Have them list all they don't understand. Invite a mathematics specialist to explain them - and their practical everyday uses to the class.
- Discuss the modern meaning of epiphany as a life changing event or the awakening of understanding. What brought Aitken's epiphany about and why was it so remarkable?
- Aitken's memory is described as 'mind boggling'. Have students list recorded incidents in his life that support this statement.
- Aitken's memory was perhaps his greatest asset. Help students identify a major incident in his life when his amazing memory in fact became a curse. What relevance has this to a commonly held belief that bad memories fade with time?
- Read his description of war in the trenches. What conclusions did Aitken reach about trench warfare?
- Discuss how being very analytical (as Aitken was) perhaps allowed him to take a closer look than most at the futility of wars present and past? What did he liken war to?
- Talk about Aitken's personality. Identify traits that make him all the more remarkable because of his humanity. What thumbnail description can students give of his personality? How do they make him a remarkable New Zealander?
- Was there more to life than mathematics for Aitken? List some of his many other talents and interests.
- Would it be true to say that we could all memorise things better by thinking harder? Have students identify any special techniques used by Aitken that we could use to help.
- Debate: 'If computers and super calculators were in common use during his early life, Aitken would not have displayed his remarkable genius'.
- Conclude by creating an historic timeline of Aitken's life.