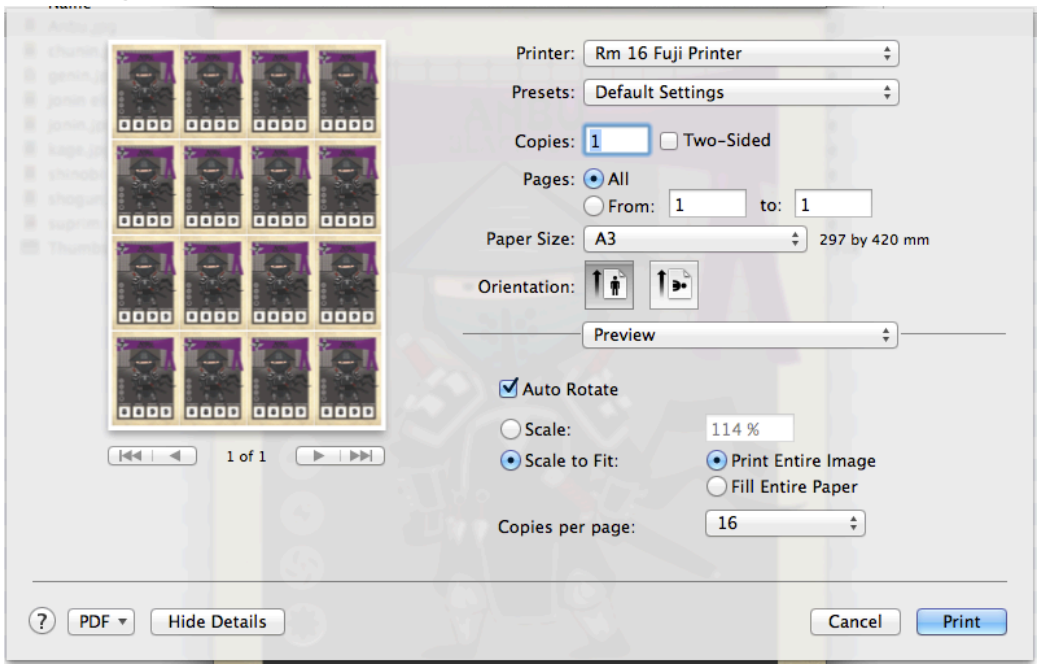
Ninja Maths Explanation

Why does this program work?

Basic facts knowledge is the basis for all mathematic concepts and 'Ninja Maths' makes it an enjoyable and motivating experience for all students. Students learning basic facts is essential for them to advance their mathematical skills and knowledge. Each student is encouraged to improve at a rate that is drawn from their own internal motivation to have success. Due to the clear evidence of improvement over a short amount of time, students gain confidence in their own ability, as they can clearly see their own progress. The 'Ninja Maths' program caters for students of all ability levels and challenges them all to get better.

Before you start:

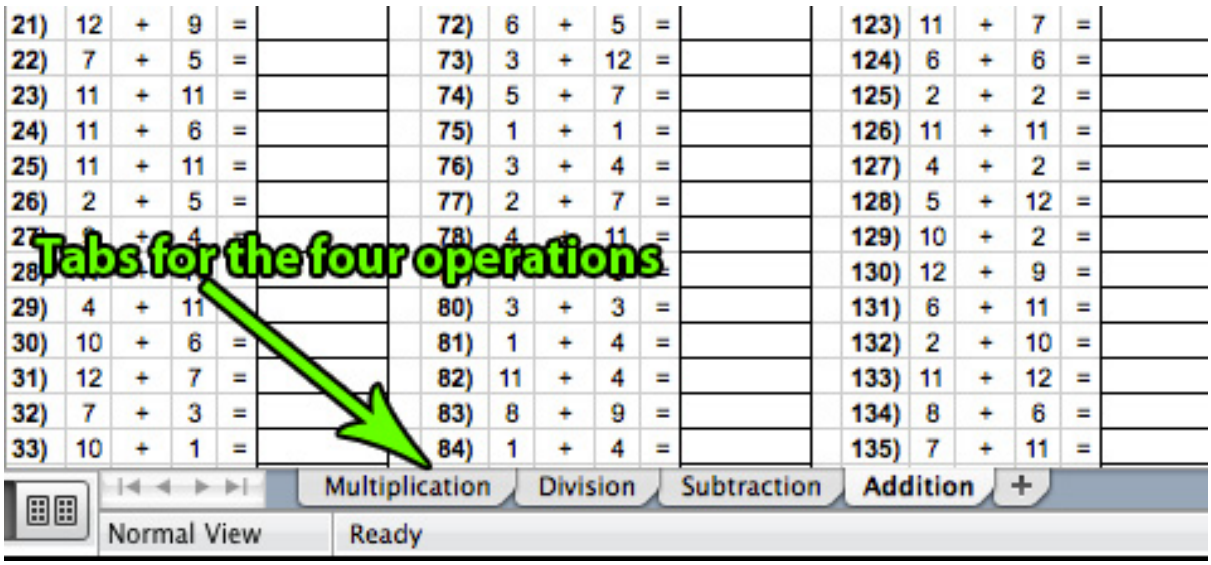
Before you start the programme print out the ninja cards putting 16 copies on an A3 sheet. (Using wallet size print for PC). Cut them out and laminate the cards. You will initially need extra lower ranked cards but as the kids improve you will need extra higher ranked ninjas. You should also print out an A4 poster version of each card, as well as an A3 version of the Ninja Rankings Poster to promote the idea to the kids.



Implementation:

The excel spread sheets included have been designed to produce 151 random questions for multiplication, division, addition or subtraction, along with answers, each time it is opened (*To generate new questions just press the 'F9' key*). These are to printed out and given to the students.

- Run your 'Ninja Maths' session weekly or more regularly if you please.
- *Suggestion*: Concentrate on one operation per term (I usually begin with multiplication).
- You could give them more time to complete the questions i.e. 5 minutes for younger students.



- Print out one copy of the question and answer sheet for yourself and then a copy of just the question sheet for each student.
- Explain the principles of what students are about to do. Read Ninja levels and descriptions to enhance motivation.
- Give students the ninja times tables sheet and allow 3 minutes to write answers.
- Swap with a partner and teacher read aloud the answers while partner marks.
- Partner adds up score and gives back to student.
- Student records their total in the times tables record sheet, which maps progress.

- Their total score will decide what level of ninja they achieve. For example 55 would be a 'Chunin Ninja'.
- Give each student the ninja card that corresponds with his or her score. If next time the student scores in a level higher, collect their previous card and give them the new card.
- You can use the cards in a maths challenge (bumper board) later, which gives more motivational value to the card.
- To put even more value on being a higher ranked ninja have the 'same ranked' ninjas come up the front and be involved in a duel and the give the higher ranks more points (or whatever your reward system is) for victories.
- If students complete all 151 questions supplied, give those students an extra sheet next time, which will give them a chance to attain the prestigious ranks of Shogun and Supurim Masuta.

Homework:

Printing out extra Ninja Maths sheets to send out for homework is an easy and effective way to promote learning basic facts, as well as giving students an opportunity to practice for their weekly Ninja Maths session. Students should time themselves for three minutes and then complete any questions they missed afterwards to practice less familiar facts.

Other Areas:

Behaviour management tool - Students with the highest ranking ninja scores (this could be most improved, among many other options) get rewarded by being released out to recess, lunch and/or home first. You would be surprised by how effective this small reward can be to increased motivation for learning and behaviour.

Missin' Ninja:

We have a new fun addition to Ninja Maths called 'Missin' Ninja'. Missin Ninja is a rogue who has abandoned his village, he is on the run (specifically from Shinobi Hunters and higher ranked Ninja).

How I use Missin' Ninja is to secretly place the Missin' Ninja card into a students tray and their job is to keep their identity as the Missin' Ninja just that....a secret.

At the end of the week I have all Shinobi Hunters and any of the higher ranked Ninjas to come to the front of the class and guess who they think the Missin' Ninja is. If they are correct they get a reward but if the Missin' Ninja is not found he/she gets the reward.

Just a bit of Ninja fun for your classroom.

Links to the Australian Curriculum

Year Level	Content Descriptor
Year 2 **Number and Algebra**	Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030)
Year 3 **Number and Algebra**	Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055)
	Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056)
Year 4 **Number and Algebra**	Recall multiplication facts up to 10 × 10 and related division facts (ACMNA075)
	Recall multiplication facts up to 10 × 10 and related division facts (ACMNA075)
	Develop efficient mental and written strategies and use appropriate digital technologies for multiplication and for division where there is no remainder (ACMNA076)
Year 5 **Number and Algebra**	Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100)
	Solve problems involving division by a one digit number, including those that result in a remainder (ACMNA101)
	Use efficient mental and written strategies and apply appropriate digital technologies to solve problems (ACMNA291)
Year 6 Content Descriptions **Number and Algebra**	Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)