

## THE BASIC NUMBER FACTS and more MATHS PROGRAM



For Students Pre-School and Upwards.



*This Program was designed to give every child the wonderful feeling of achievement in mathematics.*



**‘Congratulations.’**



*‘Can I take a copy of my Maths Dash challenge home?’*



*‘Can I please have a look at my next Maths Dash Challenge?’*



*‘Guess what, I got promoted in Maths Dash. Isn’t that great.’*

**The Maths Dash program is designed for, and has successfully been used at, home, in the class and by whole schools.**



## ***'Self Esteem is the Elixir of Self – Actualisation'***

The Maths Dash Program is a series of strategic, self-paced, challenging mental mathematics exercises motivating students to become confident recalling basic number facts and mathematical concepts covering the Number, Measurement, Data and Spatial strands. The major outcome is to enable students to tackle problem solving without being handicapped by their lack of efficient recall of basic number facts and foundation mathematical concepts.

The Maths Dash program is designed for, and has successfully been used in homes, schools as a whole and in individual classrooms.

***A small note on copyright.*** The Maths Dash Program is one of a few Edusyn designed programs (check [www.edusyn.com.au](http://www.edusyn.com.au)), using the latest educational theories, to address contemporary needs in today's challenging class environment. The Maths Dash Kits are priced to be very affordable. There is lots of FREE documentation that's able to be downloaded from the Edusyn website. All purchases will be registered. Pirating copies of the Maths Dash Program is illegal and will not only compromise the design of further programs but will impact on the sustainability of the program. Please let us know of any copyright infringements.

## ***'The Sweet taste of Success'***

Students using Maths Dash develop improved self esteem because it is a challenging and highly motivating self-paced program extremely easy to manage even in very large groups. Maths Dash focuses on individual needs and challenges students to become higher achievers. Built into the program are benefits that impact on positive developmental processes including self-esteem, a belief in self-worth and the realisation of potential capabilities reinforced by high performance, teamwork, honesty and trust. Student enthusiasm for the program has been a catalyst for initiating a formal homework program in some schools.

To get the most benefit from the Maths Dash program it is essential that all the program elements be utilised. In other words, read the procedures carefully and make sure all materials are ready when the Maths Dash program commences at home, in the class or school as a whole. The parent, teacher or school Maths Dash coordinator needs to spend time familiarising themselves with the 'Procedures' and 'Getting Started' section of this paper.

## **CONTENT**

The **Maths Dash Program**, aligned to Australian States' curriculum outcomes, is organised in 4 levels (year levels indicated are a guide only):

**A** – preschool; **B** - Early Childhood; **C** - Middle Primary and **D** - Upper/ Secondary Levels.

In level D, the students are, also, challenged to provide instant recall of facts on basic mathematical concepts covering all Numeracy strands - including Number, Measurement, Data and Space.

## MATHS DASH LEVEL A

**Maths-Dash A** consists of 4 number and mental maths challenges consisting of 8 problems per challenge. The activities are highly graphic, progressively developing student familiarity and confidence with using numbers 1 to 9.

No.	Title	Description
A	<b>Lots</b>	Matching graphical representations from 1 to 3
B	<b>Heaps</b>	Matching graphical representations from 1 to 4
C	<b>Trickle</b>	Matching graphical representations from 3 to 6
D	<b>Oodles</b>	Matching graphical representations from 7 to 9

## MATHS DASH LEVEL B

**Maths-Dash B** consists of 22 number and mental maths challenges. The activities are highly graphic, progressively developing student familiarity and confidence with using the number symbols and very basic addition, subtraction, multiplication and division operations including the 2 and 3 times tables.

No.	Title	Description
1	<b>Twister</b>	Matching graphical representations from 1 to 4
2	<b>Mixed Bag</b>	Matching graphical representations from 5 to 7
3	<b>Bunch</b>	Matching graphical representations from 8 to 10
4	<b>Jeronemo</b>	Matching numbers with graphical representations from 1 to 3
5	<b>Zippedidoodah</b>	Matching numbers with graphical representations from 4 to 6
6	<b>Sensational</b>	Matching numbers with graphical representations from 7 to 10
7	<b>Piling</b>	Addition by groups of 2 from 0 to 10
8	<b>Dazzled</b>	Addition by groups of 2 from 10 to 20
9	<b>Scatter</b>	Subtraction by groups of 2 from 2 to 10
10	<b>Tricks</b>	Subtraction by groups of 2 from 10 to 20
11	<b>Zappy</b>	Addition by groups of 3 from 0 to 15
12	<b>Racing</b>	Addition by groups of 3 from 15 to 30
13	<b>Lightning</b>	Subtraction by groups of 3 from 3 to 15
14	<b>Tumbling</b>	Subtraction by groups of 3 from 15 to 30
15	<b>Dashing</b>	Multiplication by groups of 2 from 1 to 5 times
16	<b>Cool</b>	Multiplication by groups of 2 from 6 to 10 times

17	<b>Toppled</b>	Division by groups of 2 from 2 to 10
18	<b>Thunder</b>	Division by groups of 2 from 10 to 20
19	<b>Triple</b>	Multiplication by groups of 3 from 1 to 5 times
20	<b>Full-Pelt</b>	Multiplication by groups of 3 from 6 to 10 times
21	<b>Sizzle</b>	Division by groups of 3 from 3 to 15
22	<b>Sparks</b>	Division by groups of 3 from 18 to 30

## MATHS DASH LEVEL C

**MATHS DASH C** - 9 challenges consisting of **45** mental maths problems each covering the maths tables from 2 to 10 using number patterns involving the 4 basic operations – addition, subtraction, multiplication and division.

No.	Title	Description
1	<b>Zipper</b>	2 X table
2	<b>Boggled</b>	3 X table
3	<b>Spot On</b>	4 X table
4	<b>Wrestle</b>	5 X table
5	<b>Number Crunch</b>	6 X table
6	<b>Number Gym</b>	7 X table
7	<b>Number Maze</b>	8 X table
8	<b>Think Tank</b>	9 X table
9	<b>Maestro Mathematician</b>	10 X table

## MATHS DASH LEVEL D

**MATHS DASH D** - 13 challenges consisting of 100 mental problems covering the tables from 2 to 12 in lots of two tables. As well, these exercises contain '**Brain Teasers**' covering Number, Measurement, Data and Space.

No.	Title	Description
1	<b>Five Minute Dash</b>	2 and 3 tables
2	<b>Number Control</b>	4 and 5 tables
3	<b>Number Craze</b>	6 and 7 tables
4	<b>All Systems Go</b>	8 and 9 tables
5	<b>Muscle maths</b>	10 and 11 tables
6	<b>The Challenge</b>	11 and 12 tables

7	<b>Scramble</b>	12 table
8	<b>No Strings Attached</b>	mixed
9	<b>Number Spin</b>	mixed
10	<b>Nifty Sprinter</b>	mixed
11	<b>Maths Magic</b>	mixed
12	<b>Brain Twister</b>	mixed
13	<b>Facts Muncher</b>	

## The Procedures

### Overview

The procedure may seem daunting at first. Don't get impatient. It seems complex because there are a number of powerful elements that work together to create a very satisfying challenge for the class. This has been proven many times. An absolute silent class during the test is the norm. Groups spontaneously gathering and students calling out the answers without any teacher intervention is also the norm. Feel welcome to contact Edusyn if more information is needed.

To maximise the academic and motivational benefits of the Maths Dash Program it's highly essential all the following elements be utilised. Please contact if unsure.

The 'early' levels will have strategies for teachers attached to them. These are proven activities. I'm sure you can add more. We'll be interested in your ideas.

Initially the students are given a pre-test – a MD challenge determined by the teacher. The results determine the level the students commence the MD Program with. The first new challenge they're on becomes their 'master' copy. They fill the answers in themselves, get it corrected and then use it to practice with at home.

There is a weekly test. Each student has 5 minutes to complete it with a score of 100%. 5 minutes is recommended but it depends on the ability levels of the students in your class. The idea is, though, to challenge the students. Research has demonstrated students will reach the levels expected of them when the appropriate support is present.

After the test the results are graphed, which are hung up in the class for all to see. Awards (clapping, sticker etc.) are given for '**promotions**' to the next challenge with scores of 100% correct only. This is challenging at times but it's essential the teacher doesn't compromise with expectations. Students will immediately recognise the 'weakness' and will continually be focussing on maths Dash procedure adjustments rather than challenging themselves to meet the standards.

Being 'promoted' means colouring in a block on the 'Maths Dash Champion Class Poster', displayed in the classroom, giving an instant overview of progress and is used as a positive model for students to follow.

Following is a more elaborate set of instructions on how to implement the Maths Dash Program in the class or the school as a whole. It's also recommended for families to use in the home.

## Upon Commencement of the Program

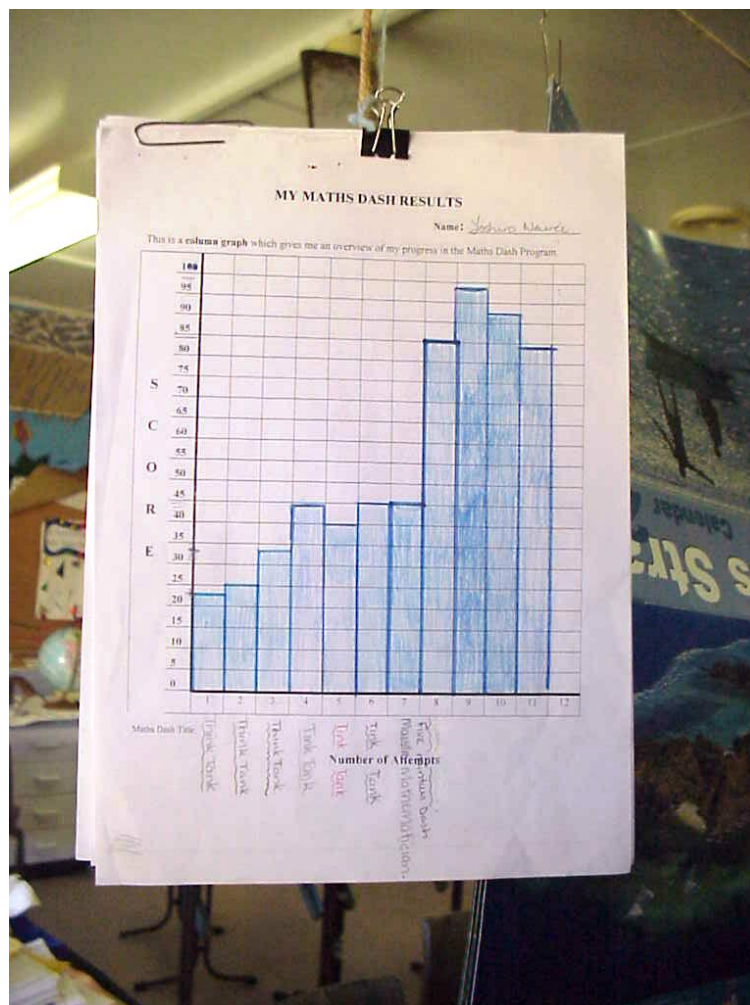
Give the students an 'average' challenge to gauge their levels. From the results allocate a MD challenge that they'll be confident starting with. Use the MD Challenge they're using as a 'Master' answer sheet by working out the problems in their own time and using the MD Answer Sheet to make sure they're all correct. This pre-test exercise will also iron out any problems including understanding the question or lack of understanding of a concept.

## Correcting the Maths Dash Challenge.

After each weekly challenge session student are encouraged to allow another student to correct the answers to their challenge. Students organise themselves into groups and correct their masterpieces independent of the teacher. Honesty is encouraged and has been found to be rarely broken.

## The Student's 'Maths Dash Results Graph'

The students record the results of their Maths Dash Challenge on their personal column graph which is displayed in the classroom. Integrate as many literacy and numeracy skills with the maths Dash Program procedures as possible.



The specified time, once decided upon, needs to apply to all subsequent Maths Dash Challenges. I have successfully had primary school students complete level C 'Facts Muncher' in a 5 minute slot. However, I've also worked in an educational setting where 10 minutes was an appropriate time frame to keep students highly motivated. Any change in times needs to be seriously debated. The capabilities of

the student are often camouflaged by 'distracting' variables from behaviour to the learning environment itself. Think about the complex skills the students learned before any formal education. What greater potential now.

**For Maths Dash to be used effectively it is highly essential that all components are utilised**

## The 'Maths Dash Students Records' sheet

The MD Student's Record Sheet will contain the weekly Maths Dash results as part of the teacher's assessment and is part of the teachers plan.

## The 'Maths Dash Champions' Class Poster

This large sized poster is displayed in a prominent position in the room and highlights the success of each student's promotion to the next Maths Dash Challenge. It includes a list of students' names and Maths Dash Challenge titles, in sequence. It's main purpose is to celebrate 'promotions', be a positive model, give a handy overview and lets the student know, immediately, which Maths Dash challenge comes next.



The following steps are a recommended set of procedures to use because they have worked highly successfully. Of course, every educational setting is different needing, possibly, varied approaches. However, try the 'proven' way first. Sometimes teachers are very good at deciding, prematurely, what the student *cannot do*.

## Getting Started

**Please note:** Maths Dash administration templates can be freely downloaded from the Edusyn site. They are Microsoft Word documents so that you can appropriately modify them for your class/ school context. We ask that the Edusyn Logo remain.

### STEP ONE: Teacher Preparation

Identify an initial Maths Dash Challenge you think will challenge the very best of your students. Give it to the class with a specified time you've decided to commit the program on, usually 5 minutes, but 10 minutes if appropriate (try not to compromise too soon there can be motivational magic found in a good challenge). Encourage the students to get as many done in the allotted time. Teach them strategies. Use the results to gauge which challenge each student will start with.

Make sure the student begins with one that is reasonably easy to do to get the student motivated to being promoted to the next one. The exercises will get more challenging as the students progress through the set.

Note the results and use them to determine which Maths Dash exercise the student can start with. Photocopy enough of each Maths Dash challenge to last a term and hand out a copy of the particular challenge for each student, preferably on a Monday. Encourage them to practice the challenge in preparation for a weekly Maths Dash challenge to be held each week, preferably on a Friday.

Photocopy enough copies of the students' **'Maths Dash Results Graph'** as well as some **'Maths Dash Students Records'** sheets

Create an attractive **'Maths Dash Champions'** class poster and display it in a prominent part of the classroom. Encourage ownership by getting the students to help you design and make it. The more serious the exercise the more students are encouraged to accept the challenges

## STEP TWO: The Students

Commence by giving the students an overview of the 'Maths Dash' program, explaining the purpose of the **'Maths Dash Results Graph'** and how to **fill** it in.

Explain the role of the **'Maths Dash Champions'** display

Proceed with the exercise that will identify students' specific Maths Dash challenge. Explain the strict time limit for the exercise i.e. 5 or 10 minutes.

Having identified the specific Maths Dash challenge for each student, hand them a copy.

Once they have received their Maths Dash challenge they need to **fill** in the answers. This becomes their master Maths Dash exercise for the week to practice with.

Explain to the students the importance of commitment to the acquisition of maths skills and wish them all the best for their first individual Maths Dash Challenge.

On the Friday have the 'Maths Dash Challenge' session. Encouraging correction by the student's neighbour/ partner promotes honesty and trust. The aim is to get a 100% score, only then will they be **'promoted'** to the next Maths Dash challenge.

It is essential any promotion is appropriately **'celebrated'**. Any student that gets 'promoted' will, immediately, be given the new Maths Dash challenge to fill out and use for practice in preparation for the next 'Maths Dash Challenge' session.

Process the results by the students neatly colouring in the column on their **'Maths Dash Results Graph'** and the teacher noting the results on the **'Maths Dash Students Records'** sheet.

The students are expected to prepare for the 'Maths Dash Challenge' session. It's essential they be encouraged to practice at home with a friend, family etc. to encourage independent learning and family/ community support.

## THE WHOLE SCHOOL

The Maths Dash Program has been successfully implemented on a whole school level. A **'Class Maths Dash Trophy'** was used to celebrate the excellent efforts by a class to achieve the highest point score of the week. The trophy had pride of place in the classroom for a week. The benefits to the school included helping focus

on academic achievements. It was also beneficial to encourage high standards from every class in the school.

## HOW?

Each class does the same as above. A consensus will need to be made on point scoring including:

- Promotions - 10 **points**
- Student improved achievement - 1 **point** for every correct answer over and above the previous score i.e. 25 points if a student scored 25 correct answers better than the previous 'Maths Dash challenge' session.
- **Average** the scores out i.e. divide the total class score with the number of students in the class that took the 'Maths Dash Challenge' session at that time.

Please find a class score template for the school as a whole on the Edusyn website.

Maths Dash occurs at the same time throughout the school. All the scores are collected and a trophy handed to the best class for that week, preferably during the weekly assembly, to be celebrated appropriately.

