

MATHS 'N' MOVEMENT



Move the desks to the side of the room it's time for maths!

This edition of Maths 'N' Movement is designed specifically for NSW Schools and combines the NSW Australian Maths Syllabus with the PD/H/PE Syllabus. With programs available from Kindergarten to Year 6 it provides a fun way to effectively engage students in maths learning across all 17 strands of the New NSW Australian Maths Curriculum.

Maths 'N' Movement increases both on task student behaviour and fitness by combining Maths with the key PD/H/PE topics of fundamental movement skills, co-operation, game play, safety, nutrition and acceptance of consequences for one's actions.

Designed to get more students, more active, more often, Maths 'N' Movement is a dual strand teaching strategy that leap-frogs time constraints by teaching twice as much in half the time. Best of all, your students won't even realise they are working so hard because they are having so much fun!

For further information on the best way to use this program and additional teaching resources visit www.mathsnmovement.com.au.

Distributed International by:

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MATHS 'N' MOVEMENT

LEVEL

6

GRADE 5

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LEVEL

6

MA3-4NA

WHOLE NUMBER

In this Maths 'N' Movement activity students will order, read and represent integers of any size and describe properties of whole numbers.

ACTIVITY

1. In teams of 4 or 5, students are shown a 2 digit number.
2. Each team must try to make the number shown with their bodies.
3. All team members must be included in every number.



Equipment Required:

- A set of Number Cards from 0 to 9 so students can see the number they need to create.



Notes:

This is a great activity for getting boys and girls to hold hands as Year 5 tends to be a time when students will actively avoid touching each other in any way. If students will not work together single sex groups may need to be created.



Additional Maths Outcomes Covered:

MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.

MA3-2WM - Problem Solving - Selects and applies appropriate problem solving strategies.



PD/H/PE Outcomes Covered:

COS3.3 – Communicating – Communicates confidently in a variety of situations.

DMS3.2 0 - Decision Making – Makes informed decisions and accepts responsibility for consequences.

INS3.3 – Interacting – Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

PSS3.5 - Problem Solving – Suggests, considers and selects appropriate alternatives when resolving problems.

SLS3.13 – Employs safe practices that are appropriate to this situation.



MATHS 'N' MOVEMENT



0

5

1

6

2

7

3

8

4

9

Whole Number

Addition

Subtraction

Multiplication
& Division

Fractions &
Decimals

Chance

Patterns &
Algebra

Data

Length

Area

Volume
& Capacity

Mass

Time

3D Space

2D Space

Angles

Position



LEVEL

6

MA3-5NA

ADDITION

In this Maths 'N' Movement activity students will select and apply appropriate strategies for addition with counting numbers of any size.

ACTIVITY

1. In teams of 4 or 5, students line up with their Addition Recording Sheet 5 metres from their pile of Number Cards.

2. The first student in each team is given a 2 digit plus 2 digit addition to solve. Students complete the addition algorithm on their Addition Recording Sheet and then race, using the given movement, to get the number cards which match their answer.

3. If incorrect the student must try again until they are correct and can return to their team so remaining team members can take it in turn to solve an addition or subtraction algorithm.



Equipment Required:

- A set of Number Cards per team (see Whole Number).
- An Addition Recording Sheet and pencil per team.



Notes:

As there is only one of each number per team the addition algorithms chosen cannot have repeating numbers in their answer. As students become more proficient at this you may wish to add more sets of cards and increase the number of digits in the algorithm being completed.



Additional Maths Outcomes Covered:

MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.

MA3-2WM - Problem Solving - Selects and applies appropriate problem solving strategies.

MA3-4NA - Whole Number - Reads and represents integers of any size and describes properties of whole numbers.



PD/H/PE Outcomes Covered:

COS3.3 – Communicating – Communicates confidently in a variety of situations.

DMS3.2 0 - Decision Making – Makes informed decisions and accepts responsibility for consequences.

INS3.3 – Interacting – Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

MOS3.4 – Moving/FMS – Refines and applies movement skills to a variety of situations.



MATHS 'N' MOVEMENT



Round 1	1st Number	Plus	2nd Number	Equals	Addition Total
Student 1: _____		+		=	
Student 2: _____		+		=	
Student 3: _____		+		=	
Student 4: _____		+		=	
Student 5: _____		+		=	

Round 2	1st Number	Plus	2nd Number	Equals	Addition Total
Student 1: _____		+		=	
Student 2: _____		+		=	
Student 3: _____		+		=	
Student 4: _____		+		=	
Student 5: _____		+		=	

Round 3	1st Number	Plus	2nd Number	Equals	Addition Total
Student 1: _____		+		=	
Student 2: _____		+		=	
Student 3: _____		+		=	
Student 4: _____		+		=	
Student 5: _____		+		=	

Round 4	1st Number	Plus	2nd Number	Equals	Addition Total
Student 1: _____		+		=	
Student 2: _____		+		=	
Student 3: _____		+		=	
Student 4: _____		+		=	
Student 5: _____		+		=	

Round 5	1st Number	Plus	2nd Number	Equals	Addition Total
Student 1: _____		+		=	
Student 2: _____		+		=	
Student 3: _____		+		=	
Student 4: _____		+		=	
Student 5: _____		+		=	

- Whole Number
- Addition
- Subtraction
- Multiplication & Division
- Fractions & Decimals
- Chance
- Patterns & Algebra
- Data
- Length
- Area
- Volume & Capacity
- Mass
- Time
- 3D Space
- 2D Space
- Angles
- Position



LEVEL

6

MA3-5NA

SUBTRACTION

In this Maths 'N' Movement activity students will select and apply appropriate strategies for subtraction with counting numbers of any size.

ACTIVITY

1. As a class, students use a tape measure or trundle wheel to measure the length of all students stretched out holding hands.
2. As a class, students measure the length of all students standing shoulder to shoulder.
3. As a class, students measure the length of all students sitting cross legged knee to knee.
4. As a class, students measure the length of all students standing with their hands on the shoulder of the student in front.
5. Students use the lengths they measured to complete their Subtractions Recording Sheet.



Equipment Required:

- A tape measure or trundle wheel.
- A Subtractions Recording Sheet and pencil per student.



Notes:

This activity is a fun way to use real world measurements in a subtraction activity. While 4 ideas have been provided students could also measure the length of them all sitting with their feet touching the back of the student in front, them all side on with one arm outstretched or any other form of length they wish to create.



Additional Maths Outcomes Covered:

MA3-4NA - Whole Number - Orders, reads and represents integers of any size and describes properties of whole numbers.

MA3-9MG - Length - Selects and uses the appropriate unit and device to measure lengths and distances.

MA3-8NA - Patterns & Algebra - Constructs and completes number sentences using basic algebraic terms.



PD/H/PE Outcomes Covered:

INS3.3 – Interacting – Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

SLS3.13 – Describes safe practices that are appropriate to maneuvering students into the positions desired.



MATHS 'N' MOVEMENT



SUBTRACTION RECORDING SHEET

Record the lengths you measured.

- The length of all students stretched out holding hands. _____
- The length of all students standing shoulder to shoulder. _____
- The length of all students sitting cross legged knee to knee. _____
- The length of all students standing with hands on shoulders. _____

Solve the subtraction algorithms below using these lengths.

A	The longest length?	
B	The shortest length?	
C	The 2nd longest length?	
D	The 2nd shortest length?	

Algebraic Term/Length	Minus	Algebraic Term/Length	Equals	Answer
A	-	B	=	
_____	-	_____	=	
A	-	C	=	
_____	-	_____	=	
A	-	D	=	
_____	-	_____	=	
C	-	D	=	
_____	-	_____	=	
C	-	B	=	
_____	-	_____	=	
D	-	B	=	
_____	-	_____	=	



LEVEL

6

MA3-6NA

MULTIPLICATION & DIVISION

In this Maths 'N' Movement activity students will select and apply appropriate strategies for multiplication and division.

ACTIVITY

1. In pairs, students collect 2 dice and find a position within the allocated space where they will not hit another student when they are jumping rope.
2. One student in each pair rolls the dice while the other student records the numbers rolled on their Multiplication & Division Recording Sheet and the answer created when these are multiplied together.
3. The student who rolled the dice jumps rope the number of times their partner recorded as the answer to the multiplication algorithm.
4. Once all jumps have been performed the pair swap positions and repeat the process so each student gets a chance to roll the dice, complete basic multiplication algorithms and jump rope.



Equipment Required:

- A Multiplication & Division Recording Sheet and pencil per pair.
- A skipping rope per pair.
- 2 regular dice per pair.



Notes:

If you do not have sufficient skipping ropes pairs could perform a vertical jump without a rope until another pair have both jumped rope so each student jumps once with the rope and once using a vertical jump. Also depending on the student's fitness levels a decahedron (10 sided) die could be used instead of one of the regular die meaning that up to 60 skips would need to be performed rather than 36.



Additional Maths Outcomes Covered:

- MA3-1WM - Communicating** - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.
- MA3-4NA - Whole Number** - Orders, reads and represents integers of any size and describes properties of whole numbers.
- MA3-5NA - Addition** - Selects and applies appropriate strategies for addition if tables are not known.



PD/H/PE Outcomes Covered:

- COS3.3 - Communicating** - Communicates confidently in a variety of situations.
- INS3.3 - Interacting** - Acts in ways that enhance the contribution of self and others in a range of cooperative situations.
- MOS3.4 - Moving/FMS** - Refines and applies movement skills to a variety of situations especially skipping rope.
- GSS3.8 - Applies movement skills in games** that require communication cooperation, decision making and observation of rules.
- SLS3.13 - Describes safe practices** that are appropriate to skipping rope.



MATHS 'N' MOVEMENT



MULTIPLICATION & DIVISION RECORDING SHEET

1st Number Rolled	Times	2nd Number Rolled	Equals	Number of Jumps
	X		=	
	X		=	
	X		=	
	X		=	
	X		=	
	X		=	
	X		=	
	X		=	
	X		=	
	X		=	
	X		=	

Whole Number

Addition

Subtraction

Multiplication & Division

Fractions & Decimals

Chance

Patterns & Algebra

Data

Length

Area

Volume & Capacity

Mass

Time

3D Space

2D Space

Angles

Position



LEVEL

6

MA3-7NA

FRACTIONS & DECIMALS

In this Maths 'N' Movement activity students will compare, order and calculate with fractions, decimals and percentages.

ACTIVITY

1. Students stand in a large circle holding their Fraction, Decimal and Percentage Card with one student in the middle.
2. The student in the middle calls out 2 numbers.
3. The students holding fractions, percentages or decimals which match the relationship between the 2 numbers race, using the given movement, to change positions i.e. If 50 and 100 and hop were called any students holding 50%, 0.5 and $\frac{1}{2}$ would hop to the middle of the circle and swap places.
4. The last student to swap is in the middle for the next round and calls the 2 numbers.



Equipment Required:

- A Fraction, Decimal and Percentage Card per student.



Notes:

If some students deliberately move slowly so that they can be in the middle you could make it that the first person back is in. Otherwise you may need to randomly select the student in the middle.



Additional Maths Outcomes Covered:

- MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.
- MA3-4NA - Whole Numbers - Orders, reads and represents integers of any size and describes properties of whole numbers.
- MA3-6NA - Multiplication & Division - Selects and applies appropriate strategies for multiplication & division to find halves, quarters and thirds.



PD/H/PE Outcomes Covered:

- COS3.3 – Communicating – Communicates confidently in a variety of situations.
- DMS3.2 0 - Decision Making – Makes informed decisions and accepts responsibility for consequences.
- INS3.3 – Interacting – Acts in ways that enhance the contribution of self and others in a range of cooperative situations.
- MOS3.4 – Moving/FMS – Refines and applies movement skills to a variety of situations.



MATHS 'N' MOVEMENT



FRACTION, DECIMAL & PERCENTAGE CARDS

0.5

$\frac{1}{2}$

50%

0.25

$\frac{1}{4}$

25%

0.33

$\frac{1}{3}$

33%

Whole Number

Addition

Subtraction

Multiplication
& Division

Fractions &
Decimals

Chance

Patterns &
Algebra

Data

Length

Area

Volume
& Capacity

Mass

Time

3D Space

2D Space

Angles

Position



LEVEL

6

MA3-19SP

CHANCE

In this Maths 'N' Movement activity students will conduct chance experiments and assign probabilities as fractions to describe their outcomes.

ACTIVITY

1. In teams of 4 or 5, students stand 5 metres from their team's bag or container of counters and calculate on their Chance Recording Sheet the probability of each counter being drawn ie. if there are 11 counters and 6 are green, 3 are red and 2 are blue there is a $\frac{6}{11}$ chance of green; $\frac{3}{11}$ chance of red and $\frac{2}{11}$ chance of blue.
2. Using their calculations, students predict the colour counter they think they will draw.
3. Students take it in turns to race, using the given movement, to their container to draw a counter, record the results and then return the counter.
4. After 5 rounds students compare their team's results with other teams and see if the counter with the highest probability, green, was drawn most often.



Equipment Required:

- A selection of Red, Green and Blue counters per team.
- A bag or container per team.
- A Chance Recording Sheet and pencil per team



Notes:

The more counters and colours used the more complex this activity so it may be best to start with 3 colours and 7 counters and as students become familiar with the task include more counters and colours on subsequent days.



Additional Maths Outcomes Covered:

MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.

MA3-2WM - Problem Solving - Selects and applies appropriate problem solving strategies in understanding investigations.

MA3-3WM - Reasoning - Gives a valid reason for supporting one possible solution over another.

MA3-7NA - Fractions, Decimals & Percentages - Compares, orders and calculates with fractions, decimals and percentages.

MA3 - 18MG - Data - Uses appropriate methods to collect data and constructs, interprets and evaluates data tables.



PD/H/PE Outcomes Covered:

COS3.3 - Communicating - Communicates confidently in a variety of situations.

DMS3.2 0 - Decision Making - Makes informed decisions and accepts responsibility for consequences.

INS3.3 - Interacting - Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

MOS3.4 - Moving/FMS - Refines and applies movement skills to a variety of situations.



MATHS 'N' MOVEMENT



Round 1	Probability of Colours Being Drawn	Colour Predicted	Colour Drawn
Student 1: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 2: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 3: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 4: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 5: _____	R: _____ G: _____ B: _____	R G B	R G B

Round 2	Probability of Colours Being Drawn	Colour Predicted	Colour Drawn
Student 1: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 2: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 3: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 4: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 5: _____	R: _____ G: _____ B: _____	R G B	R G B

Round 3	Probability of Colours Being Drawn	Colour Predicted	Colour Drawn
Student 1: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 2: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 3: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 4: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 5: _____	R: _____ G: _____ B: _____	R G B	R G B

Round 4	Probability of Colours Being Drawn	Colour Predicted	Colour Drawn
Student 1: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 2: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 3: _____	R: _____ G: _____ B: _____	R G B	R G B
Student 4: _____	R: _____ G: _____ B: _____	R G B	R G B

Whole Number

Addition

Subtraction

Multiplication
& DivisionFractions &
Decimals

Chance

Patterns &
Algebra

Data

Length

Area

Volume
& Capacity

Mass

Time

3D Space

2D Space

Angles

Position



LEVEL

6

MA3-8NA

PATTERNS & ALGEBRA

In this Maths 'N' Movement activity students will analyse and complete algebraic number sentences.

ACTIVITY

1. In teams of 4 or 5, students are shown one of the Patterns & Algebra Number Sentences.

2. The first student in each team races, using the given movement, to their team's numbers and find the answer to the number sentence and holds it up to be checked.

3. The students return their numbers to their pile and the remaining students take it in turns to find an answer to a number sentence.



Equipment Required:

- A copy of the Patterns & Algebra Cards.
- A set of Number Cards per team (see Whole Number).



Notes:

This activity need not be limited to the number sentence provided as students could create their own number sentences for other students to solve.



Additional Maths Outcomes Covered:

MA3-2WM - Problem Solving - Selects and applies appropriate problem solving strategies in understanding investigations.

MA3-5NA - Addition - Selects and applies appropriate strategies for addition to solve the algebraic problem.

MA3-5NA - Subtraction - Selects and applies appropriate strategies for subtraction to solve the algebraic problem.

Multiplication & Division - MA3-6NA - Selects and applies appropriate strategies for multiplication & division to solve the algebraic problem.



PD/H/PE Outcomes Covered:

COS3.3 – Communicating – Communicates confidently in a variety of situations.

DMS3.2 0 - Decision Making – Makes informed decisions and accepts responsibility for consequences.

INS3.3 – Interacting – Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

MOS3.4 – Moving/FMS – Refines and applies movement skills to a variety of situations.

PSS3.5 - Problem Solving – Suggests, considers and selects appropriate alternatives when resolving problems.



MATHS 'N' MOVEMENT

PATTERNS & ALGEBRA CARDS

$18 + ? = 12$	$3 + ? = 18$	$15 + ? = 23$	$15 - ? = 9$
$? + 4 = 12$	$? \times 7 = 63$	$? + 9 = 13$	$? \div 3 = 3$
$? \div 2 = 4$	$? + 16 = 19$	$12 - ? = 8$	$4 \times ? = 28$
$36 \div ? = 9$	$10 \times ? = 40$	$? \times 8 = 24$	$16 + ? = 20$

Whole Number

Addition

Subtraction

Multiplication
& DivisionFractions &
Decimals

Chance

Patterns &
Algebra

Data

Length

Area

Volume
& Capacity

Mass

Time

3D Space

2D Space

Angles

Position



LEVEL

6

MA3-18MG

DATA

In this Maths 'N' Movement activity students will use appropriate methods to collect data and construct, interpret and evaluate data displays.

ACTIVITY

1. In pairs, students find a position within the allocated space where they will not hit another student when they are jumping rope.
2. When the whistle sounds one student in each pair begins jumping rope to see how many jumps they can perform before they miss a jump and have to stop or the whistle sounds after 20 seconds.
3. Students record their number of jumps on their Data Recording Sheet and allow their partner to jump rope and record their results.
4. Students collect the results from 10 of their classmates including their partner, complete their Data Recording Sheet and use their data to answer the questions.



Equipment Required:

- A 20 second timer.
- A whistle.
- A Time Recording Sheet and pencil per student.



Notes:

If you do not have enough skipping ropes for one between 2, students can form groups based on the number of ropes available and use the results from students in their group as the first entries on their Data Recording Sheet.



Additional Maths Outcomes Covered:

MA3-4NA - Whole Number - Orders, reads and represents integers of any size and describes properties of whole numbers.

MA3-13MG - Time - Understands how short/long 30 seconds feels.



PD/H/PE Outcomes Covered:

MOS3.4 – Moving/FMS – Refines and applies movement skills to a variety of situations especially skipping rope.

ALS3.6 – Shows how to maintain and improve the quality of an active lifestyle.



MATHS 'N' MOVEMENT



Consecutive Skips Performed in 30 Seconds

Number of Skips	30											
	29											
	28											
	27											
	26											
	25											
	24											
	23											
	22											
	21											
	20											
	19											
	18											
17												
16												
15												
14												
13												
12												
11												
10												
9												
8												
7												
6												
5												
X	You _____	Partner _____	Student _____	Student _____	Student _____	Student _____	Student _____	Student _____	Student _____	Student _____	Student _____	Student _____

Least skips a student performed: _____
 Most skips a student performed: _____
 Average skips all students performed: _____



- Whole Number
- Addition
- Subtraction
- Multiplication & Division
- Fractions & Decimals
- Chance
- Patterns & Algebra
- Data
- Length
- Area
- Volume & Capacity
- Mass
- Time
- 3D Space
- 2D Space
- Angles
- Position

LEVEL

6

MA3-9MG

LENGTH

In this Maths 'N' Movement activity students will select and use the appropriate unit and device to measure lengths and distances and convert between units of length.

ACTIVITY

1. In team of 4 or 5, students predict how far they think they can run in 5 seconds.
2. When the whistle sounds, the first student in each team sprint runs as far as they can before the whistle sounds again after 5 seconds.
3. Each team uses their device of choice to measure their first team member's distance in centimetres and metres and records the distance on their Length Recording Sheet.
4. When all students have run and recorded their results students find the difference between their estimated and actual distances.



Equipment Required:

- A 30cm ruler, metre ruler, 8 metre tape measure and trundle wheel per team.
- A Length Recording Sheet and pencil per team.
- A stop watch and whistle.



Notes:

For some students 5 seconds may be too long as they will run too far to be measured. If this is the case reduce the time to 2 or 3 seconds and continue as described.



Additional Maths Outcomes Covered:

MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.

MA3-3WM - Reasoning - Gives a valid reason for supporting their estimation.

MA3-5NA - Subtraction - Selects and applies appropriate strategies for subtraction to find the difference between their two distances.

MA3-13MG - Time - Identifies how far they can actually travel in 5 seconds.



PD/H/PE Outcomes Covered:

COS3.3 - Communicating - Communicates confidently in a variety of situations.

DMS3.2 0 - Decision Making - Makes informed decisions and accepts responsibility for consequences.

INS3.3 - Interacting - Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

MOS3.4 - Moving/FMS - Refines and applies movement skills to a variety of situations especially sprint running.

PSS3.5 - Problem Solving - Suggests, considers and selects appropriate alternatives when resolving problems.



MATHS 'N' MOVEMENT



LENGTH RECORDING SHEET

Student	Predicted Distance	Actual Distance	Difference Between Predicted and Actual Distances

- Whole Number
- Addition
- Subtraction
- Multiplication & Division
- Fractions & Decimals
- Chance
- Patterns & Algebra
- Data
- Length
- Area
- Volume & Capacity
- Mass
- Time
- 3D Space
- 2D Space
- Angles
- Position



LEVEL

6

MA3-10MG

AREA

In this Maths 'N' Movement activity students will select and use the appropriate unit to calculate areas, including areas of squares, rectangles and triangles.

ACTIVITY

1. In teams of 4 or 5, students sit with their Area Recording Sheet, 5 metres from their pile of centimetre cubes.
2. Team's predict on their Area Recording Sheet the area, in centimetres, of each of the 4 shapes.
2. Once predicted team members take it in turns to race, using the given movement, to collect 2 blocks at a time (one per hand) until they have covered each shape.
3. When an area is covered students return all of their blocks to their pile and calculate the difference between their prediction and the actual area of each shape.



Equipment Required:

- A pile of centimetre square blocks per team.
- An Area Recording Sheet and pencil per team.



Notes:

Additional shapes can be used for this activity such as textbooks, novels, sticky tape rolls, pencil tin bases and any other easily accessible items. The shapes can also be enlarged or reduced to be used again and again.



Additional Maths Outcomes Covered:

- MA3-1WM - Communicating** - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.
- MA3-2WM - Problem Solving** - Selects and applies appropriate problem solving strategies in understanding investigations.
- MA3-3WM - Reasoning** - Gives a valid reason for supporting one possible solution over another.
- MA3-4NA - Whole Number** - Orders, reads and represents integers of any size and describes properties of whole numbers.
- MA3-5NA - Subtraction** - Selects and applies appropriate strategies for subtraction to find the difference between the 2 areas.



PD/H/PE Outcomes Covered:


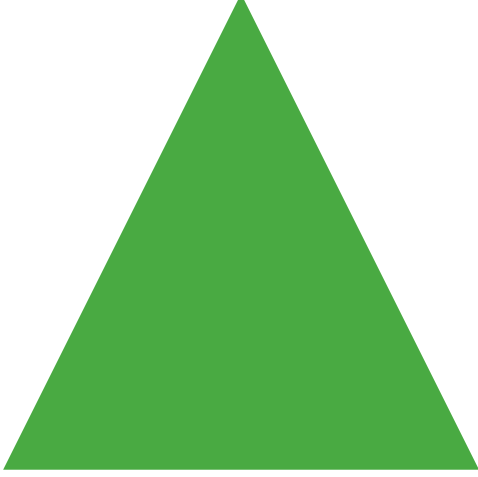

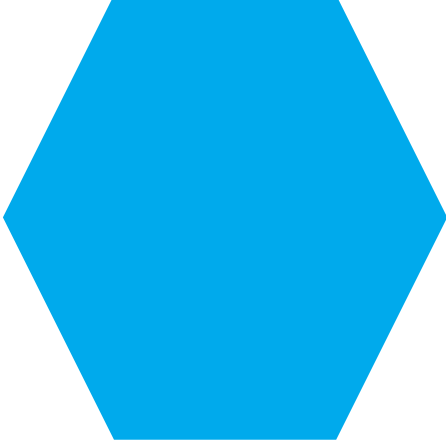
- COS3.3 - Communicating** - Communicates confidently in a variety of situations.
- DMS3.2 0 - Decision Making** - Makes informed decisions and accepts responsibility for consequences.
- INS3.3 - Interacting** - Acts in ways that enhance the contribution of self and others in a range of cooperative situations.
- MOS3.4 - Moving/FMS** - Refines and applies movement skills to a variety of situations.
- PSS3.5 - Problem Solving** - Suggests, considers and selects appropriate alternatives when resolving problems.



MATHS 'N' MOVEMENT



- Whole Number
- Addition
- Subtraction
- Multiplication & Division
- Fractions & Decimals
- Chance
- Patterns & Algebra
- Data
- Length
- Area
- Volume & Capacity
- Mass
- Time
- 3D Space
- 2D Space
- Angles
- Position

	
Estimated Area:	<input style="width: 100%; height: 20px;" type="text"/>
Actual Area:	<input style="width: 100%; height: 20px;" type="text"/>
Difference Between Areas:	<input style="width: 100%; height: 20px;" type="text"/>
	
Estimated Area:	<input style="width: 100%; height: 20px;" type="text"/>
Actual Area:	<input style="width: 100%; height: 20px;" type="text"/>
Difference Between Areas:	<input style="width: 100%; height: 20px;" type="text"/>



LEVEL

6

MA3-11MG

VOLUME & CAPACITY

In this Maths 'N' Movement activity students will select and use the appropriate unit to estimate, measure and calculate volumes and capacities.

ACTIVITY

1. In teams of 4 or 5, students stand with their clear plastic cup 5 metres from the cordial bottle.
2. The first student in each team races, using the given movement, to take their plastic cup to the cordial bottle.
3. Each student holds the Measuring Card next to their cup and measures cordial into their cup to cover the first box.
4. When each student has poured their cordial they take it in turns to add water to cover the remaining 4 boxes one at a time.
5. When each student has 4 parts water to 1 part cordial they can taste their drink and see if they think it needs more or less cordial added.



Equipment Required:

- A bottle of cordial with a 4 to 1 mixing ratio.
- A cup per student.
- Drinking water per team.
- A Volume & Capacity Measuring Card per student.



Notes:

This activity is a great way to start a discussion about what students are drinking and whether they are consuming enough water each day. If students feel that the drink is too sweet or not sweet enough discuss what this tells you about the child's diet.



Additional Maths Outcomes Covered:

MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.

MA3-7NA - Fractions, Decimals & Percentages - Calculates with fractions to work out the amount of millilitres in a 4 to 1 ratio.



PD/H/PE Outcomes Covered:

COS3.3 – Communicating – Communicates confidently in a variety of situations.

INS3.3 – Interacting – Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

MOS3.4 – Moving/FMS – Refines and applies movement skills to a variety of situations.

ALS3.6 – Shows how to maintain and improve the quality of an active lifestyle.



MATHS 'N' MOVEMENT



- Whole Number
- Addition
- Subtraction
- Multiplication & Division
- Fractions & Decimals
- Chance
- Patterns & Algebra
- Data
- Length
- Area
- Volume & Capacity
- Mass
- Time
- 3D Space
- 2D Space
- Angles
- Position

Place Cup Base Here	Water	$\frac{1}{5}$
	Water	$\frac{1}{5}$
	Water	$\frac{1}{5}$
	Water	$\frac{1}{5}$
	Cordial	$\frac{1}{5}$

Place Cup Base Here	Water	$\frac{1}{5}$
	Water	$\frac{1}{5}$
	Water	$\frac{1}{5}$
	Water	$\frac{1}{5}$
	Cordial	$\frac{1}{5}$



LEVEL

6

MA3-12MG

MASS

In this Maths 'N' Movement activity students will select and use the appropriate unit and device to measure the mass of objects, and convert between units of mass.

ACTIVITY

1. In teams of 4 or 5, students line up 5 metres from their Mass Recording Sheet and calculator.
2. Students are told that 1 Pound is equivalent to 2.2 Kilograms and are shown an example of each of these.
3. The first student in each team races, using the given movement, to their team's Mass Recording Sheet and calculator and converts the first 'Kilogram' amount into its new form of 'Pounds' by dividing by 2.2.
4. When correct the students race back to their team and each teams second member coverts pounds to kilograms by multiplying by 2.2.



Equipment Required:

- A calculator per team.
- A Mass Recording Sheet and pencil per team.



Notes:

Once students understand how to convert between pounds and kilograms you may wish to look at health weight, underweight, overweight and obese as a measure of mass and how these relate to kilograms and pounds.



Additional Maths Outcomes Covered:

- MA3-1WM - Communicating** - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.
- MA3-2WM - Problem Solving** - Selects and applies appropriate problem solving strategies in understanding investigations.
- MA3-4NA - Whole Number** - Orders, reads and represents integers of any size and describes properties of whole numbers.
- MA3-6NA - Multiplication & Division** - Selects and applies appropriate strategies for multiplication & division when converting between kilograms and pounds.



PD/H/PE Outcomes Covered:

- COS3.3 - Communicating** - Communicates confidently in a variety of situations.
- INS3.3 - Interacting** - Acts in ways that enhance the contribution of self and others in a range of cooperative situations.
- MOS3.4 - Moving/FMS** - Refines and applies movement skills to a variety of situations.
- PSS3.5 - Problem Solving** - Suggests, considers and selects appropriate alternatives when resolving problems.



MATHS 'N' MOVEMENT



1 Pound (lb) = 2.2 Kilograms (kg)

Kilograms	Pounds	Kilograms	Pounds
20kg		35kg	
	8.8lb		37.4lb
45kg		500kg	
	19.8lb		83.6lb
12kg		19kg	
	92.4lb		30.8lb
148kg		80kg	

- Whole Number
- Addition
- Subtraction
- Multiplication & Division
- Fractions & Decimals
- Chance
- Patterns & Algebra
- Data
- Length
- Area
- Volume & Capacity
- Mass
- Time
- 3D Space
- 2D Space
- Angles
- Position



LEVEL

6

MA3-13MG

TIME

In this Maths 'N' Movement activity students will use 24 hour time and am and pm notation to construct time lines.

ACTIVITY

1. In teams of 4 or 5, students line up 5 metres from their pile of 10 Time Cards.
2. Students take it in turns to race, using the given movement, to their pile of Time Cards and retrieve one card and return it to their team until all 10 Time Cards have been collected.
3. Team's work together to place each Time Card in its correct position so that all their Time Cards are arranged in order with 1 footstep between each Time Card.



Equipment Required:

- 10 Time Cards in a pile per team.



Notes:

Students could be asked to record all of their times in a single notation such as digitally and with 12 or 24 hour time. Once students have completed this challenge they could be given a different set of 10 cards.



Additional Maths Outcomes Covered:

MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.

MA3-2WM - Problem Solving - Selects and applies appropriate problem solving strategies in understanding investigations.

MA3-3WM - Reasoning - Gives a valid reason for supporting one possible solution over another.

MA3-4NA - Whole Number - Orders, reads and represents integers of any size and describes properties of whole numbers.



PD/H/PE Outcomes Covered:

COS3.3 - Communicating – Communicates confidently in a variety of situations.

DMS3.2 0 - Decision Making – Makes informed decisions and accepts responsibility for consequences.

INS3.3 - Interacting – Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

PSS3.5 - Problem Solving – Suggests, considers and selects appropriate alternatives when resolving problems.



MATHS 'N' MOVEMENT



- Whole Number
- Addition
- Subtraction
- Multiplication & Division
- Fractions & Decimals
- Chance
- Patterns & Algebra
- Data
- Length
- Area
- Volume & Capacity
- Mass
- Time
- 3D Space
- 2D Space
- Angles
- Position



MATHS 'N' MOVEMENT



DIGITAL TIME CARDS

1:23

15:08

3:46

16:33

6:07

18:12

8:59

21:18

13:41

23:54

Whole Number

Addition

Subtraction

Multiplication
& Division

Fractions &
Decimals

Chance

Patterns &
Algebra

Data

Length

Area

Volume
& Capacity

Mass

Time

3D Space

2D Space

Position



LEVEL

6

MA3-14MG

3D SPACE

In this Maths 'N' Movement activity students will visualise and construct 3D objects given drawings of different views.

ACTIVITY

1. In teams of 5, students line up 5 metres from their pile of connecting blocks.
2. The first student in each team races, using the given movement, to their pile of blocks and turns over the first 3D Shape Perspective Card. The student uses their connecting blocks to construct the shape being shown in its top, side and front view.
3. When student's constructions have been checked they dismantle their blocks and return to their team for the next student to have a turn at creating a 3D Space Shape.



Equipment Required:

- A pile of connecting blocks per team.
- A copy of the 3D Shape Perspective Cards.



Notes:

There are enough Shape Perspective cards for each student in a team of 5 to have 1 turn or if you prefer students could work in pairs or teams to solve each of the 5 challenges.



Additional Maths Outcomes Covered:

MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.

MA3-2WM - Problem Solving - Selects and applies appropriate problem solving strategies in understanding investigations.

MA3-3WM - Reasoning - Gives a valid reason for supporting one possible solution over another



PD/H/PE Outcomes Covered:

COS3.3 - Communicating - Communicates confidently in a variety of situations.

DMS3.2 0 - Decision Making - Makes informed decisions and accepts responsibility for consequences.

INS3.3 - Interacting - Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

MOS3.4 - Moving/FMS - Refines and applies movement skills to a variety of situations.

PSS3.5 - Problem Solving - Suggests, considers and selects appropriate alternatives when resolving problems.



MATHS 'N' MOVEMENT



BLOCKS	Front View	Top View	Side View
8			
20			
12			
8			
18			

- Whole Number
- Addition
- Subtraction
- Multiplication & Division
- Fractions & Decimals
- Chance
- Patterns & Algebra
- Data
- Length
- Area
- Volume & Capacity
- Mass
- Time
- 3D Space
- 2D Space
- Angles
- Position



LEVEL

6

MA3-15MG

2D SPACE

In this Maths 'N' Movement activity students will classify equilateral, isosceles and scalene triangles and describe their properties.

ACTIVITY

1. Students form a large circle around the outside of the 3 x 2D Space Cards - Isosceles, Scalene and Equilateral - which are placed on the ground in 3 hula hoops at least 5 metres from each other.

2. When shown one of the 2D Space Triangles students race, using the given movement, towards the word on the ground which matches the type of triangle shown.



Equipment Required:

- A set of 2D Space Triangles.
- The words Equilateral, Scalene and Isosceles.
- 3 hula hoops in which to place the 2D Space Triangles.



Notes:

This is a quick, easy and fun method for reinforcing the difference between these three different triangles which should be repeated regularly throughout the year to ensure retention of this information.



Additional Maths Outcomes Covered:

MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.

MA3-3WM - Reasoning - Gives a valid reason for supporting one possible solution over another

MA3-9MG - Length - Is able to differentiate between equal and unequal sides.

MA3 - 16MG - Angles - Applies angle relationships to identify triangles.



PD/H/PE Outcomes Covered:

DMS3.2 0 - Decision Making - Makes informed decisions and accepts responsibility for consequences.

INS3.3 - Interacting - Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

MOS3.4 - Moving/FMS - Refines and applies movement skills to a variety of situations.

SLS3.13 - Describes safe practices that are appropriate to moving as a whole group.



MATHS 'N' MOVEMENT



- Whole Number
- Addition
- Subtraction
- Multiplication & Division
- Fractions & Decimals
- Chance
- Patterns & Algebra
- Data
- Length
- Area
- Volume & Capacity
- Mass
- Time
- 3D Space
- 2D Space
- Angles
- Position

Equilateral	Scalene	Isosceles



LEVEL

6

MA3-16MG

ANGLES

In this Maths 'N' Movement activity students will measure and construct angles and apply angle relationships to find unknown angles.

ACTIVITY

1. In pairs, students take it in turns to estimate an angle on their Angle Recording Sheet and to race, using the given movement, to collect their protractor 5 metres away.
2. Students use the protractor to measure the angle that they estimated and find the difference between their estimation and the angles actual size.
3. Students score 3 points if their estimate was inside 10° , 2 points if inside 20° and 1 point if they were inside 30° . No points are scored if they were more than 30° out in their estimation.
4. When finished, students return the protractor and remaining students take it in turn to race, estimate and measure angles.



Equipment Required:

- An Angle Recording Sheet and pencil per pair.
- A protractor per pair.



Notes:

Students need not necessarily score for their ability to estimate but it adds an increased element of competition which students enjoy and hopefully student's scores will increase as they progress through this activity.



Additional Maths Outcomes Covered:

MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.

MA3-3WM - Reasoning - Gives a valid reason for supporting one possible solution over another

MA3-4NA - Whole Number - Orders, reads and represents integers of any size including degrees.

MA3-5NA - Addition - Selects and applies appropriate strategies to add up their score.



PD/H/PE Outcomes Covered:

COS3.3 - Communicating - Communicates confidently in a variety of situations.

DMS3.2 0 - Decision Making - Makes informed decisions and accepts responsibility for consequences.

INS3.3 - Interacting - Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

MOS3.4 - Moving/FMS - Refines and applies movement skills to a variety of situations.





ANGLES RECORDING SHEET

Student	Predicted Angle Size	Actual Angle Size	Difference Between Predicted and Actual Angle Sizes	Score 0° to 10° out = 3 10° to 20° out = 2 20° to 30° out = 1

- Whole Number
- Addition
- Subtraction
- Multiplication & Division
- Fractions & Decimals
- Chance
- Patterns & Algebra
- Data
- Length
- Area
- Volume & Capacity
- Mass
- Time
- 3D Space
- 2D Space
- Angles
- Position



LEVEL

6

MA3-17MG

POSITION

In this Maths 'N' Movement activity students will locate and describe position on maps using a grid-reference system.

ACTIVITY

1. In teams of 4, students line up 5 metres from their Position Bingo Cards and dice (1 regular die and 1 marked with the letters A - F).
2. Students take it in turns to race, using the given movement, to their team's dice and roll both dice to create a co-ordinate with a number and letter to mark off on their Position Bingo Card.
3. Students repeatedly run to their dice, roll, create a co-ordinate and mark it off on their card until one student has completely covered their grid and declares BINGO!



Equipment Required:

- A 6 x 6 Position Bingo Card and pencil per team.
- A pair of dice per team – 1 regular die and 1 marked A to F per team.



Notes:

If you wish to create a shorter version of this game students can try to be the first to complete one row, column or diagonal rather than cover the entire grid to be able to call BINGO. For a longer game a 10 sided die with +ve and -ve integers and a full Cartesian plane could be used.



Additional Maths Outcomes Covered:

MA3-1WM - Communicating - Describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions.

MA3-2WM - Problem Solving - Selects and applies appropriate problem solving strategies in understanding investigations.

MA3-4NA - Whole Number - Orders, reads and represents integers of any size.

MA3-8NA - Patterns & Algebra - Locates points on the first quadrant of the Cartesian plane using co-ordinates.



PD/H/PE Outcomes Covered:

INS3.3 – Interacting – Acts in ways that enhance the contribution of self and others in a range of cooperative situations.

MOS3.4 – Moving/FMS – Refines and applies movement skills to a variety of situations.

GSS3.8 – Applies movement skills in games that require communication cooperation, decision making and observation of rules.



MATHS 'N' MOVEMENT



- Whole Number
- Addition
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- Mass
- Time
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- 2D Space
- Angles
- Position

_____ 's Bingo Card

F						
E						
D						
C						
B						
A						
	1	2	3	4	5	6

_____ 's Bingo Card

F						
E						
D						
C						
B						
A						
	1	2	3	4	5	6

_____ 's Bingo Card

F						
E						
D						
C						
B						
A						
	1	2	3	4	5	6

_____ 's Bingo Card

F						
E						
D						
C						
B						
A						
	1	2	3	4	5	6

