

Nurturing Number Sense

WITH NUMBER PLATES



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of Western Australia

&



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Nurturing Number Sense

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How to Use Number Plate Cards

Initially, Number Plate cards were designed for data collection and then using data for the calculation of averages.

Also, the cards were created to engage 'struggling' maths students, using games to build fluency skills, statistics, and probability understandings and to foster a 'happy' mathematics disposition.

The Number Plate cards include plates from Australian, places from around the world and some quirky personal plates. Forty-seven (47) number plate cards are used for all activities and games, except for Number Plate Cricket. Two "No Ball" cards are added for this game.

The cards can be used for sorting activities, such as finding cards with odd or even totals. Students can explore the idea of 'difference', and there are well-known sporting games, such as basketball, that introduce division with remainders.

Teachers will need to educate students on the context of the number plates, in terms of the number digits and letters.

For example, students need to understand the difference between "I - 'eye'" and "1 - 'one'", and, "0 - 'zero'" and "O - 'oh'". A real-life example is mobile phone numbers.

0476 ... is 'zero476...', and not 'oh476...'.

The Number Plate suite has an emphasis on recording sheets. The recording sheets capture some of the features of the games played in real life. Also, we want students to systematically record and track their progress in the games, use ready reckoner conversion tables and to make visual connections with number lines and area grids.

The "Contents" page gives an indicative guide as to when you may introduce the games.

Using Number Plate Games for Assessment

Teachers can create a sequence of cards and ask students to record the story of the game.

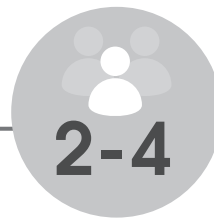
An example of this is on pages 13 and 14, "Football Assessment". These assessment scenarios determine the students' understanding of the games, using conversion tables, and accurately recording the card order.



Number Plate Sorts and Simple Games

- Ideas for Teachers

Years 2+



Purpose

Building Fluency for recognising, adding, and subtracting single and double digits.

Materials

Number Plate Playing Cards (Remove the “No Ball” cards.)

The Number Plate cards can be used for several sorting activities and simple games.

Number Plate Card Sorting

Number of Digits Sort

Individually or in pairs, determine if there are more 4-digit number plates than 2-digit number plates? [1 one-digit number plate, 10 with 2 digits, 24 with 3 digits, 8 with 4 digits, 2 with 5 digits, and 2 with 6 digits.]

Odds and Evens Sort

Individually or in pairs, spread the cards on the table and separate into odd and even piles. Are there more ‘odd’ cards than ‘even’ cards? How did you work this out? Did you total the digits or look at the digits? That is, 1 or 3 odd digits, the total will be odd. If there are 2 or 4 odd digits, then the total is even. [There are 21 even cards and 26 odd cards.]

Highest Total Wins

One Card Draw

A game for 2 – 4 players.

Shuffle the deck. The dealer turns one card face-up on the table for each player. The player(s) with the highest total, retains their card, and this card is kept to one side as a ‘scorecard’. The first player to get 5 scorecards, wins the match.

Two out of Three Card Draw

A game for 2 – 4 players.

Shuffle the deck. The dealer deals three cards, face-down, to each player. Players select their two highest cards and calculate their total. Together, the players lay their two cards face-up on the table and announce their total. Totals are checked. The winning player keeps one card to the side as a ‘scorecard’. The first player to collect 5 scorecards, wins the match. If the dealer runs out of cards, shuffle the used cards, and continue play.



Number Plate 100 Difference

Years 2+

2 Players

WESTERN AUSTRALIA
5TSN-521

Purpose

Building fluency for adding single-digit numbers
Building fluency for subtracting one and two digit numbers
Building spatial connections visually with partitions of 100

Materials

Number Plate Playing Cards (Remove the “No Ball” plates.)

Number Plate 100 Grid Recording sheet

Aim

To be the first player to fully shade/cover (and more) their 100 recording grid. Keep a record of winning/losing margins.

Rules

Each player has their own Recording sheet. Shuffle the deck. Each player takes one card, calculates the total of their digits, turns the card face-up and announces the total to the other player. The difference between the two totals is calculated. This is stated by the ‘winning’ player and the ‘losing’ player verifies that the difference is correct.

On their recording sheet the ‘winning’ player draws a boundary around the number of squares that represents the winning difference. The winning player writes this number on the ‘winning’ area region. The winning player is always the first player to take a card for the next round.

Examples:

Player 1



Total: 13

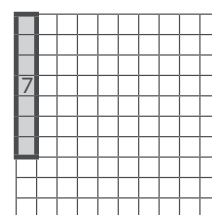
Player 2



Total: 20

Player 2 wins with a difference of 7.

An area of 7 squares is shown.



Play ceases when a player is the first to fully cover the entire 100 grid (it is fine to exceed 100).

Each player records their winning or losing margin for the game.

Extension: If four or more rounds are played, players can do a ‘Match Analysis’ about their winning/losing margins. These scores provide a probability and statistics reasoning opportunity.

Variations

The ‘100 Game Grid’ is renamed as the ‘1 Game Grid’.

The Number Plate card totals are divided by 100 and called “hundredths”.

The totals also can be used to make connections between fractions, percents and decimals.



Number Plate 100 Difference Recording Sheet

Round ___	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
My Total																									
Opponent's Total																									
Difference																									

Round ___	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
My Total																									
Opponent's Total																									
Difference																									

Round ___

Winning/

Losing Margin

—

Round ___

Winning/

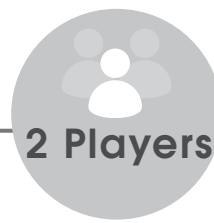
Losing Margin

—



Number Plate Sequence

Years 2+



Purpose

Building fluency for adding single-digit numbers

Materials

Number Plate Playing Cards (Remove the “No Ball” plates.)

Number line from 0 to 40 (See Number Plate Sequence Template Scoresheet)

Two Coloured Pens

Aim

To make more sequences of 2 or more numbers and to score more points than your opponent.

A sequence of 2 dots is worth 2 points.

A sequence of 3 dots is worth 3 points.

A sequence of 4 dots is worth 4 points, and so on.

Rules

The cards are shuffled. Randomly and without looking, remove one card from the deck so there are 46 cards. Players alternate turns, taking the top card from the deck until no cards remain, which will signify the end of the game.

Players total the Number Plate card digits. On the Number Line Template Scoresheet, using a different colour to their opponent, they lightly colour a ‘dot’ for this total. Taking turns, this continues.

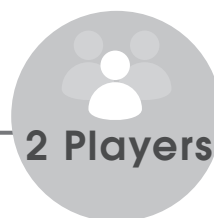
When a player decides to score points for making a sequence, they put crosses through their coloured dots and are awarded the corresponding points for the number of crosses.

Note: No opponent’s coloured dots can be in this sequence range.

These totals on the number line become ‘active’ again for sequence making.

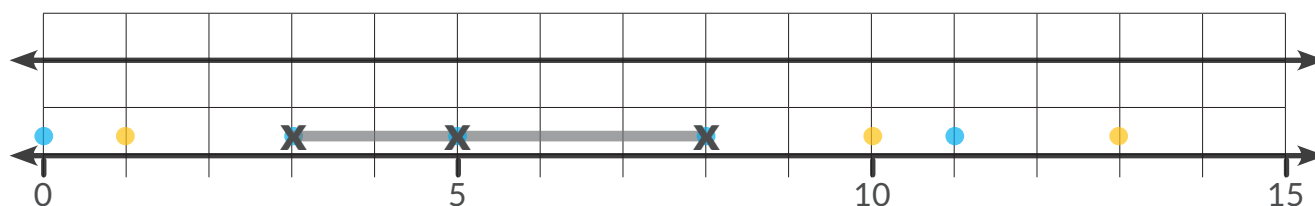


Number Plate Sequence




Sequence Example

Player A turns up **Q 44** the number plate. The total is 8 and a coloured dot is placed on 8. Player A now has a sequence of three dots for numbers 3, 5 and 8 and decides to claim 3 points for this sequence. A cross is put through each of these coloured dots and a line segment connects these. The 3 points are recorded on the 'Sequence Scores' table.



Player B has a dot on numbers 1 and 10. All numbers are now active between this range to build a longer sequence.

Note: If you turn up a card and the total is already shown as a 'dot' (by either player) on the number line, then you cannot play this total.

For example you turn up  , 11 is the total and this is already covered on the number line, so you miss out on drawing a dot.

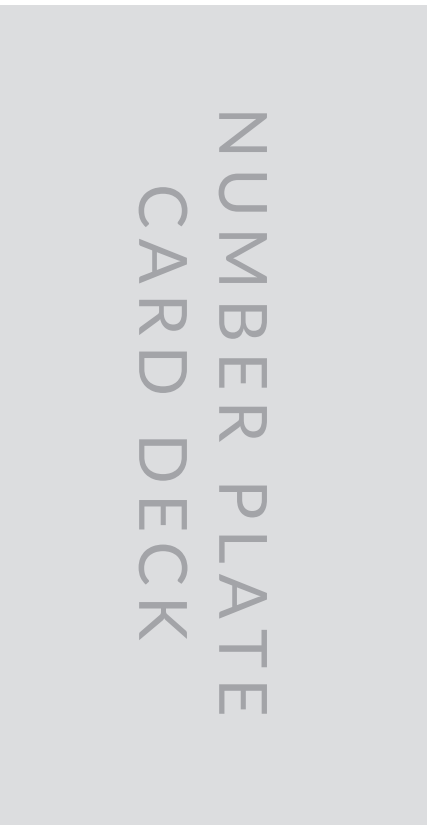
Number Plate Card Totals – A Strategic Tool

CARD TOTAL	NUMBER OF CARDS WITH THIS TOTAL	CARD TOTAL	NUMBER	CARD TOTAL	NUMBER
0	2	10	2	19	1
1	3	11	2	20	2
2	2	12	4	22	1
3	1	13	4	23	2
4	1	14	3	27	1
5	2	15	3	33	1
8	2	17	1	36	1
9	5	18	1		

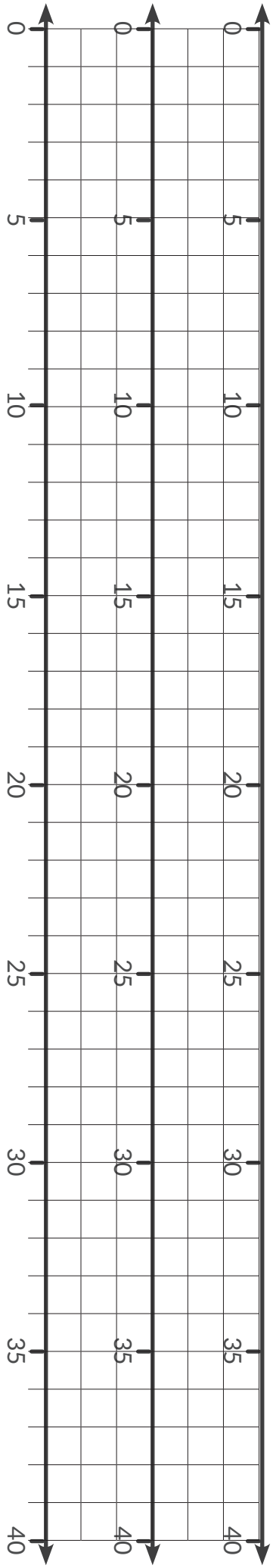
Nearly half of the cards have a total from 9 to 15, so this has implications for blocking the ability to play or make sequences.

The Number Plate Sequence Template Scoresheet has 'stacked' or multiple number lines on it as many 'crosses' and 'dots' appear for the numbers 9 through to 15. The multiple number lines and accompanying grid will help to spread out the players moves for this crowded number range.

Number Plate Sequence Template Scoresheet

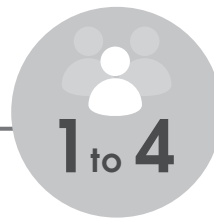


Sequence Scores										TOTAL
Player 1										
Player 2										



Number Plate Football

Years 3+



Purpose

Building fluency for adding one, two and three-digit numbers.

Building effective reading of tables and recording data.

Materials

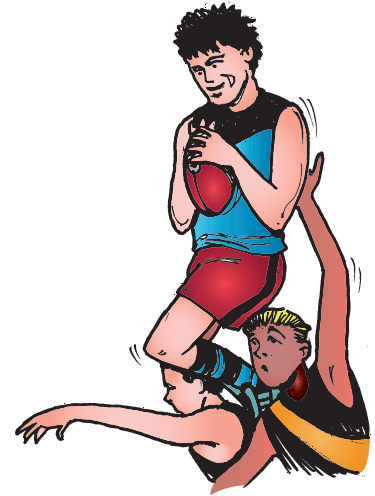
Number Plate Playing Cards (Remove the 2 “No Ball” plates.)

Number Plate Football Scoresheet.

Aim

To get the highest score over four quarters.

Variation: To get the highest average score per quarter for a restricted game.



Rules

Each player has their own Scoresheet. The first player turns a card over from the shuffled Number Plate deck. The card will either be a “Scoring” or “Time” card. Players alternate turns. The “Used Cards” are reshuffled, should you run out of cards.

“Scoring” cards do not have any zero digits on them. To determine the score for each scoring card, the **largest two digits** are identified and added.

For the blue plate shown to the right, 5 + 5 is 10 points. For recording purposes, this is converted to 1 Goal 4 Behinds.



In Football, a score can be a ‘Goal’ which is 6 points or a ‘Behind’, which is 1 point.

Where possible, each “Scoring” card points total is converted to Goals and Behinds. A “conversion table” is on the Number Plate Football Scoresheet.

“Time” cards have one or more zeros on them (e.g. the red plate). These cards signify the end of the quarter if a player has scored. To record the end of the quarter, the player writes “Time” in the “Goals” column on the “Game Recording” table for the corresponding “Card Order” row.



NOTE: A player **MUST** register a score for each quarter. If “Time” cards are revealed prior to any “Scoring” cards shown for the quarter, they are ignored and are **NOT** recorded.

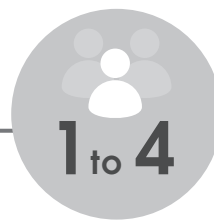
The player totals the number of goals and behinds for that quarter and then records this total on the “Master Scoreboard”. Place all “Used Cards” face down on scoresheet space provided.

Goals and Behinds are recorded for each quarter and the progressive total is given for quarter time, half time, three quarter time and full time.

The duration of the game is four quarters. The game ends for the player, once four (4) “TIME” cards have been turned over. Also, the game automatically ends after 20 cards have been played.



Number Plate Football



Scoresheet Recording Example

Example Game

- First Plate:
Since no score has been recorded yet, this plate is ignored.



- Second Plate:
 $9 + 8 = 17$
Converts to 2 goals 5 behinds.



- Third Plate:
 $3 + 4 = 7$
Converts to 1 goal 1 behind.



- Fourth Plate:
Contains a 0, "TIME" is written in the "Goals" column of the recording sheet.



Game Recording

Card Order	Goals	Behinds
1	2	5
2	1	1
3	TIME	

Master Scoreboard	Goals	Behinds	Total
First Quarter and Quarter Time Score	3	6	24
Second Quarter			
Half Time Score			
Third Quarter			
Three Quarter Time Score			
Fourth Quarter			
Full Time Score			

Calculating the Cumulative Score

- Half Time Score =
First Quarter Score + Second Quarter Score
- Three Quarter Time Score =
Half Time Score + Third Quarter Score
- Full Time Score =
Three Quarter Time Score + Fourth Quarter Score

Number Plate Football Scoresheet

Player's Name: _____



Game Recording

Card Order	Goals	Behinds	Card Order	Goals	Behinds
1			11		
2			12		
3			13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Conversion Table

Goals	Points	Goals	Points	Goals	Points
1	6	11	66	21	126
2	12	12	72	22	132
3	18	13	78	23	138
4	24	14	84	24	144
5	30	15	90	25	150
6	36	16	96	26	156
7	42	17	102	27	162
8	48	18	108	28	168
9	54	19	114	29	174
10	60	20	120	30	180

Master Scoreboard	Goals	Behinds	Total
First Quarter and Quarter Time Score			
Second Quarter			
Half Time Score			
Third Quarter			
Three Quarter Time Score			
Fourth Quarter			
Full Time Score			



NP Football Assessment



You are applying for a scorer's position at your local football club. The Club President will give you the job if you can correctly give the team's score for the following sequence of cards.

Game Recording

Conversion Table



Card Order	Goals	Behinds
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Goals	Points	Goals	Points
1	6	11	66
2	12	12	72
3	18	13	78
4	24	14	84
5	30	15	90
6	36	16	96
7	42	17	102
8	48	18	108
9	54	19	114
10	60	20	120

Master Scoreboard	Goals	Behinds	Total
First Quarter and Quarter Time Score			
Second Quarter			
Half Time Score			
Third Quarter			
Three Quarter Time Score			
Fourth Quarter			
Full Time Score			



Football Assessment



Answer

The Half Time score is 8 Goals 17 Behinds. This is a total of 65 Points. For the 8 cards, the fifth card (1CJM 207) is not used, as there has been no score for the second Quarter. This card is ignored. As such, there is only 7 'Card Order' rows completed.



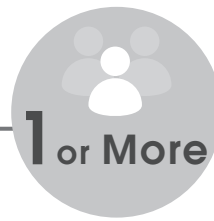
Game Recording

Card Order	Goals	Behinds
1	2	3
2	1	1
3	2	5
4	TIME	
5	3	0
6	1	5
7	TIME	
8		
9		
10		

Master Scoreboard	Goals	Behinds	Total
First Quarter and Quarter Time Score	5	9	39
Second Quarter	4	5	29
Half Time Score	9	14	68
Third Quarter			
Three Quarter Time Score			
Fourth Quarter			
Full Time Score			

Number Plate Cricket

Years 3+



Purpose

Building fluency for adding single digits to two and three-digit numbers.

Materials

Number Plate Playing Cards (including the two "No Ball" plates.)

Number Plate Cricket Scoresheet.

Organisation

Solo version: one player

Regular version: two or more players. Players take turns to play a card and record their game.

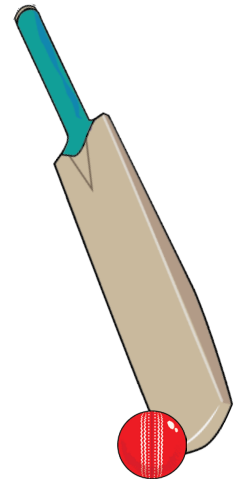
Aim

To get the highest score. (Variation: To get the highest average score.)

Rules

There are three types of number plate cards:

1. "Runs." These cards that do not have any zeroes on them. The digits on these cards are added together to give the score total for that card.
2. "Wicket." These number plate cards have one or more zeros on them (not the letter 'O'). The "Wicket" cards could have one zero (one wicket), two zeros (two wickets) or three zeros (three wickets or a 'hat trick') on them. You earn no runs from the other digits on the plate.
3. The "NO BALL" card is a valuable card, as it means that the next "Wicket" card that is turned up for that player results in no wicket(s) is lost. NOTE: The "NO BALL" card is valid for the next "Wicket" card only and no 'balls' are recorded for this play.

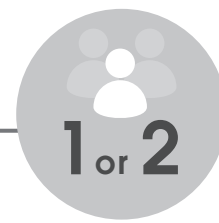


A progressive total is kept until 10 wickets have fallen and the innings is closed. This is the final total for this player. Use the Number Plate Cricket Scoresheet for recording.

Notes: In Cricket there are six balls per over. Generally only one wicket can be taken and a max of six runs can be scored, however history records that 286 runs were scored from one ball in 1986, but is this a myth? In 2008, Australia got 8 runs from one ball, the players ran 4 runs and there were 4 overthrows. The number plate version allows for many runs and multiple wickets to be scored per ball.



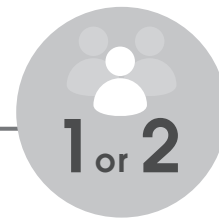
Number Plate Cricket



How to Play:

In the standard two-player game, one player is the Bowler and the other is the Batter. The bowler turns a card faceup from the shuffled deck. The Batter keeps the “Runs” and “Wicket” tallies and places the cards face – down once the calculations are done. The Bowler continues to turn a card faceup, one at a time and the Batter continues the recording. If the Bowler takes a wicket, the wicket and current score is recorded in the “Wicket” section of the scoresheet. Play continues until all 10 wickets have been taken. The players change Bowler and Batter roles. The winner will be the player who scores the highest score after all players have batted.

Number Plate Cricket Scoresheet												Batter's Name: _____												
WICKET CARDS												RUN SCORE CARDS												
RUNS																								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275
276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300
WICKET		1 /		2 /		3 /		4 /		5 /		6 /		7 /		8 /		9 /		10 /				
BALLS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			



Using The Number Plate Cricket Scoresheet

All players (Batters) will record their own scores. On the Scoresheet, there is a position to place the “Runs” and “Wickets”. These are placed facedown, once the calculation and recording has been completed. This can assist to replay the innings and check calculations.

Recording on the Scoresheet: The Batter must add the digits shown on the “Runs” card and place a line through the number of runs scored for that card.

Sample Game

Ball #1 Number Plate



This is 13 runs. A line is placed through 1 to 13.

Ball #2 Number Plate



This is 10 runs. A line is placed through 14 to 23.

Tips: Use two colours to differentiate between consecutive balls bowled.

Ball #3 Number Plate



This is a wicket. No runs are scored, and the fall of wicket score is 1 wicket for 23 runs.

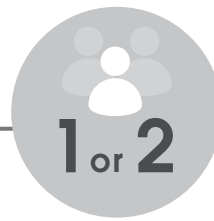
RUNS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

WICKETS	1 / 23	2 /	3 /	4 /	5 /	6 /
---------	--------	-----	-----	-----	-----	-----

For the Limited Over versions such as 20/20 Cricket (Two overs / Two overs – 12 balls per player) the number of “BALLS” bowled can be tracked and recorded.

BALLS	1	2	3	4	5	6	7	8	9	10	11	12
-------	---	---	---	---	---	---	---	---	---	----	----	----



Game Variations

Many Players (Groups of 3+)

Players take alternate turns recording their runs and wickets. Once a player has had all 10 wickets taken, they wait until all players have lost wickets and the highest score wins. Cards will run out, so collect the used cards, shuffle and continue play.

Double Wicket (Class Play)

This can be a knockout pairs competition. Decide which pair bats firstly. The first player bats and records their score until a “Wickets” card is revealed. The second member of the team does the same. Their total score is the sum of their individual scores. “Wicket” cards played will only count as a single wicket for this competition. Winners move into a “Champions” division and losers move into a “Plate” division. See the ‘Knockout’ recording sheets.

The Knockout competition continues until there is one winner for each division.

Limited Overs (2 Player Game Variation)

A set number of turns are determined, such as eight cards each. The winner can be the highest score, or the highest runs scored per wicket (average score per wicket).

Two overs / two overs (20/20 cricket!) You get 12 cards each, playing alternately. You can circle the numbers on your scoresheet to keep track of how many cards / balls bowled on the “BALLS” section of the Scoresheet.

Super Over (2 Player Game Variation)

In 20/20 cricket when the scores are tied, each side faces a six-ball Super Over. Play a Super Over game having alternate moves. Great for a warmup to the lesson.

Solo Player:

The aim in a solo play game is to set Personal Best (PB) scores. Decide on a set number of cards/balls to be bowled. 3 overs or 18 balls. Deal 18 cards and remove the remaining cards.

Standard Solo Play:

- Play one card at a time. Complete the scoresheet until all 10 wickets fall.

Solo Super Over

- Sort the 6 cards into “Wicket” cards and “Run” cards. Calculate the wickets taken, then add the “Runs” score cards with or without recording (mental practice).
- You can set an 18-ball high score (runs only count) or you can set an 18 ball highest runs scored per wicket (average).

Note: Use the DRS (Umpire Decision Review System) in games with 2 or more players to check calculations. They can ask the player concerned to review / replay their calculation verbally or in writing. This is a useful checking mechanism.



Number Plate Cricket Scoresheet

Batter's Name: _____

WICKET CARDS

RUN SCORE CARDS

RUNS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275
276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300

WICKETS	1 /	2 /	3 /	4 /	5 /	6 /	7 /	8 /	9 /	10 /										
BALLS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20



Number Plate Cricket Knockout - Championship Division

Qualifying Players	Finals Teams	Quarter Finals	Semi Finals
1 _____	1 _____	1 _____	1 _____
2 _____	2 _____	2 _____	2 _____
3 _____	3 _____	3 _____	3 _____
4 _____	4 _____	4 <u>Lucky Loser from 7 - 12</u>	4 _____
5 _____	5 _____	5 _____	
6 _____	6 _____	6 _____	
7 _____	7 _____	7 _____	
8 _____	8 _____	8 <u>Lucky Loser from 1 - 6</u>	
9 _____	9 _____		
10 _____	10 _____		
11 _____	11 _____		
12 _____	12 _____		
13 _____			
14 _____			
15 _____			
16 _____			
17 _____			
18 _____			Grand Finals
19 _____			1 _____
20 _____			2 _____
21 _____			
22 _____			
23 _____			Championship Winner
24 _____			_____

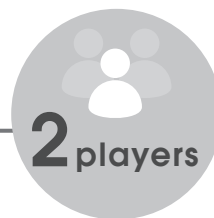
Number Plate Cricket Knockout - Plate Division

Plates Teams	Plate Quarter Finals	Plate Semi Finals
1 _____	1 _____	1 _____
2 _____	2 _____	2 _____
3 _____	3 _____	3 _____
4 _____	4 Lucky Loser from 7 - 12 _____	4 _____
5 _____	5 _____	
6 _____	6 _____	
7 _____	7 _____	Plate Grand Finals
8 _____	8 Lucky Loser from 1 - 6 _____	1 _____
9 _____		2 _____
10 _____		
11 _____		Plate Winner
12 _____		_____



Number Plate Basketball

Years 5+



Purpose

Building fluency for adding one-digit numbers.

Building fluency for dividing one-digit and two-digit numbers by three (3), particularly those that result in a remainder.

Materials

Number Plate Playing Cards (Remove the “No Ball” plates.)

Number Plate Basketball Scoresheet (one per player)

Aim

To get the highest number of points before five (5) fouls are committed.

Rules

Each player receives one ‘Triple Zero’ (000) card. This is to be played in an emergency.

The cards are shuffled, and the deck is placed face-down on the table.

Players each turn a card face-up for both to see.

The total for each card is calculated and recorded.



The total is then divided by three (3).

If the Remainder is zero (0), a ‘three-pointer’ has been made. The player is awarded 3 points.

If the Remainder is two (2), a ‘field goal’ worth 2 points is recorded.

If the Remainder is one (1), then one ‘free throw’ has been successful and 1 point is recorded for the player.

Cards having **one or two ‘zeros’** on them will be registered as one (1) Foul against the player. Even though a foul is recorded, the card has the total calculated and the division operation actioned.

Triple Zero Cards ( and ) are Wild Cards and can be played at any time. They are effectively a “TIME OUT” call to ‘wipe-out’ the current play. It can be played to remove a foul or to stop the opponent from getting a 3-pointer. When declared and used, the player puts the wild card on their pile.

The player calling the Time Out will write “TO” (denoting ‘Time Out’) in their ‘Total’ column for that ‘Card Order’ play.

Division Remainder Ready Reckoner

Remainder ‘Zero’ Totals:

3,9,12,15,18,27,33 and 36

Remainder ‘One’ Totals

1,4,10,13,19 and 22

Remainder ‘Two’ Totals

2,5,8,11,14,17,20 and 23





Number Plate Basketball

Team _____

Date _____

Team _____

Card Order	Total	Points	Fouls
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

Card Order	Total	Points	Fouls
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

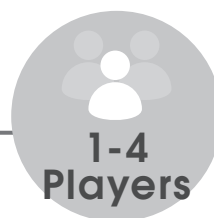
Running Score														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Foul Count	1	2	3	4	5									

Running Score														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Foul Count	1	2	3	4	5									



Number Plate Golf

Years 5+



Purpose

Building fluency for adding single-digit numbers.

Building fluency for dividing one-digit and two-digit numbers by five (5), particularly those that result in a remainder.

Materials

Number Plate Playing Cards (Remove the "No Ball" plates.)

Number Plate Golf Scoresheet (one per player)

Terminology for Number Plate Golf

Par – the numbers of shots (score) a player takes to complete the hole. For the holes of a shorter distance, the Par is 3 (shots). Longer holes in terms of distance, are rated as a Par 4 or Par 5.

Birdie – A player scores 1 under the Par for the hole e.g., scores a 3 on a Par 4 hole.

Bogey – A player scores 1 over the Par for the hole e.g., scores a 5 on a Par 4 hole.

Double Bogey – A player scores 2 over the Par for the hole e.g., scores a 6 on a Par 4 hole.

Aim

To get the lowest score for the 9-hole course.

Rules

Players take turns to turn one card face up. The player adds the digits. The total is divided by five (5) and the remainder determines the player's score for the hole. This is shown in the Remainder Ready Reckoner Table.

Remainder	Score
0	Par
1	Birdie
2 or 3	Bogey
4	Double Bogey

The player with the lowest score for 9 holes wins.

See the Scoresheet example that follows.



Number Plate Golf

9 Hole Scorecard Example

HOLE	BLUE TEES METRES	PAR	NUMBER PLATE TOTAL	÷ 5 REMAINDER	SCORE
1	354	4	11	1	1
2	172	3	9	4	5
3	465	5	15	0	5
4	308	4	1	1	3
5	375	4	12	2	5
6	165	3	14	4	5
7	480	4	0	0	4
8	303	4	20	0	4
9	456	5	22	2	6
TOTAL	3078	36			40

REMAINDER READY RECKONER

Remainder = 0	PAR for the hole
Remainder = 1	BIRDIE for the hole (PAR - 1)
Remainder = 2 OR 3	BOGEY for the hole (PAR + 1)
Remainder = 4	DOUBLE BOGEY for the hole (PAR + 2)



Number Plate Golf Recording Sheet

HOLE	BLUE TEES METRES	PAR	NUMBER PLATE TOTAL	÷ 5 REMAINDER	SCORE
1	354	4			
2	172	3			
3	465	5			
4	308	4			
5	375	4			
6	165	3			
7	480	4			
8	303	4			
9	456	5			
TOTAL	3078	36			

REMAINDER READY RECKONER

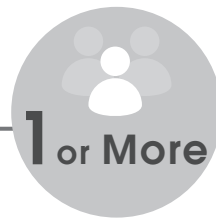
Remainder = 0	PAR for the hole
Remainder = 1	BIRDIE for the hole (PAR - 1)
Remainder = 2 OR 3	BOGEY for the hole (PAR + 1)
Remainder = 4	DOUBLE BOGEY for the hole (PAR + 2)





Number Plate Baseball

Years 5+



Purpose

Building fluency adding one-digit numbers.

Building fluency for dividing two-digit numbers by 4, particularly those that result in a remainder.

Materials

Number Plate Playing Cards (47 'Standard' plates. No "No Ball" plates are used.)

7 counters.

Number Plate Baseball Scoresheet (one per two players)

Aim

To get the highest number of runs over one or two innings.

Rules

For the two-team (player) game, decide on the Batting and Fielding teams.

The Batting team places the counters in the BATTING BOX. Move a counter to the Home plate to show there is a 'Batter-up.'

The Fielding team shuffles the Number Plate Cards and then makes the first pitch by turning over the first card and placing it face up on the score sheet 'Pitcher's Cards' area.

For all 'non - zero' cards, the batter adds the total of the single digits. This total is then divided by 4.

If the remainder is 1, the batter's counter advances to 1st base.

If the remainder is 2, the batter's counter advances to 2nd base.

If the remainder is 3, the batter's counter advances to 3rd base.

If remainder is 0, the total is divisible by 4 and a Home Run is scored. The Batter's counter will advance around all bases to Home base, collecting any other "Base Runners (counters)" along the way. (see example 2)

The Cards with 'zeros' on them are potentially the 'OUT' cards. A Base Runner is out if the counter on a particular base matches the number of zeros on the number plate card.

If a card has 1 zero on it (there are 9 of these), and there is a Base Runner on 1st base, then the runner is out! This counter is removed and placed on the "OUTS" section of the score sheet. If there is no Base Runner (counter) on 1st base, then there is no 'OUT' for this card play.

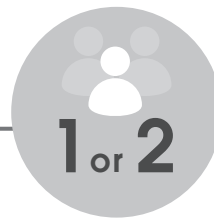
The BATTING Team's Innings concludes when there are three (3) OUTS.

The BATTING team keeps track, or marks off, their RUNS scored on the "INNINGS RUNS COUNT" section on the scoresheet. A Run is scored when the counter completes a circuit around 1st, 2nd, 3rd and Home base.





Number Plate Baseball




MAIN RULE: All Base Runners (counters) advance the same number of bases as the Batter.

There cannot be more than one counter (Base Runner) on each base. As such, any Base Runners (counters), are moved by the number bases determined by the remainder. (See Example 1.)

Examples of Base Runner (Counter) Movements

Example 1: There are Base Runners (counters) on both 1st and 3rd base.

The number plate  is "pitched" (turned face - up).

The total is 9, and when it is divided by 4, the remainder is 1. All counters advance by the base. i.e. Third base moves to Home. First base runs to second and the Batter runs to first base. One run is added to the INNINGS RUNS COUNT tally.

Example 2: The bases are 'Loaded'. That is, there are counters on 1st, 2nd and 3rd bases and the Batter at Home.

The number plate  is 'pitched'.

The total is 8 and when divided by 4, there is no remainder. This is a Home Run for this Batter and the Base Runners (counters) on 1st, 2nd and 3rd also advance to Home base and score runs. Four (4) runs in total are scored for this card and added to the INNINGS RUNS COUNT tally.

Example 3: The bases are 'Loaded' again.

The number plate  is 'pitched'. (A 'pitch' in Baseball is the act of throwing a baseball toward Home plate to start a play.)

The total is 14 and when divided by 4, the remainder is 2.

The Base Runner (counter) on 3rd base runs to Home and scores a run.

The Base Runner on 2nd base runs two bases to Home and also scores a run.

The Base Runner on 1st advances to 3rd base.

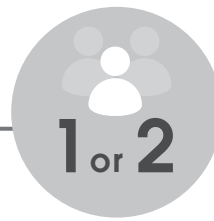
The Batter runs two bases and 'holds up' on 2nd base.

A total of 2 runs are scored for this play.





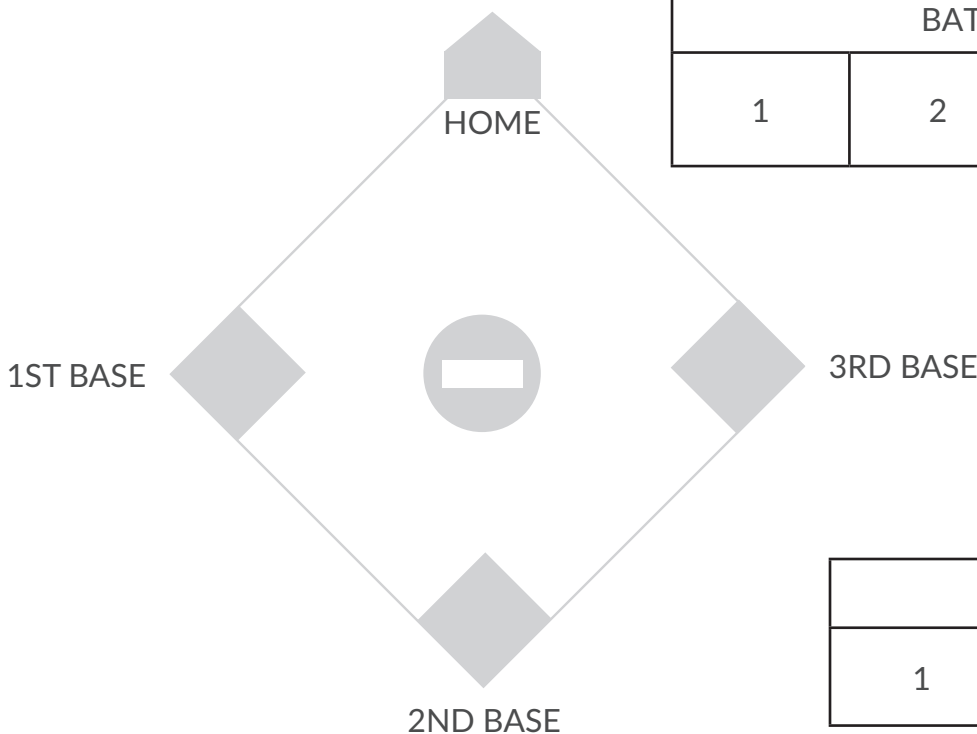
Number Plate Baseball



PITCHER'S CARDS

GAME SCORE		
INNINGS	1	2
TEAM 1		
TEAM 2		

BATTING BOX			
1	2	3	4



OUTS		
1	2	3

INNINGS RUNS COUNT

Team 1

Team 2

FIRST INNINGS									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40

FIRST INNINGS									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40

SECOND INNINGS									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40

SECOND INNINGS									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40



