# Numeracy Baseline Assessment

**Student name:** _____

**Date of birth:** _____ **ID Number:** _____

**Date of entry to school:** _____

| Assessment | Score | Curriculum |
|---|---|---|
| **Baseline** | | |
| **After 1 year in school** | | |
| | | |

## Part 1 Mathematical Language Development

Language assessments should be carried out in a variety of contextual situations from student play, discussion around events students have experienced or are participating in, classroom routine instructions and any other situations where dialogue occurs naturally.

It is not expected that each word is ticked off. Make a generalisation but it might be useful to underline or add any specific word you notice is a problem.

**Colour and visual words:** Included but are not limited to

yellow, red, blue, green, black, brown, white, pink, orange, purple, same, different

1. _____ Does not understand
2. _____ Understands but does not use
3. _____ Beginning to use
4. _____ Mostly uses
5. _____ Uses confidently

**Positional words:** Included but are not limited to

before, after, on, in, out, under, over, in front of, in between, in the middle of, next to, behind, forward, back, high, low

1. _____ Does not understand
2. _____ Understands but does not use
3. _____ Beginning to use
4. _____ Mostly uses
5. _____ Uses confidently

**Measurement words:** Included but are not limited to:

big, bigger, biggest, small, smaller, smallest, long, longer, longest, tall, taller, tallest, short, shorter, shortest, heavy, heavier, heaviest, light, lighter, lightest, full, empty, hot, hotter, hottest, warm, warmer, warmest, cold, colder, coldest

1. _____ Does not understand
2. _____ Understands but does not use
3. _____ Beginning to use
4. _____ Mostly uses
5. _____ Uses confidently

**Geometric Word:** Included but not limited to

circle, triangle, square, rectangle, oblong, diamond, straight, corner, curved, edge, side

1. _____ Does not understand
2. _____ Understands but does not use
3. _____ Beginning to use
4. _____ Mostly uses
5. _____ Uses confidently

**Quantity & Sequencing words:** Included but are not limited to

one, two, three, four, five, six, seven, eight, nine, ten, zero, more, less, more than, less than, most, least, same, different, altogether, take away, count, first, second, third, last

1. _____ Does not understand
2. _____ Understands but does not use
3. _____ Beginning to use
4. _____ Mostly uses
5. _____ Uses confidently

## Part 2 Number knowledge

Data for this section may be collected from contextual situations as they occur or you may need to set up a situation in order to collect the data.
Ensure the situation is relaxed and informal. Young students often enjoy a one on one situation with their teacher. Make it engaging and meaningful to the student.

**Subitizes dice patterns**

_____ _____ _____ _____ _____ _____

1. _____ Not able to subitize
2. _____ Subitizes 1 or 2
3. _____ Subitizes 3 or 4
4. _____ Mostly subitizes
5. _____ Confidently subitizes

## Counting Knowledge

Rote counting sequence

| No sequence | Counts to 5 | Counts to 10 | Counts to 20 | Counts beyond 20 |
|---|---|---|---|---|
| 1. | 2. | 3. | 4. | 5. |

Counts a set of objects 1-1

| Unable to count | Counts to 5 | Counts to 10 | Counts to 20 | Counts beyond 20 |
|---|---|---|---|---|
| 1. | 2. | 3. | 4. | 5. |

Makes a set of objects

| Unable to make | Makes sets to 5 | Makes sets to 10 | Makes sets to 20 | Makes sets beyond 20 |
|---|---|---|---|---|
| 1. | 2. | 3. | 4. | 5. |

Joins two sets of objects within 10

| Does not understand question | Counts each set of objects | Counts all objects together | Counts on from either number | Counts on from larger number or recalls fact |
|---|---|---|---|---|
| 1. | 2. | 3. | 4. | 5. |

## Numeral Identification

Ask students to identify numbers in a random order or notice from their play.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| | | | | | | | | | |
| 40 | 60 | 35 | 57 | 78 | 100 | 104 | 113 | 182 | 395 |
| | | | | | | | | | |

| Recognises 2 nos. or less | Recognises up to 5 nos. | Recognises all nos to 10 | Recognises all nos. to 20 | Recognises numbers beyond 20 |
|---|---|---|---|---|
| 1. | 2. | 3. | 4. | 5. |

## Ordering Numbers

If students can identify numbers, give students range of digits to put in order.

| Unable to order | Orders 1 - 3 | Orders 1 - 5 | Orders 1 - 10 | Orders 1 - 20 |
|---|---|---|---|---|
| 1. | 2. | 3. | 4. | 5. |

## Patterning

Repeating patterns with two or more elements.

| Copies a,b,a,b pattern | Continues a,b,a,b pattern | Creates a,b,a,b pattern and identifies repeat | Continues pattern with at least 3 elements | Creates pattern with at least 3 elements and identifies repeat |
|---|---|---|---|---|
| 1. | 2. | 3. | 4. | 5. |

## Teacher Notes and Guidance

Assessment is for the benefit of the student and involves the student. It must be valid and fair, suited to purpose and support teaching and learning goals.

The purpose of this assessment used on entry to school is to identify students baseline in mathematical knowledge and language to progress through a programme of learning covering level 1 of the Mathematics and Statistics Curriculum Learning Area.

Much of the mathematical language is also used for following classroom routines so it is important to identify students who may have difficultly in following routines through lack of understanding rather than behaviour.

It will identify those students who require extra support in developing the language and/or knowledge in order to begin a programme of learning at level 1.

This assessment can also be reused after one year at school to identify progress made over the first year at school. It could also be used at a later date for students with specific learning needs whose progress may be delayed.

## Collecting data from young students

Students under 7 will rarely respond to a test situation in the same way as older students. They can appear to give right and wrong answers quite randomly. A meaningful context is essential to their understanding of the task.

The data should be collected from careful observation during normal class activities or it may be necessary to sit with an individual and "play" some activities to collect the data. No specific activities are provided, they should come from your classroom.

At all times the student should not be put under any pressure to perform.

When the data for all sections has been completed, probably over a 4 - 6 week period then total the number scored in each section to give an overall score.
The overall score is used to place a student in a particular curriculum level category in order to give a startting point for measuring progress over time.
**For teaching and learning purposes make note of any particular strengths or weaknesses in your students by looking at each area rather than the overall score.**

| | Pre Level 1 | Ready for Level 1 | Early Level 1 | Mid Level 1 |
|---|---|---|---|---|
| Overall Score | 12 - 24 | 25 - 40 | 41 - 55 | 56 - 65 |

**Contributers to this assessment:**

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Te Hapara School
Kaiti Kindergarten
Makauri Rural Kindergarten
Paikea Kindergarten
Pickering Street Kindergarten

To continue to measure progress in mathematical knowledge and skills throughout a student's time at primary school then the Wilkie Way Assessment Screens are available for purchase through www.thewilkieway.co.nz
Level 1 Assessment Screen (mid 1 - early 2)
Level 2 Assessment Screen (upper 1 - early 3)
Level 3 Assessment Screen (upper 2 - early 4)
Level 4 Assessment Screen (upper 3 - early 5)

To measure progress in problem solving use the Primary Mathematics Assessment Tool available from www.edify.co.nz
Data from all these assessment tools can be analysed through Beagle www.beagleinnovations.com