

Explaining Numeracy Stages

This booklet explains what strategy and knowledge is being developed at each numeracy stage. It also identifies our expectations for children at Hukanui for each year level.

The STAGES OF NUMERACY DEVELOPMENT

- Stage 0 Emergent
- Stage 1 1-1 counting
- Stage 2 Counts From 1 on Materials
- Stage 3 Counts From 1 by Imaging
- Stage 4 Advanced Counting
- Stage 5 Early Additive
- Stage 6 Advanced Additive
- Stage 7 Advanced Multiplicative
- Stage 8 Advanced Proportional

EXPECTATIONS at HUKANUI SCHOOL

At Hukanui we expect children to be working at the following stages by the end of their month or year level.

After Six Months at school	–	Stage 2
After One Year at school	–	Stage 3
After Two Years at school	–	Stage 4
After Three Years at school	–	Early Stage 5
At The End Of Year 4	–	Stage 5
At The End Of Year 5	–	Early Stage 6
At The End Of Year 6	–	Stage 6

Emergent (Stage 0)

Strategy

- This child is unable to count a set of objects.

Knowledge

- Read numbers to 5.
- Rote count to 5 at least.
- Numbers before and after in the range 0 - 5.

One to One Counting (Stage 1)

Strategy

- Counts a set of objects to 10 by one to one matching.

Knowledge

- Read numbers to 10.
- Rote count to 10 at least.
- Numbers before and after in the range 1 - 10.
- Know patterns to 5.

Counts from One on Materials (Stage 2)

Strategy

- Solve simple addition and subtraction problems to 10 by counting all the objects.

Knowledge

- Read numbers to 20.
- Forward and backward number word sequence 0-20.
- Numbers before and after in the range 0-20.
- Order numbers to 20.
- Instant recognition of patterns to and with 5 including finger patterns.

Counts from One By Imaging (Stage 3)

Strategy

- Solve addition and subtraction problems to 10 by counting all the objects and or numbers in my head.
- Share objects equally to make halves and quarters.

Knowledge

- Read numbers to 20.
- Forward and backward word sequence in the range 0-20.
- Say the number before and after a given number in the range 0-20.
- Ordering numbers 0-20.
- Instant recognition of patterns to 10 including finger patterns.

Advanced Counting (Stage 4)

Strategy

- Solve addition and subtraction problems by counting on or back in my head from the largest number.
- Solve addition and subtraction problems by counting on in 10s and 1s.
- Solve multiplication problems by skip counting in 2s, 5s and 10s.
- Find half and quarter of sets.

Knowledge

- Read numbers to 100.
- Forward and backward word sequence in the range 0-100.
- Say the number before and after a given number in the range 0-100.
- Ordering numbers 0-100.
- Know doubles to 20 and halves.
- Know 10s in decades and 10s which add to 100.
- Read unit fractions.

Early Additive Part-Whole (Stage 5)

Strategy

- Solve + and - problems in their head by working out the answer from basic facts they know.
- Solve + and - problems with 2 or 3 numbers using grouping of 10 and 100.
- Use addition strategies to solve multiplication problems.
- Find a fraction of a number by using repeated + and -.

Knowledge

- Read numbers to 1000.
- Count forwards and backwards in 1s, 10, and 100s to 1000.
- Say number 1, 10, 100 more and less in the range 0 - 1000.
- Know unit fractions.
- Instant recall of + and - facts to 20.

Advanced Additive Part-Whole (Stage 6)

Strategy

- Choose from:
 - Compensation
 - Place Value
 - Compatible Numbers
 - Reversibility
 - Equal Additions
 - DecompositionTo solve + and - problems.
- Solve \times and \div problems using known strategies e.g. doubling, rounding.
- Solve fractions problems using known \times and \div facts.

Knowledge

- Read and order numbers to 1 000 000.
- Read decimals up to 3 places.
- Know how many 10s and 100s are in 4 digit numbers.
- Know how many 2s, 3s, 5s and 10s are in numbers to 100 and any remainders.
- Round whole numbers to nearest 10, 100 and 1000 and decimals to nearest whole number.
- Know \times facts for squares to 100, e.g. 7×7 .

Advanced Multiplicative Part-Whole (Stage 7)

Strategy

- Solve +, -, \times and \div problems with whole numbers (and decimals) using a range of strategies.
- Solve problems involving fractions, decimals, proportions and ratios using multiplication and division strategies.
- Use pencil and paper or calculator to work out answers where the numbers are large or untidy.

Knowledge

- Count forwards and backwards in 0.001s, 0.01s, 0.1s, 1s, 10s.
- Say number 0.001, 0.01, 0.1, 1, 10 before and after any whole number.
- Order decimals to 3 places.
- Order fractions.
- Know equivalent fractions.
- Recall \times and \div to 10×10 , $100 \div 10$.

Advanced Proportional Part-Whole (Stage 8)

Strategy

- Choose appropriately from a broad range of strategies solve +, -, \times and \div with fractions and decimals.
- Find fractions, decimals, and percentages of given amounts.
- Use a range to strategies to solve problems with ratios and proportions.

Knowledge

- Count forwards and backwards in 0.001s, 0.01s, 0.1s, 1s, 10s etc.
- Say number 0.001, 0.01, 0.1, 1, 10 before and after decimal numbers.
- Order fractions, decimals, and percentages.
- Know the number of tenths, hundredths, and thousandths in numbers to three decimal places.
- Round decimals to the nearest 100, 10, 1, tenths, hundredths.
- Recall fractional, decimal, and percentage conversions for commonly used fractions.