Nau mai

haere mai

Hui 5 – Families & whānau

THE LEARNER FIRST™

A balanced experience

Procedural Fluency

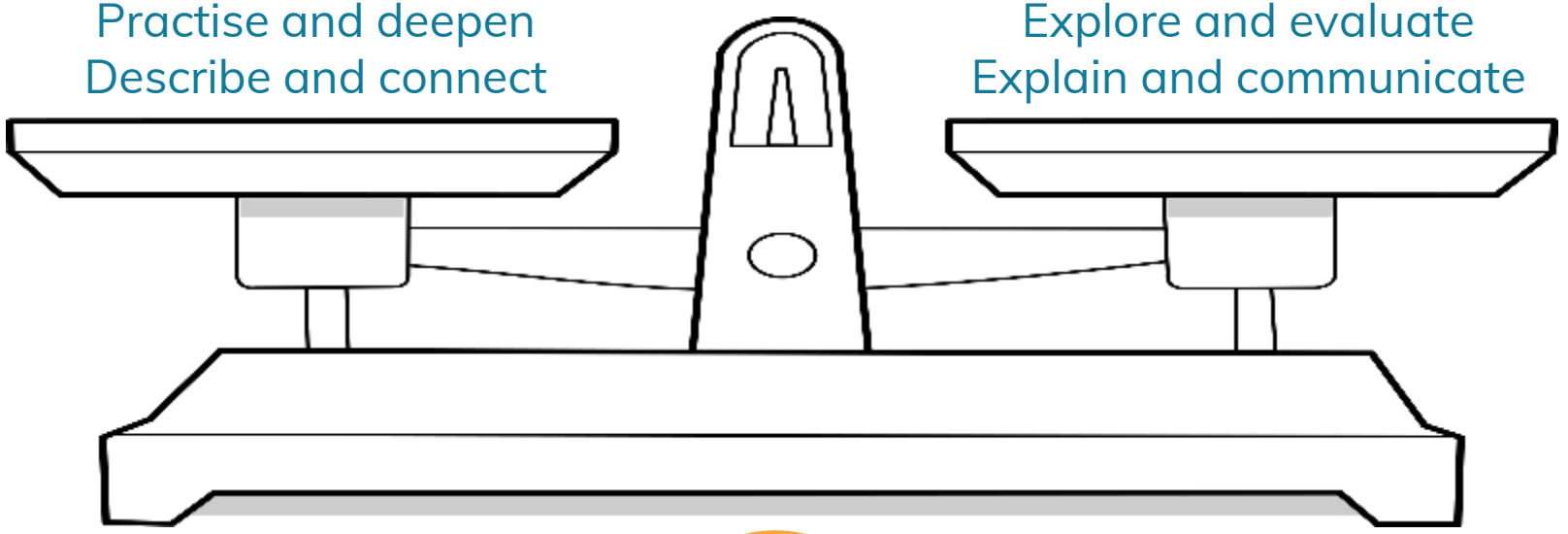
Conceptual Understanding

Adaptive Reasoning

Problem Solving

Practise and deepen
Describe and connect

Explore and evaluate
Explain and communicate



Mātauranga
Tataiako

Productive Disposition

Effective Pedagogies
Key Competencies

A balance can help reduce anxiety

Showcase the creativity and relevance of maths

A key way to reduce maths anxiety is to move away from focusing on right and wrong answers, and instead bring creative thinking and real-life applications to the fore.

For parents, caregivers, families, whānau who lack confidence or suffer from maths anxiety themselves, maths at home can cause stress and exacerbate a negative reaction, with long-lasting consequences for families.

How about setting fun maths activities that promote all the traits associated with mathematical competence, and that can have a positive impact on the learning and perceptions of maths at home for all tamaraki.

1 Learning at home

Families and whānau

Learning at home
Weekly plans to support your child's maths learning when they are unable to attend school.

Supporting school maths
Understanding and supporting classroom maths at home.

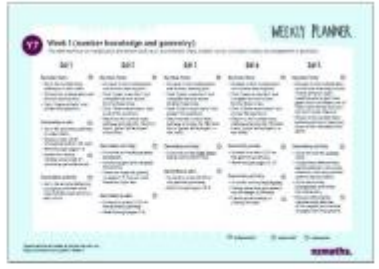
Maths at our house
Using everyday experiences to explore maths.

Maths kete
Free or low-cost items your child can use for exploring maths ideas.

FAQs and other resources
Frequently asked questions and links to other resources

1. **Weekly plans: Using online resources**
Each of these plans has five sessions. Each session has activities using the resources here on nzmaths that should take about 45 minutes. Feel free to pick and choose ideas from these plans to find activities for your child.

These weekly plans use e-ako maths, an online tool developed by the Ministry of Education. e-ako modules are more like classroom lessons than games, and therefore your child may require some guidance to get the most out of these. Number Facts is a learning tool on e-ako maths that finds out the number facts your child knows and teaches them the ones they don't.



Getting started on e-ako maths
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2. **Weekly plans: Using offline resources**
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The activities include mathematical problems to solve, projects to work on, and number facts to practice. Some of the activities may require support from parents or whānau.

1.1 Weekly plans - using online resources

Year 4 week 2 (place value and measurement)

This week we focus on place value, and on measuring area.

This page suggests activities for each day. Click to download a printable PDF to help keep track of progress.

Day 1

Place value

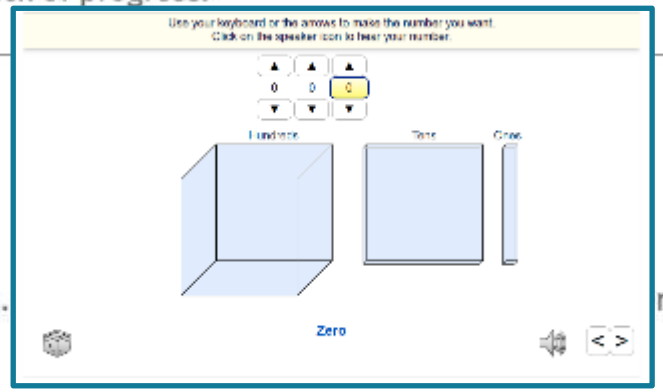
- Go to the Modeling 3-digit numbers learning object.
- Click on the dice at the bottom, then use the arrows at the top to make the number given.
- Make at least 10 numbers correctly.

Measurement e-ako

- Go to the measurement pathway in e-ako maths.
- Choose e-ako M2.50 (the fifth yellow button on the second row).
- Work through pages 1–7.

Measurement activity

- Go to the activity An Absorbing Challenge.
- Follow the instructions to complete a, b, and c.



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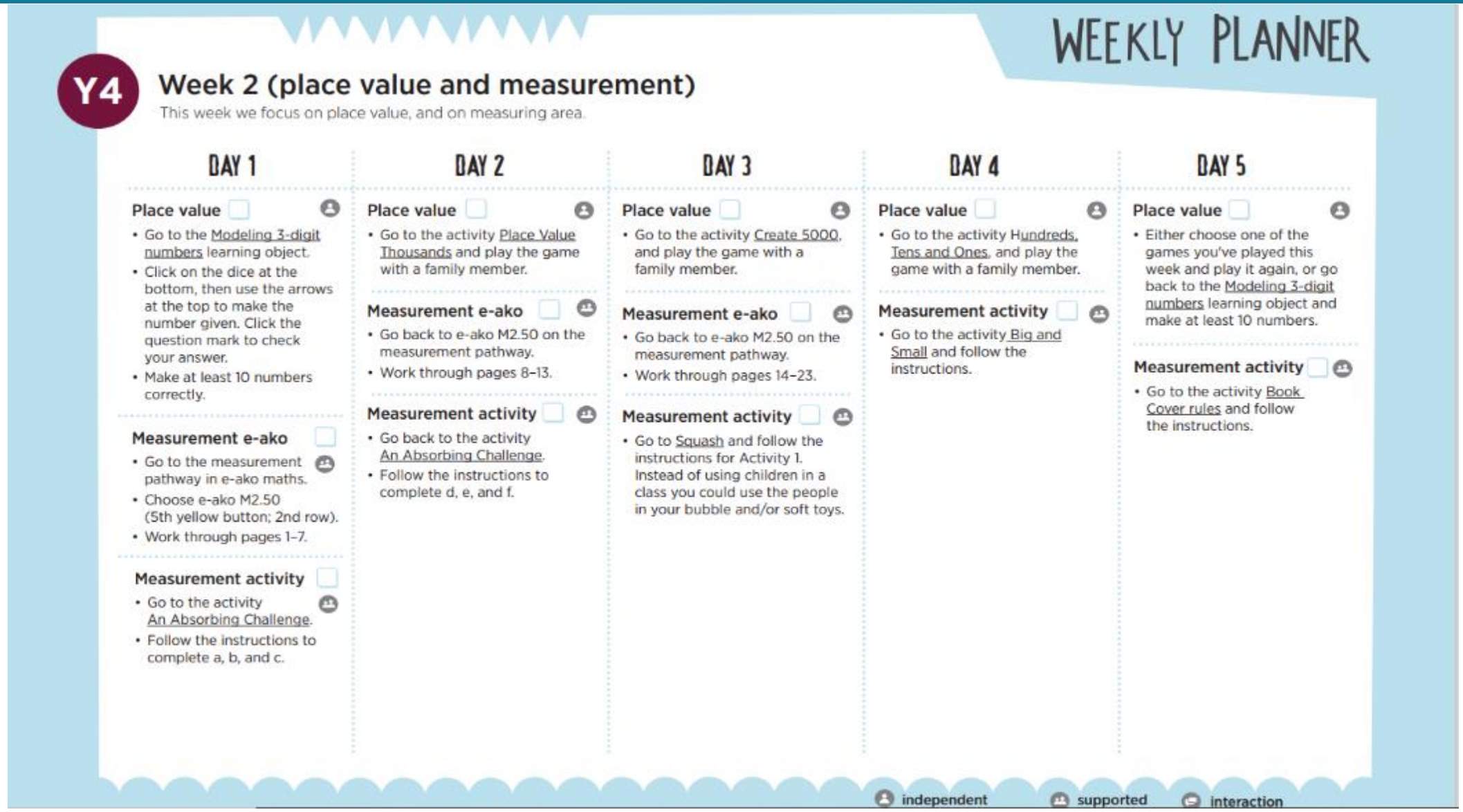


WEEKLY PLANNER

Y4

Week 2 (place value and measurement)

This week we focus on place value, and on measuring area.

DAY 1

Place value

- Go to the Modeling 3-digit numbers learning object.
- Click on the dice at the bottom, then use the arrows at the top to make the number given. Click the question mark to check your answer.
- Make at least 10 numbers correctly.

Measurement e-ako

- Go to the measurement pathway in e-ako maths.
- Choose e-ako M2.50 (5th yellow button; 2nd row).
- Work through pages 1–7.

Measurement activity

- Go to the activity An Absorbing Challenge.
- Follow the instructions to complete a, b, and c.

DAY 2

Place value

- Go to the activity Place Value Thousands and play the game with a family member.

Measurement e-ako

- Go back to e-ako M2.50 on the measurement pathway.
- Work through pages 8–13.

Measurement activity

- Go back to the activity An Absorbing Challenge.
- Follow the instructions to complete d, e, and f.

DAY 3

Place value

- Go to the activity Create 5000, and play the game with a family member.

Measurement e-ako

- Go back to e-ako M2.50 on the measurement pathway.
- Work through pages 14–23.

Measurement activity

- Go to Squash and follow the instructions for Activity 1. Instead of using children in a class you could use the people in your bubble and/or soft toys.

DAY 4

Place value

- Go to the activity Hundreds, Tens and Ones, and play the game with a family member.

Measurement activity

- Go to the activity Big and Small and follow the instructions.

DAY 5

Place value

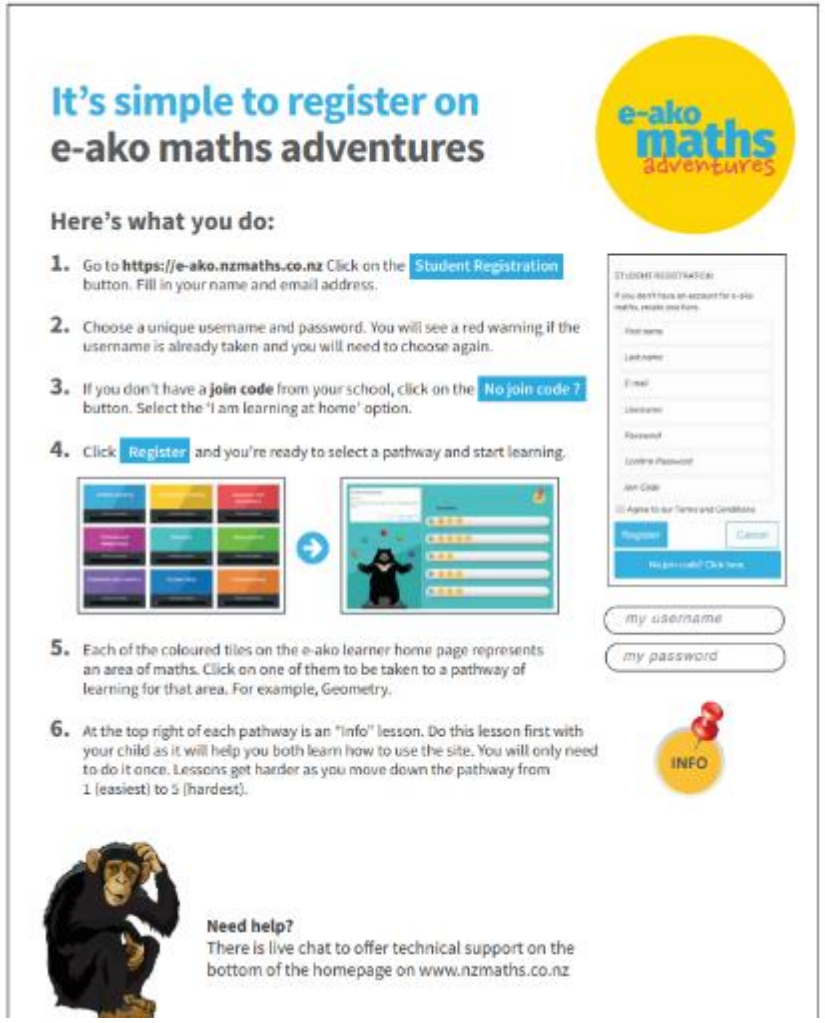
- Either choose one of the games you've played this week and play it again, or go back to the Modeling 3-digit numbers learning object and make at least 10 numbers.

Measurement activity

- Go to the activity Book Cover rules and follow the instructions.

independent supported interaction

1.1 Weekly plans - using online resources: e-ako maths



1.1 Weekly plans - using online resources: e-ako maths

e-ako

PLD360
maths adventures

maths adventures

Student pathways

Check out student content, learn from the teacher tips

Create new class

Work with multiple classes

1.1 Weekly plans - using online resources: e-ako maths

1.1 Weekly plans - using online resources: e-ako maths

Tara also knows some other things about the patterns.



Tick which are true.

- ☐ You see similar designs in traditional *moko*, which are permanent face or body tattoos.
- ☐ On *moko*, the designs are usually in black.
- ☐ In traditional *kōwhaiwhai*, the koru are usually white.
- ☐ Designs like this are in some Māori carvings.
- ☐ *Moko* (tattoos) and carvings are made by master artists.
- ☐ In *kōwhaiwhai*, there are also designs like this, which are called crescents, or *kape*.
- ☐ Transformations, including reflection, rotation and translation, are used in making *kōwhaiwhai* patterns.

Points: 5 / 130 Page: 4 / 28 Check Answers

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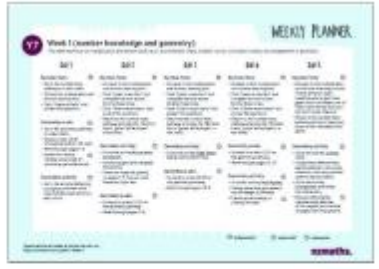

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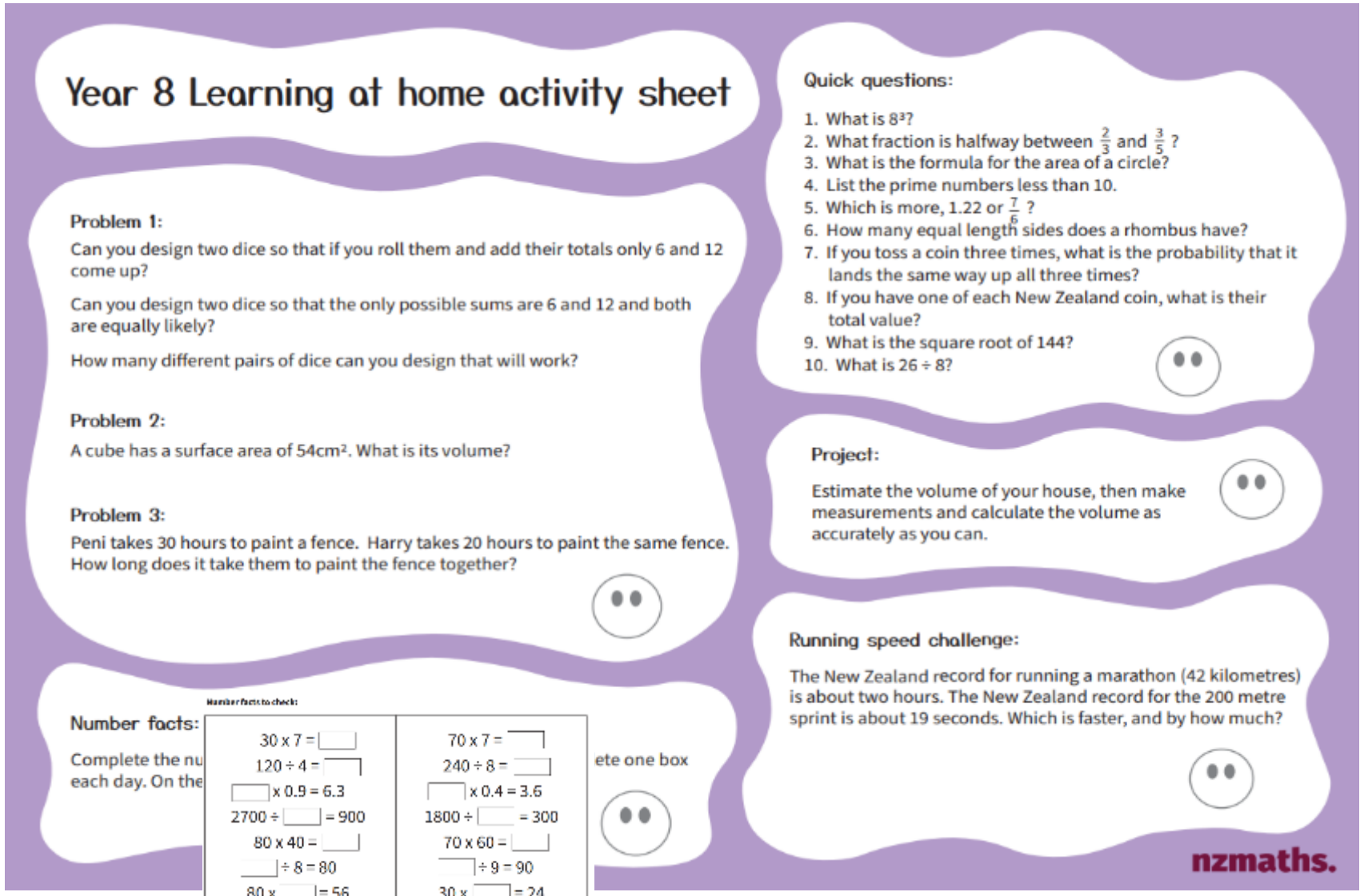

Year 8 Learning at home activity sheet

Problem 1:

Can you design two dice so that if you roll them and add their totals only 6 and 12 come up?

Can you design two dice so that the only possible sums are 6 and 12 and both are equally likely?

How many different pairs of dice can you design that will work?

Problem 2:

A cube has a surface area of 54cm². What is its volume?

Problem 3:

Peni takes 30 hours to paint a fence. Harry takes 20 hours to paint the same fence. How long does it take them to paint the fence together?

Number facts:

Complete the nu ete one box each day. On the

Number facts to check:

30 x 7 = ☐	70 x 7 = ☐
120 ÷ 4 = ☐	240 ÷ 8 = ☐
☐ x 0.9 = 6.3	☐ x 0.4 = 3.6
2700 ÷ ☐ = 900	1800 ÷ ☐ = 300
80 x 40 = ☐	70 x 60 = ☐
☐ ÷ 8 = 80	☐ ÷ 9 = 90
80 x ☐ = 56	30 x ☐ = 24

Quick questions:

1. What is 8^3?
2. What fraction is halfway between $\frac{2}{3}$ and $\frac{3}{5}$?
3. What is the formula for the area of a circle?
4. List the prime numbers less than 10.
5. Which is more, 1.22 or $\frac{7}{6}$?
6. How many equal length sides does a rhombus have?
7. If you toss a coin three times, what is the probability that it lands the same way up all three times?
8. If you have one of each New Zealand coin, what is their total value?
9. What is the square root of 144?
10. What is 26 ÷ 8?

Project:

Estimate the volume of your house, then make measurements and calculate the volume as accurately as you can.

Running speed challenge:

The New Zealand record for running a marathon (42 kilometres) is about two hours. The New Zealand record for the 200 metre sprint is about 19 seconds. Which is faster, and by how much?

nzmaths.

1.2 Weekly plans - using offline resources

Year 8 Learning at home: Notes for parents

When your child finishes each activity, ask them to add a mouth to the face to show how they felt about that activity.

Problem 1:

The key to this problem is to put the same number of every face of one die. If, for example, one die has 5 on every face, then you know that die will always roll a 5. For the sum to be equally likely to be 6 or 12 the other die needs to have a 1 on three faces and a 7 on the other three faces.

This will work for any number on the first die. You could challenge your child by pointing out that the problem does not say you can't use fractions, decimals or negative numbers!

Problem 2:

A cube has six faces, each with the same surface area. Therefore, the surface area of each face of a cube with a total surface area of $54cm^2$ is $9\ cm^2$.

If the area of one face of the cube is $9cm^2$ then its edge length must be 3cm ($3 \times 3 = 9$).

The volume of a cube with edges 3cm long is = 3cm x 3cm x 3cm, which makes $27cm^3$.

Problem 3:

Find how much of the fence each person can paint in 1 hour.

Peni can paint $\frac{1}{30}$ of the fence per hour.

Harry can paint $\frac{1}{20}$ of the fence per hour.

Together, they can paint $\frac{1}{30} + \frac{1}{20}$ of the fence in 1 hour.

$\frac{1}{30} + \frac{1}{20} = \frac{2}{60} + \frac{3}{60} = \frac{5}{60}$

$\frac{5}{60}$ can be simplified to $\frac{1}{12}$.

If they can paint $\frac{1}{12}$ of the fence per hour it will take them 12 hours to paint the whole fence.

Questioning Conjecturing
Explaining Proving
Justifying Generalising

Adaptive Reasoning

2 Supporting school maths

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Supporting school maths

Kia ora, parents and whānau, thank you for supporting your child's maths learning at home (read more).

Introductory video
A video describing how you can support your child's learning in maths.

Number facts games
A collection of games to help your child improve their recall of basic number facts (addition and multiplication tables).

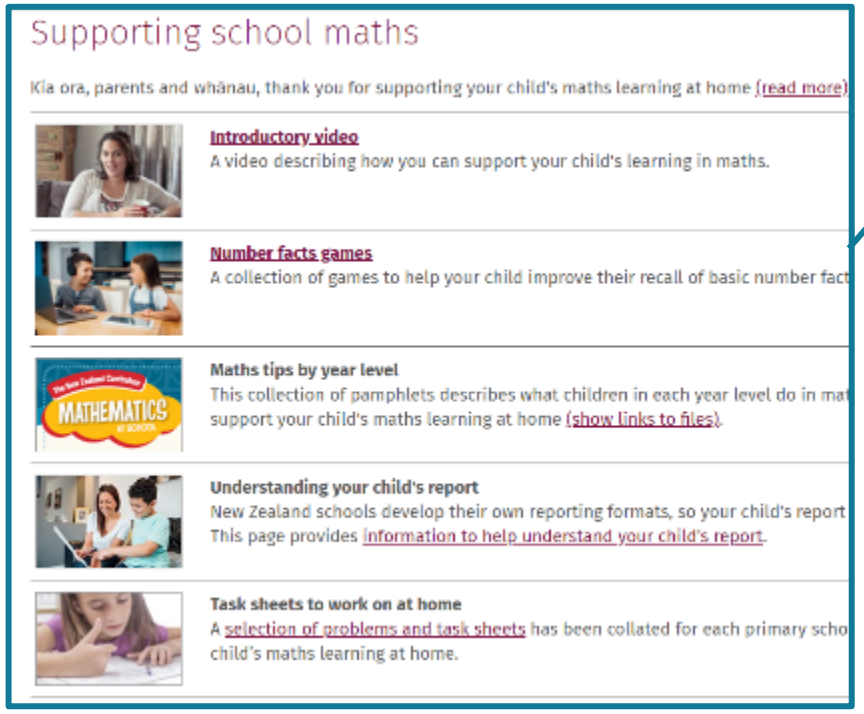
Maths tips by year level
This collection of pamphlets describes what children in each year level do in maths at school, and gives some ideas of how you can support your child's maths learning at home (show links to files).

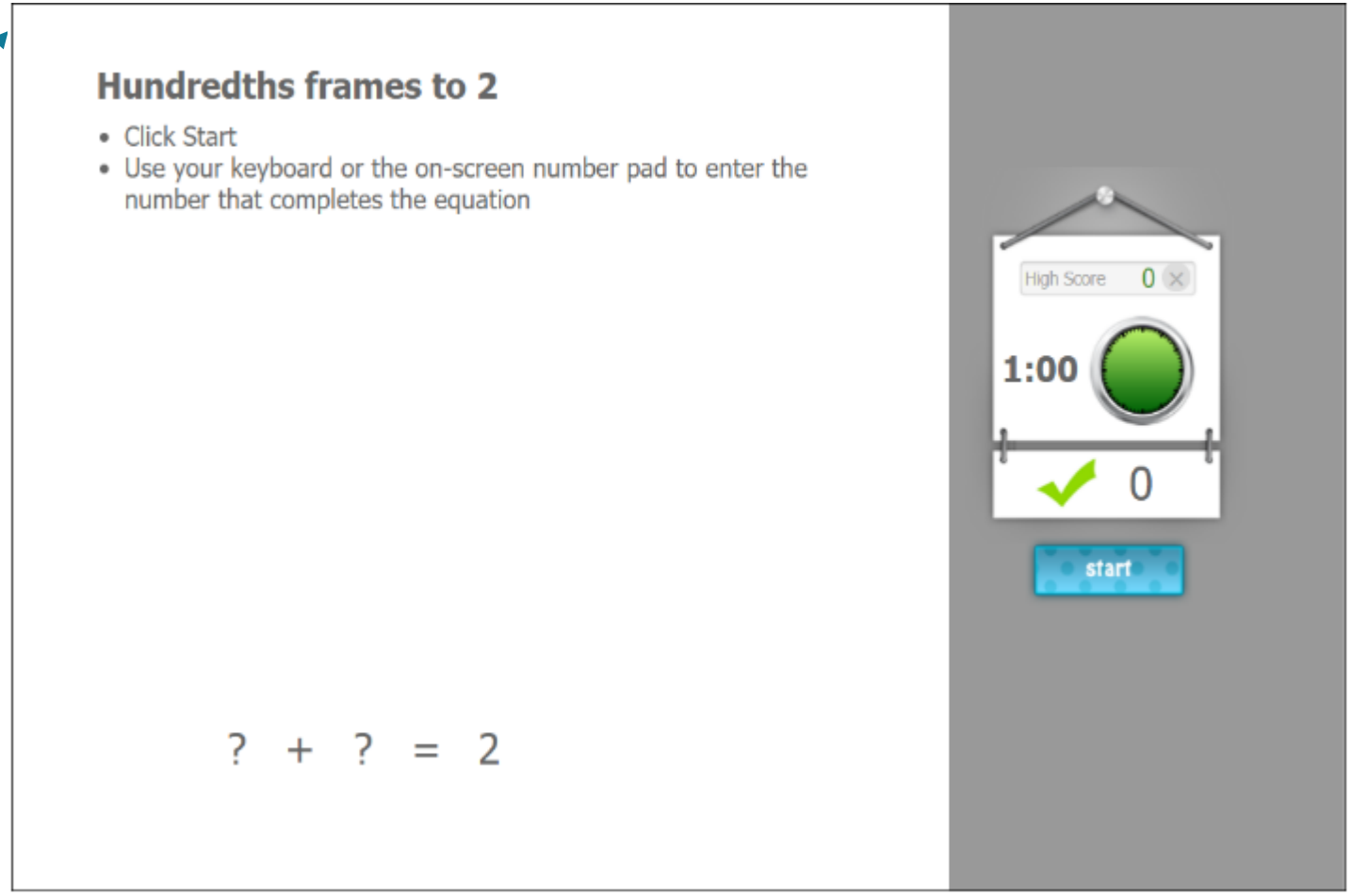
Understanding your child's report
New Zealand schools develop their own reporting formats, so your child's report will not be the same as reports from other schools. This page provides information to help understand your child's report.

Task sheets to work on at home
A selection of problems and task sheets has been collated for each primary school year level to enable you to help more with your child's maths learning at home.

2.1 Number Fact Games

These are linked to from online weekly activities





Procedural Fluency

2.2 Maths tips – information sheets

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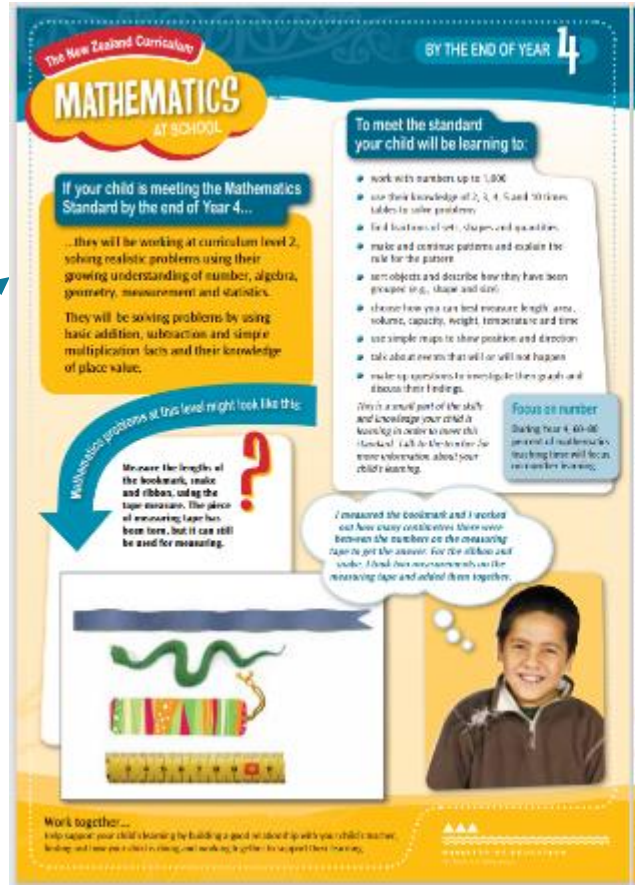

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Problem Solving

Student task sheets

Task notes | It's a problem — Y2

Notes for parents. Activity next page.

The purpose of this task is to help your child to:

- use materials, drawings and numbers to work out a problem
- show different ways of solving a problem
- talk about **how** they solve a problem and **why** they did it that way
- enjoy working out maths problems

You may like to print the task sheet on the next page:

Here's what to do:

- Have paper, a pencil or crayons/felt pens, and some counting materials (e.g. dried beans, buttons, bottle tops, counters) ready.

- Choose one problem that appeals to you and read it with your child (you may like to cut it out).
- Have your child explain to you what the problem is asking them to do and how they might go about working it out.
- Give them time and encouragement to solve it.
- Listen carefully as your child explains their solution/s and tell them what you like about what they have done.
- Try another problem when you're both ready.

Page 1 of 2

Activity | Problems to solve — Y2

Write down how much of this shape is coloured.

Draw other shapes you know and colour in this amount of each shape.

There are 20 wheels altogether on the cars and bikes parked in the driveway.

What might be parked there?

When children in Sam's class got into groups of four, one child was left out.
How many children might there be in Sam's class?

Mum got 11 text messages altogether on Monday and Tuesday.
How many texts could she have received on each day?

What numbers up to 100 can you make using 1, 0, 2, 7, 8 and 4?

A group of **six squares** are joined together.
What might the joined squares look like?

Page 2 of 2

3 Maths at our house

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A snapshot for Hui 6 – Diverse needs

High Order
rich tasks
open ended

Low Order
Exercisess
simple word

High cognition Low insights	High cognition High insights
Low cognition Low insights	Low cognition High insights

Productive Disposition

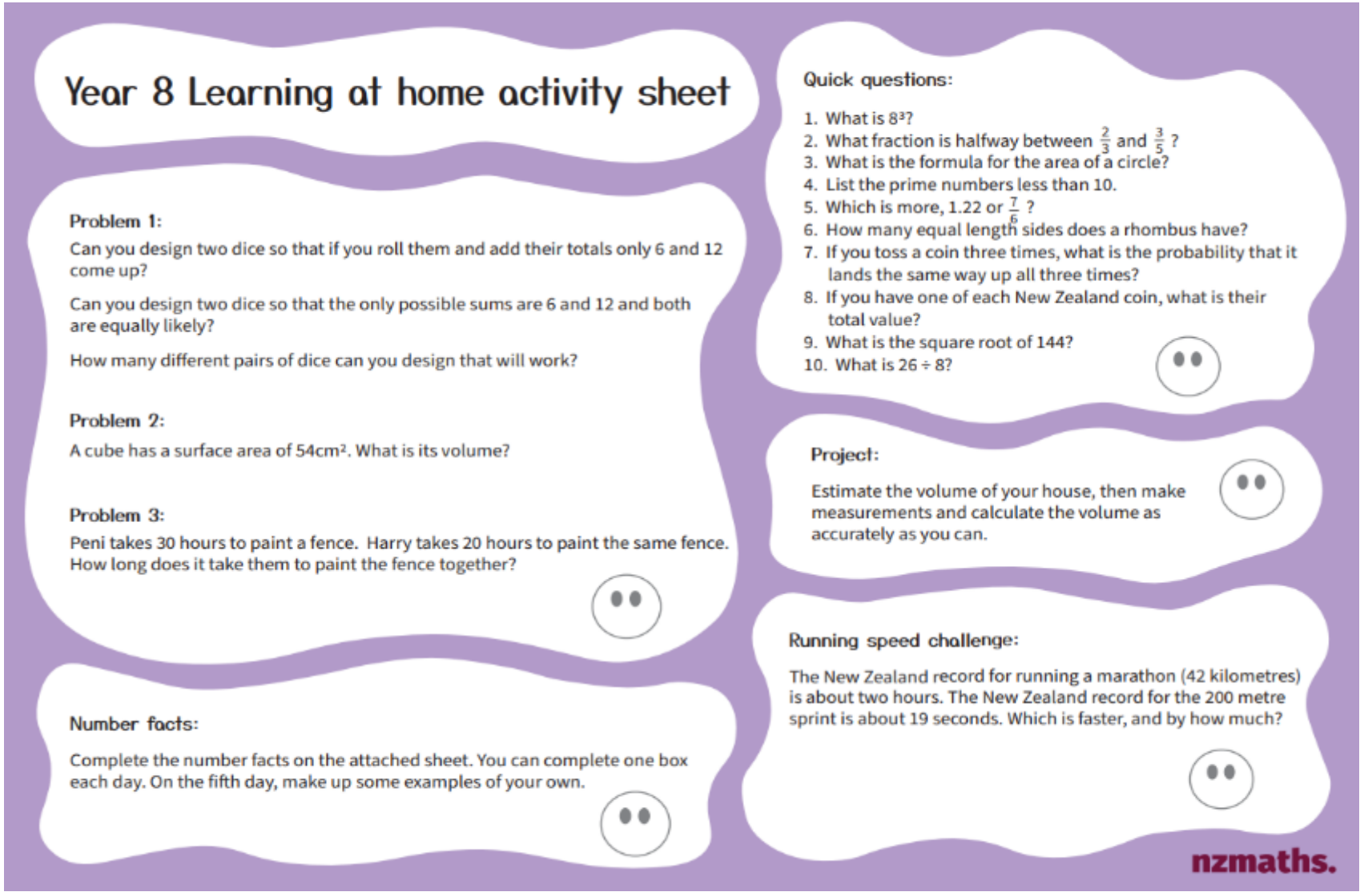
Procedural Fluency

Conceptual Understanding

Adaptive Reasoning

Problem Solving

NZ Maths is supporting us with that balance



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Number facts:

Complete the number facts on the attached sheet. You can complete one box each day. On the fifth day, make up some examples of your own.

Quick questions:

1. What is 8^3?
2. What fraction is halfway between $\frac{2}{3}$ and $\frac{3}{5}$?
3. What is the formula for the area of a circle?
4. List the prime numbers less than 10.
5. Which is more, 1.22 or $\frac{7}{6}$?
6. How many equal length sides does a rhombus have?
7. If you toss a coin three times, what is the probability that it lands the same way up all three times?
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nzmaths.

Working with kaiako to create a balanced ‘diet’

High Order
rich tasks
open ended

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Low Order
Exercisess
simple word

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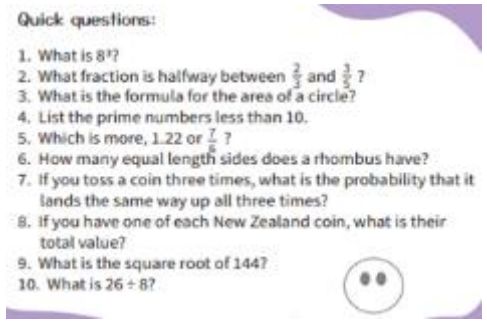

Quick questions:

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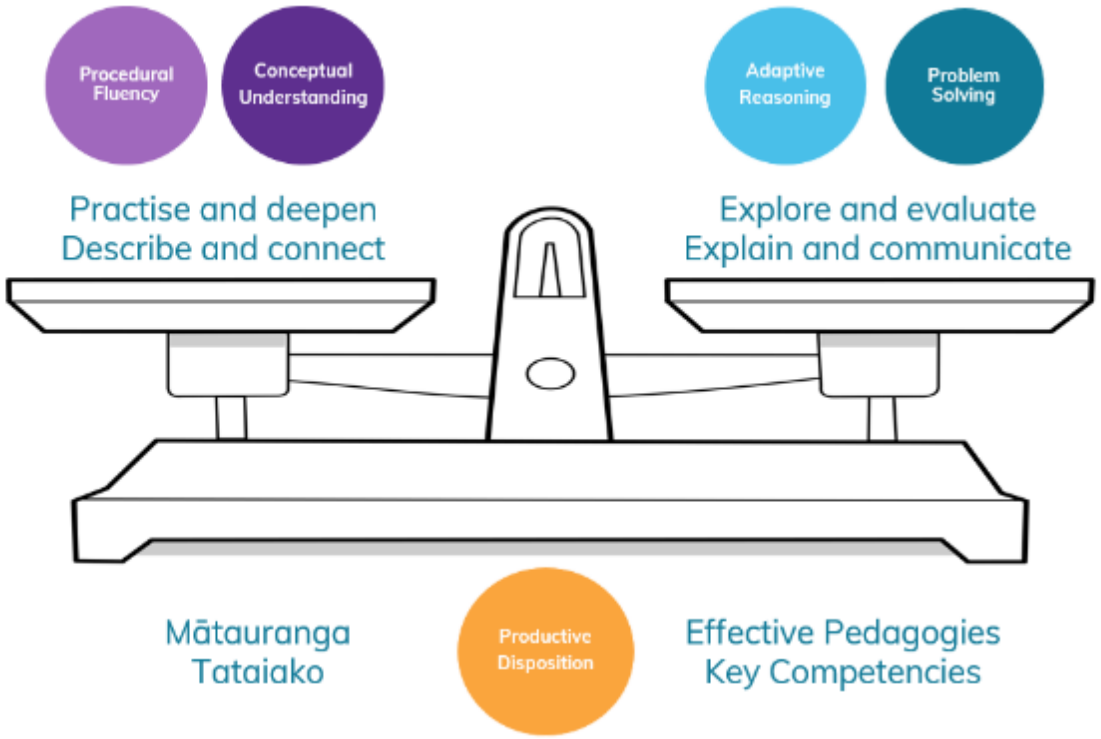
NZMaths – A great starting point



Online- weekly

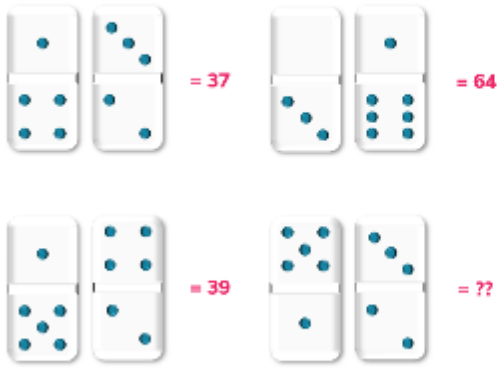
- E-ako adventures
- Games
- Problems

Offline – weekly

- Problems
- Project
- Quick Fire and number facts

Just-in-Time Maths – Rapid Routines

recallNreason



Domino Detectives

Aim – To solve and explain what the mystery number is

There is a pattern hidden in the dominoes that, once identified will help you work out what the missing number is?

1. Work out what you think the missing number is.
2. Explain your thinking.
3. Create another one like this to share

4. How could you change the puzzle to use different:
   - place value positions eg 3-digits, tenths and ones
   - operations
   - positions or number of dominoes

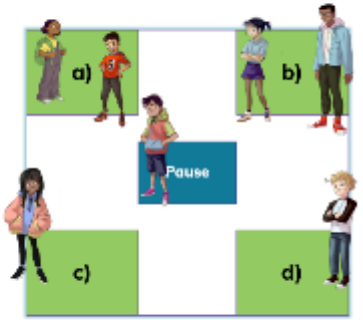
Get that creative thinking flowing

THE LEARNER FIRST Self-Understanding | Connection | Knowledge | Competency Maths – Ideas and Insights TLF

moveNprove

These cookies are sold in packs of 10.
How many packs do I need to buy to give all 32 ākonga one each?

a. 1
b. 2
c. 3
d. 4



THE LEARNER FIRST Self-Understanding | Connection | Knowledge | Competency Maths – Ideas and insights TLF

Communicating – written, symbolic, verbal, concrete
Justifying – prove, defend, challenge,
Collaborating – learning together, listening, sharing
Thinking – curiosity, creativity, expressive

Families and whānau can see what is important

Productive Disposition

Connect to prior learning	Knowing the ‘what’, ‘why’, ‘how’ Diagnosing what they bring Building on their experiences
Supportive environment	Social and cultural contexts Building positive relationships Acceptance of ideas
Encourage reflection	Opportunities to think critically Targeted use of ‘rich tasks’ Talk moves
Enhance new learning	Stimulating curiosity Clarity of learning objectives Encourage student voice
Opportunities to learn	Planning reactivation Sequencing tasks/lessons Assessing ‘on the run’
Shared Learning	Embed & role model values Reflective peer discourse
Teaching as inquiry	Measuring our impact Repertoires of routines

Initial insights from...

Andrew Tagg – how else NZ Maths is supporting family and whānau

Marie Hirst - repertoire of games to share

One Tree Point School - using rapid routines remotely

Open up for further discussion
and where to for Hui 6