



Junior Journal 55

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Junior Journal

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Making Money

by Tricia Glensor

We use money to buy the things we need – and the things we want. But how much do you know about the money we use in New Zealand?



Where does New Zealand money come from?

The Reserve Bank is in charge of producing the money we use in New Zealand. (The Reserve Bank is owned by the New Zealand Government.)

What does New Zealand money look like?

New Zealand has five different banknotes (\$5, \$10, \$20, \$50, and \$100) and five different coins (10 cents, 20 cents, 50 cents, 1 dollar, and 2 dollars). The Reserve Bank began producing new notes in 2015, so now we have a mix of old notes and new notes.

Why do banknotes and coins get changed?

1. Prices change

New Zealand used to have 1 cent, 2 cent, and 5 cent coins, as well as 10 cent, 20 cent, and 50 cent coins. Now you can't buy things for 1 cent, 2 cents, or 5 cents any more, so those smaller coins are no longer needed.



2. Money wears out

New Zealand also used to have \$1 and \$2 banknotes, but people used these notes a lot and they wore out quickly. In 1991, the \$1 and \$2 notes were replaced with coins because coins last longer.



New Zealand banknotes used to be made from paper, but this changed in 1999. Since then, they have been printed on polymer, which is a type of plastic. Polymer is much stronger than paper, and it lasts a lot longer. This means that we don't need to print new banknotes so often.

3. People like money to look interesting

In the early 1990s, the Reserve Bank decided to change the design of New Zealand's banknotes to make them look more attractive and up to date. They asked people what pictures they wanted on the notes.

Most people wanted images of things that reminded them of New Zealand and things that people overseas would see as “Kiwi”. The images on our notes were changed to include well-known New Zealanders, as well as more birds and plants from New Zealand.

In 2015, the Reserve Bank updated the design of the banknotes. The images on the new notes are similar to the old notes, but the colours are brighter.



People from other countries liked the new notes so much that the New Zealand \$5 note was named Banknote of the Year in an international competition.

4. Money needs to be secure

Sometimes people try to make copies of banknotes. The Reserve Bank adds security features (things that help to keep something safe) to banknotes to make it much harder for people to do this.

What are some security features on our banknotes?

- 1** Every banknote has its own serial number. This number is printed twice on the front of each note.

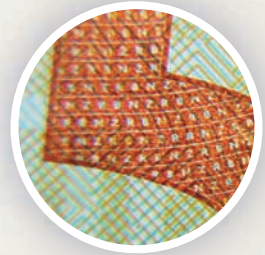


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- 2** Parts of the new notes are printed with special raised ink. You can feel this if you run the tip of your finger over the note.



- 3** There is some tiny printing that you can only see with a strong magnifying glass. For example, inside the large 5, the letters RBNZ (Reserve Bank of New Zealand) are printed many times.



- 4** There are some “hidden” images. If you hold the note up to the light, you can see a fern shining through the middle of the bird on the left-hand side of the note. You will also be able to see shapes on the front and back of the note that fit together to make a hidden number. It’s the same as the value of the note.



5 Inside the clear “window” on the right-hand side of the note, there are holograms. (Holograms are shiny images that reflect light and change as you move them.) In the \$5 note, the holograms are of a fern, a map of New Zealand, and the hoiho (the same bird you can see on the left-hand side of the note).



What happens to old banknotes?

Banknotes should last for six or seven years. When they are damaged or too old to be used again, they are shredded (cut up into tiny pieces by a machine). The shredded notes are recycled and made into useful plastic items. So who knows? Maybe that \$2 plant pot started life as a pile of \$50 banknotes!





Take Note

by Tricia Glensor



In 2015, the Reserve Bank began producing a new set of New Zealand banknotes. Everything on the banknotes shows something special about New Zealand.



Famous faces

On the front of every New Zealand banknote, there is a famous face. Each face is of a person who has done something important for New Zealand (and sometimes for other countries too).

\$5: Sir Edmund Hillary (1919–2008)

In 1953, Sir Edmund Hillary and Tenzing Norgay became the first people to climb Mount Everest, the highest mountain in the world. Sir Edmund Hillary was also the first person to drive a vehicle with wheels across Antarctica to the South Pole. (Other people who had reached the South Pole had used sleds.) He is also famous around the world for the work he did to help the people of Nepal.



\$10: Kate Sheppard (1847–1934)

Before 1893, New Zealand women weren't allowed to vote in elections. Kate Sheppard was a leader of a group of women who helped change that. New Zealand was the first country in the world to give women the right to vote.



\$20: The Queen (1926–)

The Queen lives in England, but she is also the Queen of New Zealand.



\$50: Sir Āpirana Ngata, Ngāti Porou (1874–1950)

Sir Āpirana Ngata was an important Māori leader and member of parliament. He worked hard to improve life for Māori. He also encouraged Māori to keep their culture.



\$100: Ernest Rutherford (1871–1937)

Ernest Rutherford was a New Zealand scientist who won the Nobel Prize for Chemistry in 1908.



Other images

As well as the famous faces, there are many other images on our banknotes. Here is a closer look at the images on the \$5 note.

THE FRONT OF A \$5 NOTE

1 Tukutuku pattern

Every New Zealand banknote has a tukutuku pattern. The \$5 note has the kaokao pattern.

2 Hoiho

Every New Zealand banknote has a bird on it. The \$5 note has the hoiho (yellow-eyed penguin).



3 Aoraki/Mount Cook

This is New Zealand's highest mountain. It was one of the first mountains that Sir Edmund Hillary climbed, and it was one of his favourites.

THE BACK OF A \$5 NOTE

The images on the back of the \$5 note all show things to do with the Subantarctic Islands, a group of New Zealand islands that are close to the Antarctic (the area around the South Pole).

1 Campbell Island

Campbell Island is one of New Zealand's Subantarctic Islands.

2 Campbell Island daisy

This giant, colourful daisy grows close to the ground, away from Campbell Island's strong, cold winds.

3 Ross lily

This plant is also found on the Subantarctic Islands. It has bright yellow flowers and grows up to a metre high.



4 Hoiho

The hoiho is one of the most endangered penguins in the world. It is found only in southern New Zealand, including the Subantarctic Islands. (There are two more images of the hoiho on the front of the \$5 note.)



If you were designing a banknote, what images of Aotearoa New Zealand would you choose?

STOP, Thief!

by
Simon
Cooke

CHARACTERS

MOHUA



MAX

(MARAMA'S
ASSISTANT)



KEA



MARAMA

(A PHOTOGRAPHER)



KĀREAREA



KŌKAKO



WHIO



HOIHO





SCENE: *A forest by the sea. MARAMA and MAX are walking through the forest. It is very early in the morning, and the air is filled with birdsong.*

MARAMA. I love the forest at dawn. It's so beautiful. I want to photograph everything.

MAX *(yawning)*. It's too early. Can I please go back to bed?

MARAMA. No, Max, we have a job to do. We're here to get pictures of birds for the new banknotes that are going to be printed. And we'll need to find a really special bird for the hundred-dollar note!

MOHUA, WHIO, KŌKAKO, KĀREAREA, and KEA *are nearby, listening to the humans.*

MOHUA. Did you hear that? Those humans want to take our pictures and put them on banknotes. We'll be famous!

WHIO. Awesome! Mum will be so proud of me.

KEA *(talking to himself)*. That camera is so shiny. I wonder if I can get a closer look ...

KEA *shuffles around behind the humans to get closer to the camera.*

KĀREAREA. Since I'm the most important bird, my picture is sure to be on the hundred-dollar note. Everybody wants to see Kārearea, king of the skies!

KŌKAKO. In your dreams, Kārearea. They'll want to see my beautiful blue wattle. Watch!

KŌKAKO *flies around the humans, doing rock star poses.*

MARAMA *snaps photos excitedly.*

MOHUA. Out of the way, Kōkako. My bright yellow head will make them forget about your blue wattle.

MOHUA *flies around the humans, doing supermodel poses.*

KŌKAKO (*pushing in front*). Stop hogging the camera, Mohua!

MOHUA (*pushing back*).

Get off my beak, Kōkako!

MAX (*confused*). What are those birds doing?

MARAMA. I think they're fighting over territory.

HOIHO *waddles up.*

HOIHO. What's going on?

KĀREAREA. Kia ora, Hoiho. Good news. Those humans are going to take my photo and put it on the one-hundred-dollar note.



HOIHO. Do you think they'll take a photo of me?

WHIO. No chance, Hoiho. You're not a proper bird. I mean, you can't even fly!

KŌKAKO (*laughing*). Imagine a flying penguin!

The birds all laugh at HOIHO.

WHIO (*to KŌKAKO, KĀREAREA, and MOHUA*). Anyway, I don't know why you three think you have a chance. They'll want a photo of me – a bird that's brave and sporty. I love swimming in fast mountain streams and rivers. I'm a thrill-seeking duck!

WHIO flies in front of the camera and pretends to be kayaking down rapids.

MAX. What is that duck doing? Break-dancing?

MARAMA. It's a whio – and no, I think it might have something stuck in its beak.

KĀREAREA (*calling to WHIO*). I'm braver than you, Whio. (**KĀREAREA** *turns to where the other birds are standing.*) Isn't that right, Kea? Hey, where's Kea gone?



WHIO. He's over there.

MOHUA. What's he up to? I think we'd better stop him before he does something silly!

KEA is sneaking up behind MARAMA, who is still taking photos. Suddenly, KEA grabs the camera and flies away with it.

MARAMA. Stop, thief!

MAX. What's happening?

MARAMA. That kea has stolen my camera!

The birds look at each other, their beaks open in shock.

KĀREAREA. Oh no! If there's no camera, there'll be no photo of me on the hundred-dollar note! Come on, everybody. Catch that kea!



WHIO. Sorry, Hoiho. You'll have to stay here because you can't fly.

MOHUA, WHIO, KŌKAKO, and KĀREAREA chase **KEA.**

KEA. This heavy camera is slowing me down. They're catching up. But if I can't have this camera, nobody can!

KEA *flies over the sea and drops the camera.*

MOHUA. Oh no, Kea's dropped the camera into the sea!

WHIO (*crying*). The camera's gone?

Now we'll never be famous.

Mum will be so disappointed!



HOIHO. Don't worry. Leave it to me.

HOIHO *waddles towards the sea and dives in.*

WHIO (to **KĀREAREA**). Wow! Look at Hoiho dive! She dives into the sea as well as you dive down from tall trees!

KĀREAREA (*disgruntled*). Hmmph!

MOHUA. Look at Hoiho glide through the water!

KŌKAKO. She glides through the water as well as I glide through the forest!



HOIHO *arrives back with the camera, placing it carefully on the ground near **MARAMA** and **MAX**, who look astonished. **HOIHO** waddles back to the other birds.*

KŌKAKO. Well done, Hoiho!

MOHUA. Yes, we're sorry we made fun of you. If anyone deserves to be on the hundred-dollar note, it's you.

KĀREAREA *scowls but doesn't say anything. **MARAMA** picks up her camera.*

MARAMA. That was amazing. I didn't expect to see this camera again. It's a good thing it's waterproof.

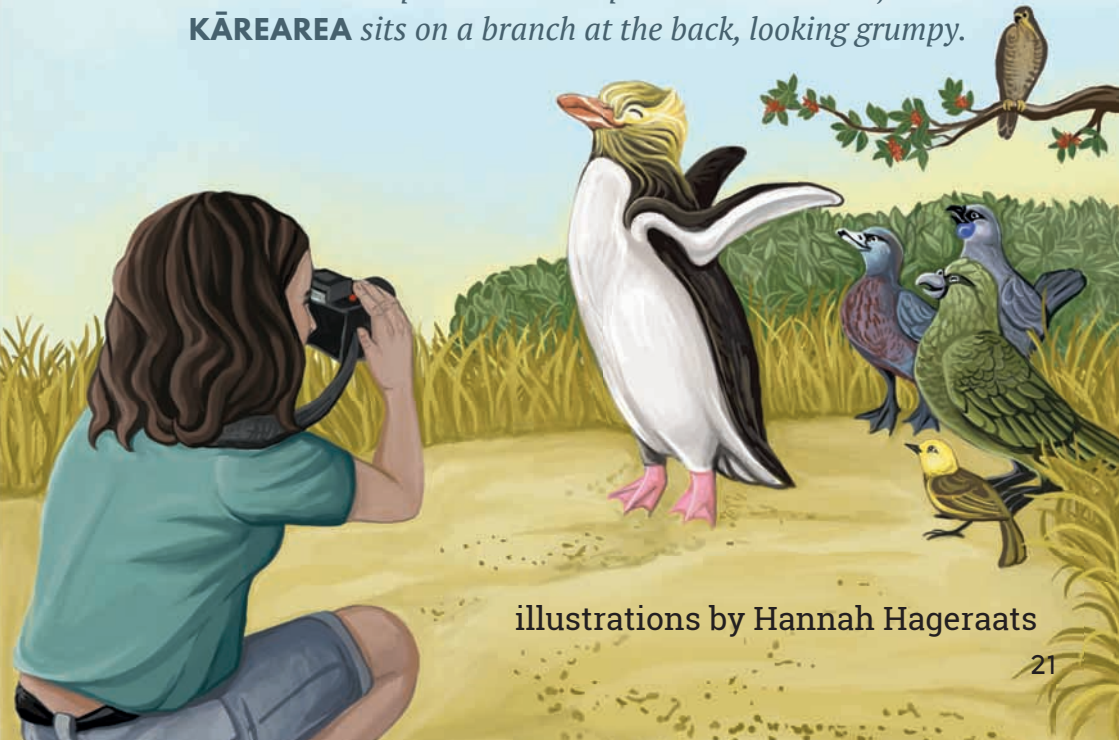
MAX. It's a pity it wasn't kea-proof too.

MARAMA. Yes, that kea caused so much trouble there's no way he's going to be on a banknote. But that helpful hoiho should be. I'm going to make sure she ends up on the best note of all.

MAX. You mean the hundred-dollar note?

MARAMA. No, hardly anyone uses those. The five-dollar note is the best. There are lots of them around. People use them and look at them every day. I'm going to make that little bird famous!

MARAMA starts taking pictures of the birds again. All the other birds except **KĀREAREA** push **HOIHO** to the front. **KĀREAREA** sits on a branch at the back, looking grumpy.



illustrations by Hannah Hageraats

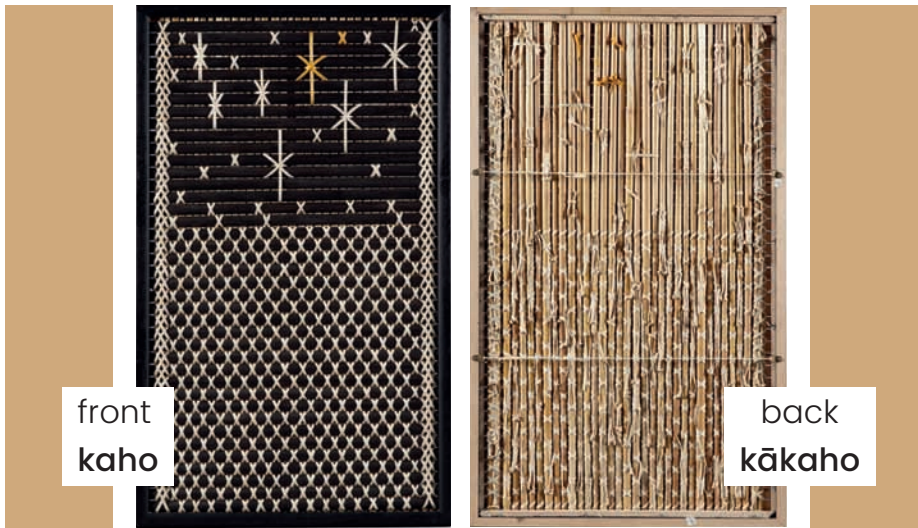
Weaving Tukutuku

by Kelly Joseph



These women are weaving tukutuku panels. Tukutuku panels are used to decorate whareniui (Māori meeting houses). The panels are placed between poupou (carved posts) around the walls. The coloured patterns of the panels help to tell stories.





front
kaho

back
kākaho

Most tukutuku panels are made with dried stalks of plants such as toetoe. Sometimes thin pieces of wood are used. The weavers tie the stalks together. They place some stalks horizontally (going from side to side) and some stalks vertically (going up and down). The horizontal stalks are at the front of the panel and are called **kaho**. The vertical stalks are at the back of the panel and are called **kākaho**.

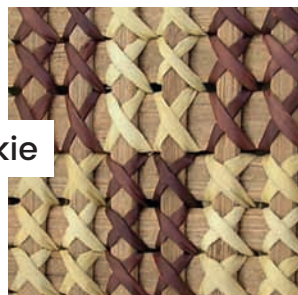
The weavers weave thin strips of grass or flax over and under the stalks. They use different colours to make patterns. For example, **pīngao** is a yellow grass and **kiekie** can be bleached white or dyed black.



pīngao



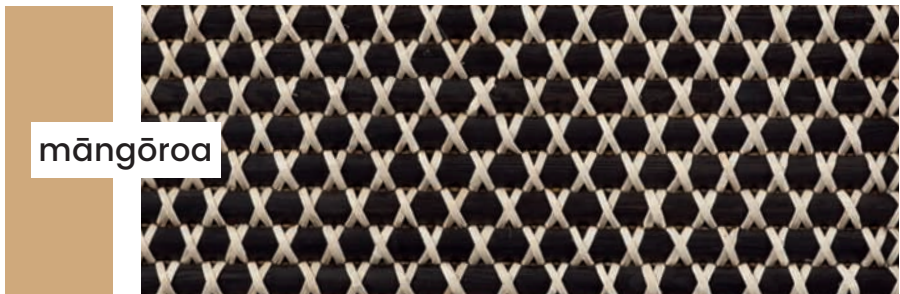
kiekie



Each pattern symbolises (stands for) something.



The **kaokao** pattern symbolises the arms of warriors performing a haka. It also symbolises mountains and the strength and shelter of the meeting house.



The **māngōroa** pattern symbolises the stars, especially the group of stars known as the Milky Way. There is a traditional story that tells how Māui placed a shark in the night sky to form the Milky Way. (Māngō means shark; roa means long.)

It usually takes two people to make a tukutuku panel. One person weaves, and the other person sits at the back tying the ends. The weavers need to be very patient – it can take a long time to complete the hundreds of stitches in each panel.

Tukutuku

In pairs, we make them,
one on each side,
a kanikani of hands
lashing and binding
pīngao, kiekie, or harakeke
across kaho and down kākaho.

Within these patterns
our stories are woven,
the zigzags of the kaokao
like mountains
or men swinging arms in haka.
These are stitches of strength.

On this panel,
māngōroa is laced
like pinpricks of starlight
leading us across the sea,
the eyes of many looking to the skies.
These are stitches of guidance.

Inside the wharenuī,
between the poupou,
these precious taonga stand.
We are warmed
by woven memories.
These are stitches of ancestors.

Kelly Joseph



Glossary

harakeke: a type of flax

kanikani: a dance

taonga: a treasure

Zapped!

Chapter 4: Machine Mayhem

by Renata Hopkins

The story so far:

(You can find chapters 1–3
in *Junior Journals* 52–54.)



Tai and Ana made a robot for their school science fair. They called it “Tidy-Bot”. When the robot was hit by lightning, it came alive! Unfortunately, Tidy-Bot was not very good at following instructions, and the twins had to hide the robot after it caused lots of trouble. Then other machines around town started acting strangely. How much trouble would these crazy machines cause ...?

Tai and Ana had a problem. Tomorrow was the day of the school science fair.

“If Tidy does something crazy, we’ll get the blame,” Tai said. “Again.”

That morning, Tidy-Bot had tried to feed the cat. Only, the robot had emptied the tin of cat food into Dad’s shoe. It had been quite yucky to clean up.

“Maybe we should tell Miss Simpson that we didn’t finish our robot,” said Ana gloomily.

"If Tidy-Bot had an off switch, we wouldn't have to worry," Tai replied.

The twins looked at each other.

"What if ..."

"... there *is* one?"

Tidy-Bot was made from broken gadgets – with lots of buttons. Maybe one of them would work? After checking that their parents were busy, the twins ran to Ana's room. They took Tidy-Bot out of the wardrobe.

"Hey, Tidy," said Ana. "Is it OK if we press your buttons?"

"Bleep, bloop," said Tidy-Bot happily.

Tai pressed a button on Tidy-Bot's toaster tummy. The little robot giggled. Ana tried another button. Tidy-Bot giggled louder. Then Tai pressed the button for making the toast pop up. At once, Tidy-Bot's giggles faded, and the little robot slumped.



"Sleep mode!" said the twins, at exactly the same time. Ana pressed the button again, and Tidy-Bot popped upright.

"Bingo!" shouted the twins.

The next day, the whole school was busy setting up for the science fair. One class had built catapults that fired ping-pong balls. Another had made battery-powered cars that moved when a propeller spun round. There were lots of other robots too. They looked great, but they didn't really do anything.

"You're still the coolest, Tidy-Bot," Tai whispered to their sleeping robot.

"And we're going to prove it," Ana added.

They checked the sleep button on their robot's tummy one last time, just to be sure. Then, as their class started to leave the hall, Ana saw something strange. The caretaker had left the big electric steam mop in a corner. Ana thought she saw it jiggle. She nudged Tai.

"Hey, that machine moved."

Tai looked, but the steam mop just sat there. "Are you sure?" he asked. "We haven't seen any other weird machines since the mall."

The mop stayed completely still.

"I guess I must be seeing things," Ana said. She and Tai ran after their class.

After dinner, the family returned to school for the science fair. First, the twins showed Tidy-Bot to Mum and Dad.

“Wow!” said Dad. “This little beauty must have kept you busy.”

Tai and Ana grinned. “That’s for sure.”

Next, the principal welcomed everyone. But halfway through her speech, the twins heard a familiar noise.

“Bleep, bloop!”

Tai and Ana spun round. A little girl was standing next to the robot table. She had just pushed Tidy-Bot’s sleep button.

“Eek!” gasped Tai and Ana, at exactly the same time.

Tidy-Bot began rolling along the table.

“Wow, kids,” said Mum. “You didn’t say your robot could move!”

Tidy-Bot started to place the other robots in a neat row.

“Look,” said another parent. “It’s tidying up!”

“Tidy up,” repeated Tidy-Bot. “Bleep, bloop!”

Everyone started to clap. Tai and Ana beamed. But just then, there was a loud noise. In the corner, the steam mop was jiggling and buzzing.

“Who turned that on?” said the bewildered principal.

“Wait,” said Miss Simpson. “It’s *not* turned on.”

She headed for the mop. Whizzz! The mop took off towards the crowd. Brave Miss Simpson dived for it, but the mop zoomed past her.



Pandemonium broke out. Kids laughed, and adults shrieked. A group of parents tried to herd the mop into a corner, but it puffed out steam and raced towards the display tables.

Zap! Zap! Zap! Tiny lightning bolts shot out of the steam mop. They hit the robots, the cars, and the catapults. Then everything happened at once. The catapults fired. The cars zoomed off the table and began speeding around the crowd. The robots started moving.

“We have to stop them!” Ana shouted to Tai.

The hall was in an uproar. People were tripping over cars, ducking ping-pong balls, and running from the mop.

“Ana,” Tai shouted over the noise. “You know how Tidy-Bot sometimes gets things mixed up when we give him instructions?”

“Yeah, so?” Ana yelled back.

“Maybe we can confuse these machines the same way.”

In a flash, Ana saw what Tai meant. She ran towards a group of zapped machines.

“Hey, you lot,” she shouted. “This way!” Ana ducked right, and the machines charged after her.

“No – this way!” Tai called, going left. The machines swerved after him.

“Copy me,” said Ana. She started to spin round. Three cars flipped over, and their propellers popped off.

“Now do this,” said Tai, jumping up and down. Nuts and bolts went flying, and two robots toppled over.

Other kids joined in the crazy game of Simon Says.

“Roll over!”

“Cartwheel!”

“Stand on your head!”

More machines fizzled and conked out. But the steam mop was still zooming around the room. Suddenly, it turned and headed for the twins. At the same time, Tidy-Bot saw the pile of broken machines.

“Tidy up!” said the little robot, rolling towards the junk pile. It didn’t see the speeding mop.

Wham! Tidy-Bot and the mop collided. They flew into the air and came down on top of the mechanical mess. There was a tremendous crackling, zapping noise. Then everything was still.

“Phew!” said all the kids and adults, at exactly the same time.



Later that night, Tai and Ana looked at the box they had brought home. It held a very untidy, very broken robot.

“Poor Tidy-Bot,” said Ana. “We’ll miss you.”

“It was fun,” agreed Tai. “But I won’t miss all the cleaning up.”

Ana nodded. “It’s way easier to do our own jobs.”

They went to brush their teeth.

“Do you think there could be more zapped machines out there?” Ana asked Tai.

“Who knows?” Tai replied. “We’ll have to keep our eyes open.”

“And our ears,” joked Ana. Tai grinned.

“BLEEP, BLOOP!” said the twins, at exactly the same time.

The End

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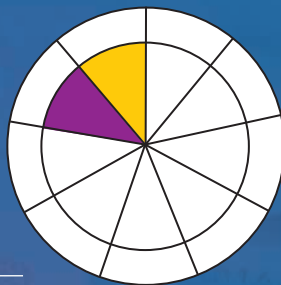
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TITLE	GUIDED READING LEVEL
Making Money	Gold 1
Take Note	Gold 1
Weaving Tukutuku	Gold 2
Zapped! Chapter 4: Machine Mayhem	Purple and Gold (Use this as a shared reading text with year 3 students who are reading below Purple.)



Go to www.juniorjournal.tki.org.nz

for PDFs of all the texts in this issue of the *Junior Journal* as well as teacher support materials (TSM) and audio for the following:



	TSM	Audio
Making Money	✓	✓
Take Note	✓	✓
Weaving Tukutuku	✓	✓
Tukutuku	✓	✓
Zapped! Chapter 4: Machine Mayhem	✓	✓

Chapters 1, 2, and 3 of “Zapped!” are in *Junior Journals* 52, 53, and 54.

There are also PDFs of all four chapters at www.juniorjournal.tki.org.nz



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