

Teaching Resource

On the Brink

New Zealand's Most Endangered Species

By Maria Gill

Illustrations: Terry Fitzgibbon



Discover our most threatened animals in New Zealand from the beautiful forest ringlet butterfly to the down-right ugly southern elephant seal.

Predators, land changes, pollution, and other human-induced disturbances threaten every one of the unique species in our waters and on our land.

As well as finding out how unique these animals are, you'll read about what is harming them, and most importantly what we can do to help them.

On the Brink

Maria Gill has written over 60 children's stories, many of which are about New Zealand's endangered species including *Save Our Seas*, *Call of the Kokako*, *Toroa's Journey*. Her book *Anzac Heroes* won the New Zealand Book Awards for Children & Young Adult Non-fiction Award, as well as the Book of the Year prize.

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Terry Fitzgibbon has illustrated over 30 children's books including *Gentle Giant Wetāpunga* and *Kārearea: Fearless Falcon*. He has written extensively about nature including two recent publications *The Sea Dreamer* and *Coo-Coo Kererū*. Terry's Master thesis is on protecting forests. He has worked for the Department of Conservation and Forest & Bird. www.makingwaves.co.nz

Values

'Ecological sustainability' and **'Inquiry and curiosity'** Students will consider the sustainability of our native animals. They will identify an endangered animal and discover contributing factors that led to its extinction or depletion and look ahead to what they can do to protect those that remain.

Key Competencies

Using Language, Symbols and Texts Students will access information from books including 'On the Brink' and the Internet. They will present knowledge gained from their inquiry.

Relating to Others Students will interact with others in pairs, small groups and as a whole class. They will share ideas, listen to others, discuss, negotiate, and complete activities.

Learning Goals

Students will learn about our endangered animals through close reading of the book *On the Brink*.

Students will research, note take and report on one of the animals and present the information in a written and oral presentation.

Students will participate in a range of activities that will help cement the information into their long-term memories.

Before Reading

- What do you think 'On the Brink' could mean?
- Why are hands holding the planet? What do you think it represents?
- New Zealand is rather over-sized compared to other countries – why did they decide to do that?
- What do you think the book is about?
- Why have they chosen the animals on the cover?
- Class brainstorm on which animals they think are endangered.

Activities

- Research, note take, and write a report about how to save an endangered animal.
- Educate others by performing a play, song/rap, poem, or video presentation.
- Place A3 pieces of paper in front of groups of 4 children. Tell them to write the name of one of the animals from the book up the top. Next each write something they learned about that endangered animal (fold it opposite way each time so it looks like a concertina). Move to next table and do the same. At the end groups unfold and share.

Close Reading

- Why has the author said "New Zealand is a little bit special?" Discuss with a partner what you think makes it special. P4
- What is a mammalian predator? Name two. P6
- What predators threaten the NZ fairy tern? P6
- What bird is the world's rarest stilt and how many are left? P7
- Who is helping care for the orange-fronted parakeet? P7
- Name something you didn't know about the kākāpō. P8
- What does it mean when a bird fledges? P8
- What is closely related to Maui dolphins? P10
- What do baleen plates do? P11
- Where do the largest sea lions in the world live? P11
- What family does the orca belong? P12
- How many NZ sea lions live in NZ? P12
- Name three native land mammals in NZ? P13
- What do Hamilton frogs hatch as? P14
- How do the Northern lesser short-tailed bats communicate? P15
- How big is the NZ long-tailed bat? P15
- What can Chesterfield skinks do to escape a predator? P16
- What changes to Muriwai gecko's environment have caused problems? P16
- What is NZ's most endangered fresh-water fish? P18
- Why is the Canterbury mudfish covered in slimy stuff? P19
- What senses does the Great white shark use? P19
- What caused the demise of the basking shark in NZ's waters? P20
- How fast can the Southern blue fin tuna swim and where do they go? P20
- What is the most common animal in NZ?
- How does the Mokohinau stag beetle defend itself? P22
- How long have the Tekapo ground wētā been around for and where do they like to live? P23
- How does the Te Paki stick insect act like a twig? P23
- What amazing thing can an Alpine grasshopper do? P24
- What predated the Forest ringlet butterfly? P24
- What is the world's largest insect? P25
- Name three things you already do at your home to help the environment. Name two new things you might do. P26

Reflection

Students write in a journal what they learnt and felt during the reading, inquiry and activities. Students set a goal of something they would like to achieve for one of the endangered animals.

What Now?

Individuals, pairs, groups or class decide on an action. For example, clean up a local river or beach; fundraise for an endangered animal; help plant trees nearby.



WHO AM I QUIZZ?

1

- I like to roost inside holes in trees
- Babies are called pups
- We like to hold onto our mother's nipples
- We eat moths, midges, mosquitoes, beetles while flying
- We use echolocation to see and hear while flying
- Can travel up to 60 kilometres an hour
- Logging and fires in native fires are a big problem
- Predators such as cats, stoats, rats and possums prey on us

Who am I?

2

- I'm New Zealand's most endangered bird
- Father bird feeds mother bird even before she lays her eggs
- We share incubation duties
- We guard and feed the chick together
- Humans and dogs have moved in on our territory
- If frightened we'll leave our eggs
- To help us we often have a fence around our nesting site

Who am I?

3

- I'm the largest native of my species in New Zealand
- I'm also one of the most endangered of my species in the world
- My babies are born as mini-me
- I like to cling onto my father's back until I'm old enough
- I squeak or chirp
- A fungus is killing us all around the world
- Rats, cats, mustelids kill us

Who am I?

4

- We're often confused with whales
- We like to eat stingrays, sharks and even whales
- We're very clever
- Boats colliding with us are a problem
- We don't like underwater noises
- Abandoned nets and fishing lines can kill me

What am I?



5

- I live underground for most of my life
- I change body shape three times
- I'll charge any unwelcome intruders
- I only live above ground for one season
- Rats like to eat us
- Thieves like to collect us and sell us on the black market

Who am I?



6

- I have six senses – humans only have 5!
- I like to ambush my prey
- I can roll my eyes backwards to protect them
- I can feel vibrations
- I'm protected by law
- Fishermen sometimes catch me as bycatch

Who am I?



- ANSWERS
1. Northern Lesser short-tailed bat
 2. New Zealand fairy tern
 3. Hamilton's frog
 4. Orca
 5. Mokohinau stag beetle
 6. Great White shark

1



2



3



4



5



6



Crossword clues

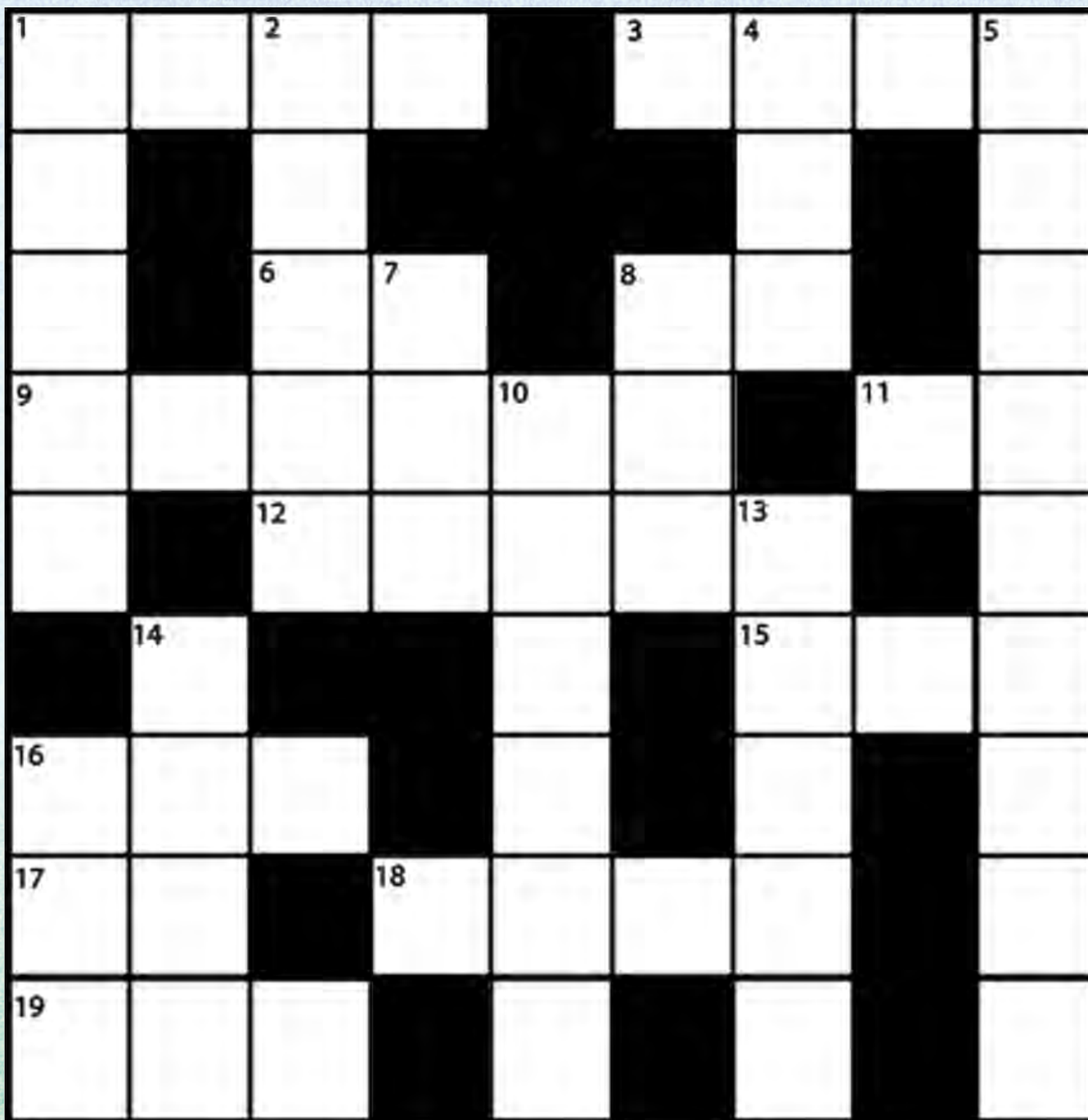
ACROSS:

1. ACROSS: What marine species/family does our most endangered bird belong to?
3. ACROSS: The general term for water-dwelling, cold-blooded animals with fins and gills?
6. ACROSS: An abbreviation for "nota bene," which means 'note well'. Used when you want to include extra important information in a letter or online.
8. ACROSS: Personal possessive word generally used when discussing something that belongs to you.
9. ACROSS: What bird booms loudly at night to attract its mate?
11. ACROSS: What is the Maori name for a muttonbird, (i.e. sooty shearwater)?
12. ACROSS: What is the name of the sly predator that has a deadly sense of smell?
15. ACROSS: What is the common name for a rodent?
16. ACROSS: What is the name of the wild female creature (who doesn't have horns like its male partner), that strips our native forests of understory plants?
17. ACROSS: What is the short slang abbreviation for Australia?
18. ACROSS: We need to reduce our throw-away rubbish - especially plastic - in this place? Often called a tip.
19. ACROSS: What is the shortened name for a gemstone?

DOWN:

1. DOWN: What is the name of the seabird rediscovered in 1978 by ornithologist David Crockett?
2. DOWN: What is the plural term used by scientists when grading the levels of threat facing various species?
4. DOWN: How would you describe the highest and coldest part of the winter habitat of kea?
5. DOWN: Our most endangered frog species. It lives in damp places and hatches mini-versions of the adults?
7. DOWN: What creature looks like a tiny, pig-nosed mouse with wings?
8. DOWN: What flightless bird became extinct around 600 years ago?
10. DOWN: A furry predator imported from Australia that eats hatchlings and leaves?
13. DOWN: What devices should we set to catch predators?
14. DOWN: Another name for the slimy habitat that mudfish often occupy in times of drought?
16. DOWN: Needs to be on a leash when in reserves and in other fragile habitats?

Your "On the Brink" Crossword









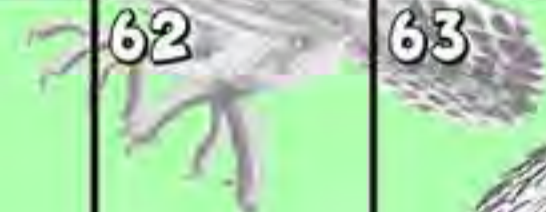
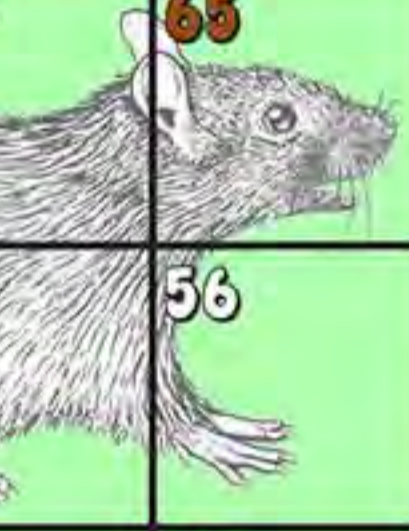

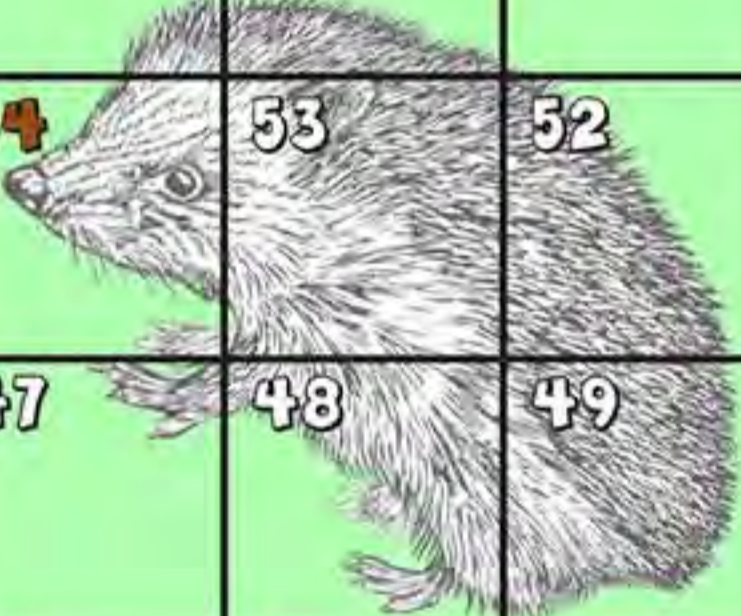
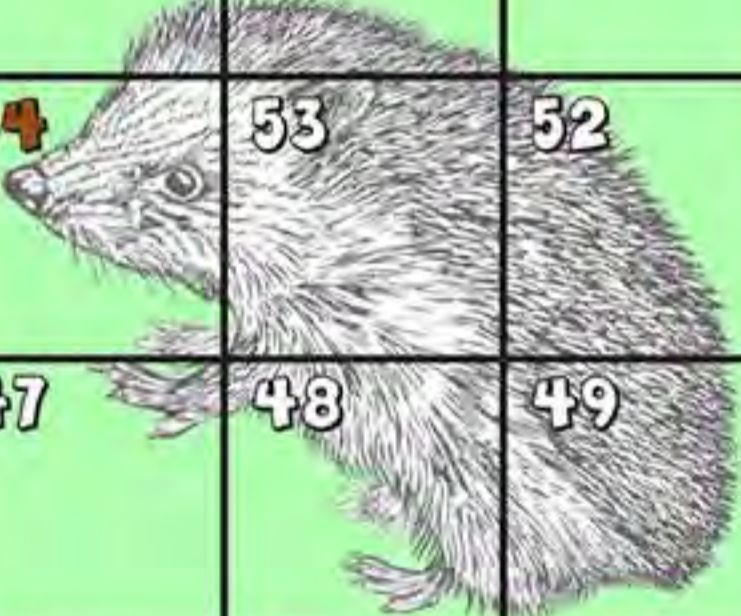
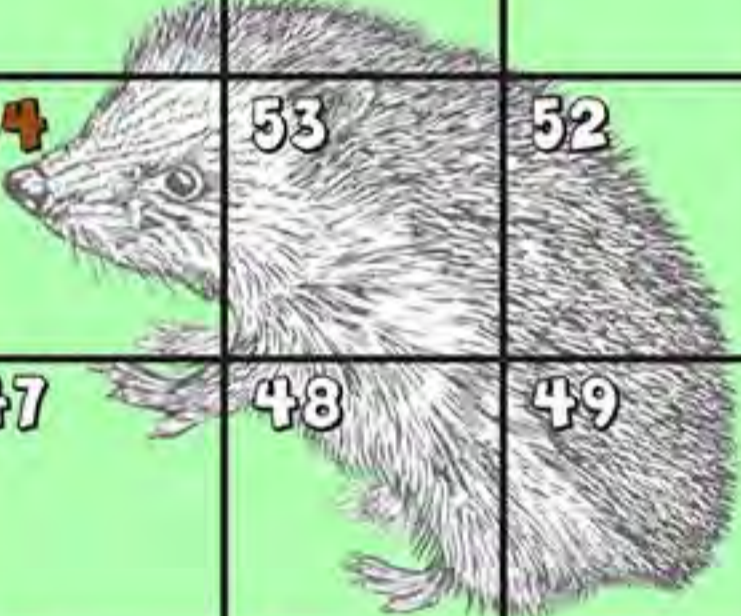
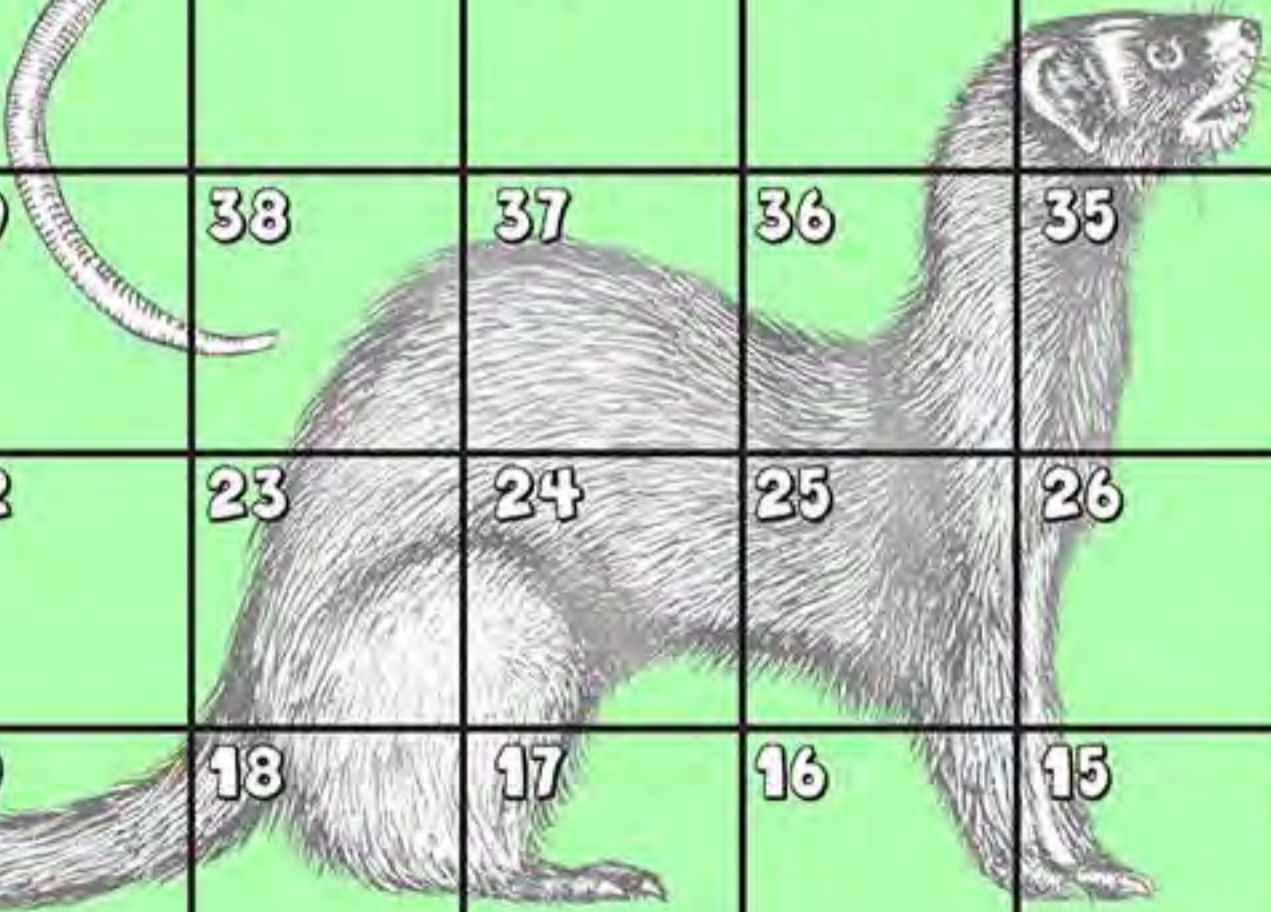
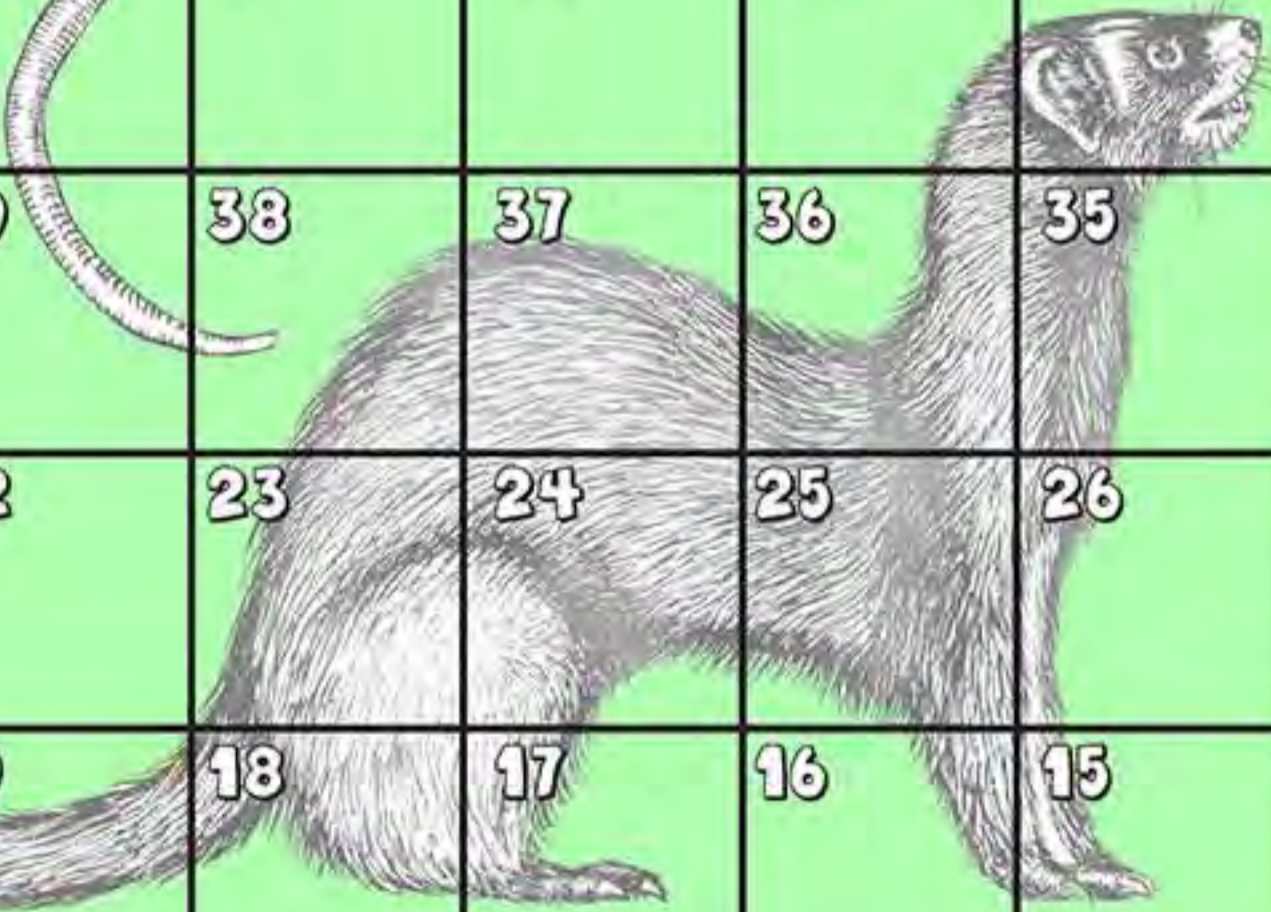

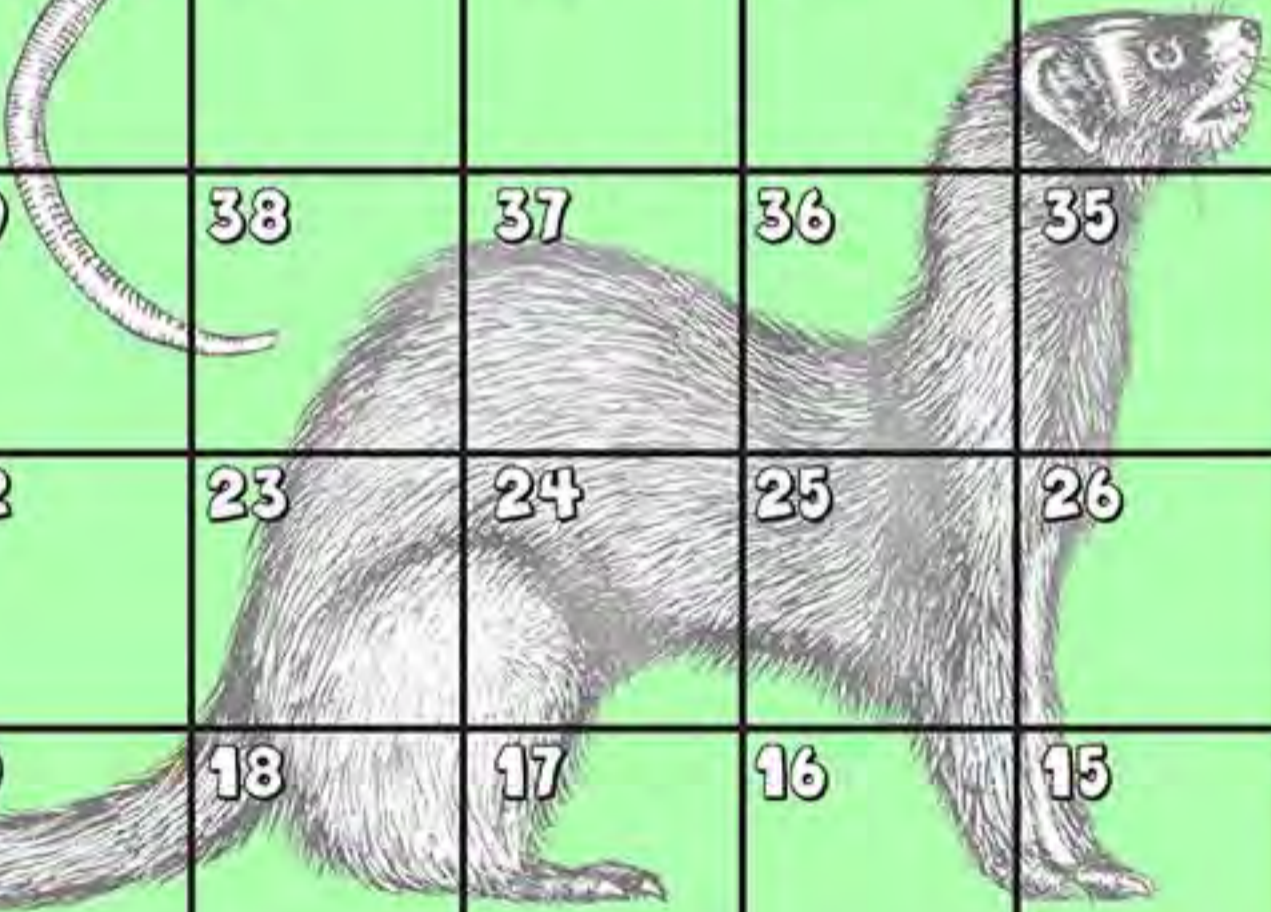






ANSWERS

1. ACROSS: TERN; 3. ACROSS: FISH; 6. ACROSS: NB; 8. ACROSS: MY; 9. ACROSS: KAKAPO; 11. ACROSS: OI; 12. ACROSS: STOAT; 15. ACROSS: RAT; 16. ACROSS: DOE; 17. ACROSS: OZ; 18. ACROSS: DUMP; 19. ACROSS: GEM

1. DOWN: TAIKO; 2. DOWN: RANKS; 4. DOWN: ICY; 4. DOWN: HAMILTONS; 7. DOWN: BAT; 8. DOWN: MOA; 10. DOWN: POSSUM; 13. DOWN: TRAPS; 14. DOWN: OOZE; 16. DOWN: DOG

"The Giant Weta Race" Board-Game

100 	99	98	97	96 	95 	94 	93	92	91
81	82 	83	84	85	86	87 	88	89	90
80	79 	78	77	76	75	74	73 	72	71
61	62 	63	64	65 	66	67	68	69	70
60	59	58	57 	56	55	54 	53 	52	51
41	42	43	44	45	46	47	48 	49	50
40	39	38	37	36 	35	34	33	32	31
21	22	23	24	25 	26	27	28	29	30 
20	19	18	17	16 	15	14	13	12 	11 
1 	2	3	4	5	6	7	8	9	10 

Pesky predator pests - and even our native morepork (ruru) and tuatara - want to gobble up our rare wētā. Even though wētā is defending itself - (see its barbed back legs are upright above its head) - it wants to scramble home rather than stay and fight to survive.

AIM: The challenge is for each "Wētā" player to try to avoid the threats from these challenges and BE THE FIRST to quickly get back to its hiding place deep down in its underground burrow.

YOU NEED: A dice plus a counter or button for each person playing the game, plus a throwing dice. Make or find these yourself - use or imagination!

HOW TO PLAY

Players take turns to throw the dice and move their counters ahead - each moving the same number of squares as the number on the upright dice he/she has thrown. If you land in the square containing the nose, mouth or beak of one of the wētā's enemies - you slide back down to the number corresponding to its tail.

GOOD LUCK !