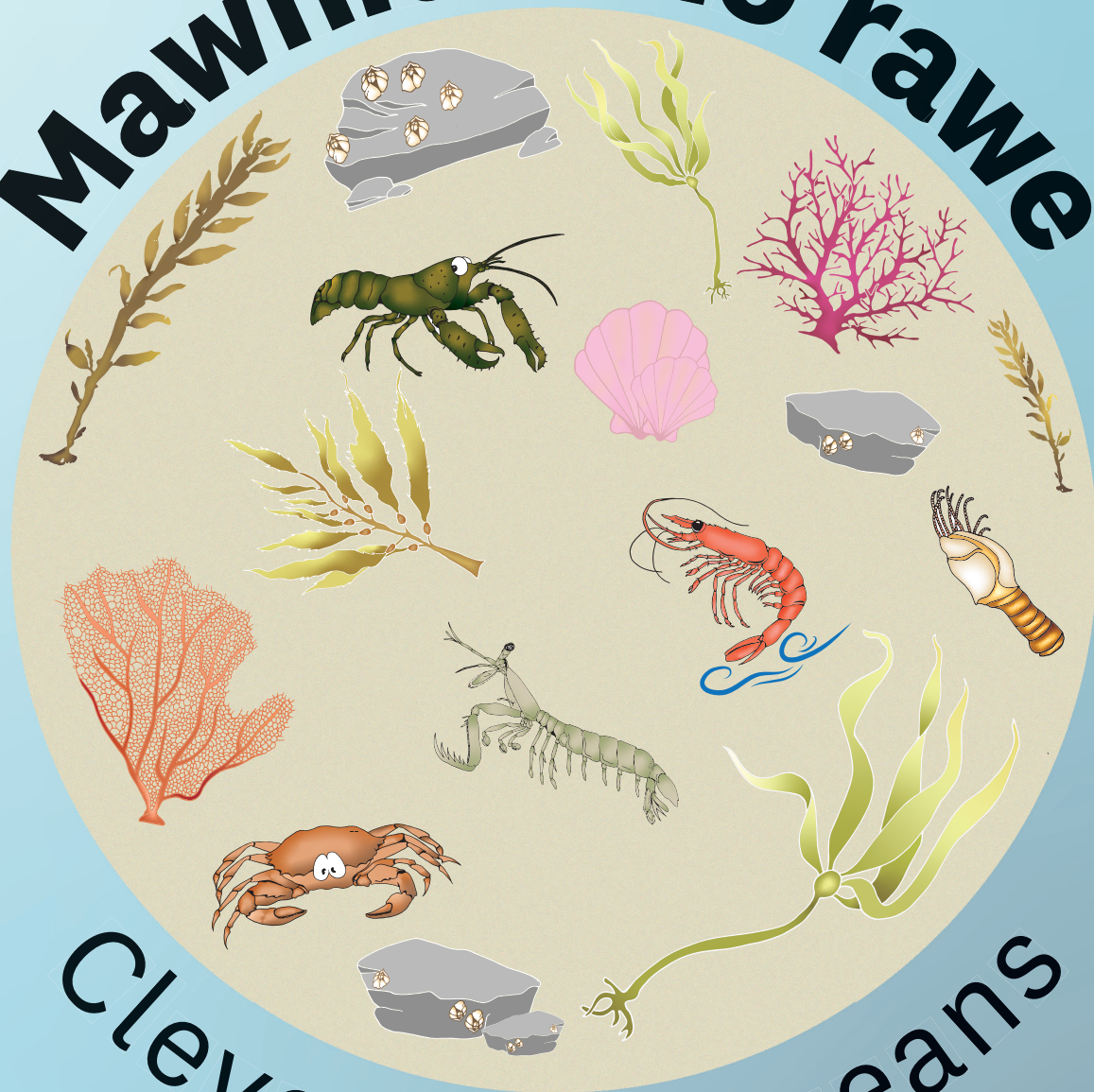


Mawhiti tino rawe



Clever Crustaceans

Pukapuka mahi Activity book

Name of junior
carcinologist*: _____

*the people who study these cool creatures!

Crustaceans come in all shapes and sizes, from huge king crabs to tiny sand hoppers!

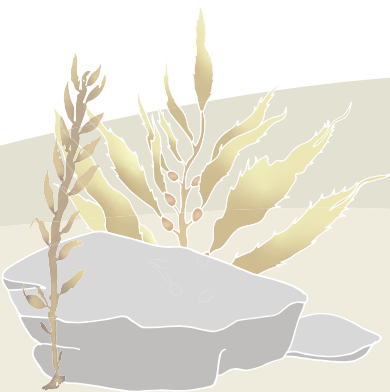
Most crustaceans live in the sea, but some prefer to live in fresh water, on land, or even underground.

Crustaceans have developed all kinds of tricky traits to thrive in these environments – including camouflage and motion detectors!

In Aotearoa New Zealand we have over 3,000 different kinds of these clever creatures living alongside us.

In this pukapuka mahi (activity book) we will:

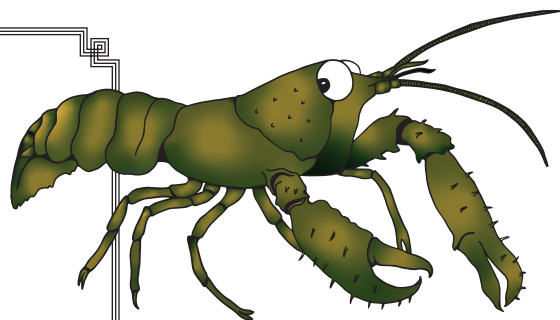
- Learn how to recognise crustaceans
- Spot crustacean body features
- Practise moving like a crustacean
- Follow the life cycle of a crustacean
- Find the right home for our crustaceans
- Read a story about catching kōura
- Get clever with a crustacean crossword
- Bring a kōura to life with colour!



Have you met these crustaceans?

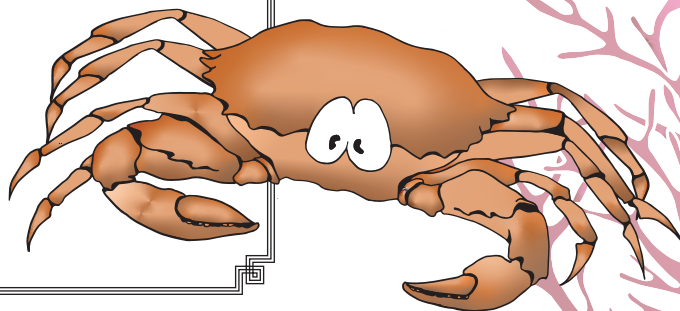
Write about when you met the crustacean...
Where was it? What was it doing?

I met the crafty crayfish...

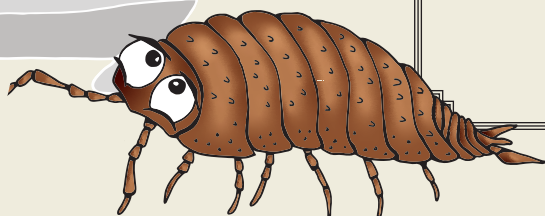


I met the bizarre barnacle...

I met the curious crab...

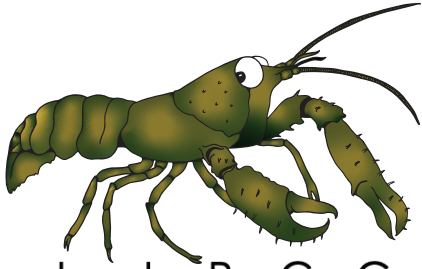


I met the shy slater...



Time to get to know the whānau! Crustaceans are all related, but these tricksters can look very different from one another.

Kupu (word) search: Find some of the fantastic features crustaceans can have.

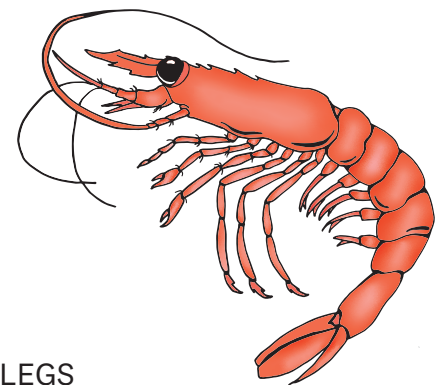


L J P C G Y E F A L V N E S E C E Y
 Q R D K M Z A C P W E R I E X A U G
 A K R N X F M A I S K E C G O R G L
 N B F H D N N M C P C C G M S A X U
 T Q L Q N X C O V I Z G C E K P R E
 E K W E F K Z U W K P B L N E A G R
 N C Q R T C M F U E C R A T L C I C
 N V T A N D R L I S P M W E E E L Z
 A S Q Z Q R Q A K P H B S D T Z L I
 E M V M N B C G X D X E T I O S S G
 R E G G S J L E V N S J V U N E N D
 J O I N T E D L E G S E I G G O U I

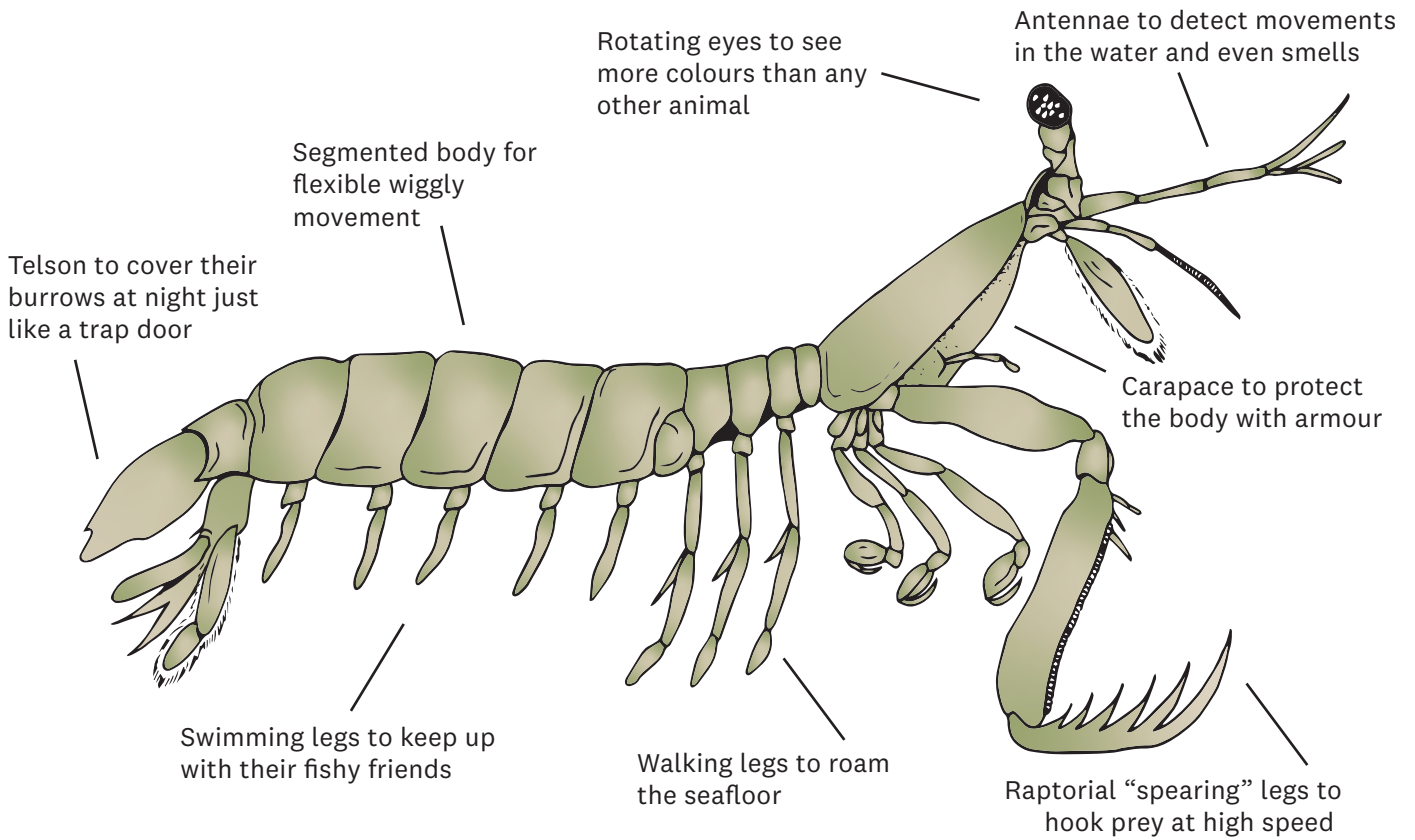


Hidden kupu:

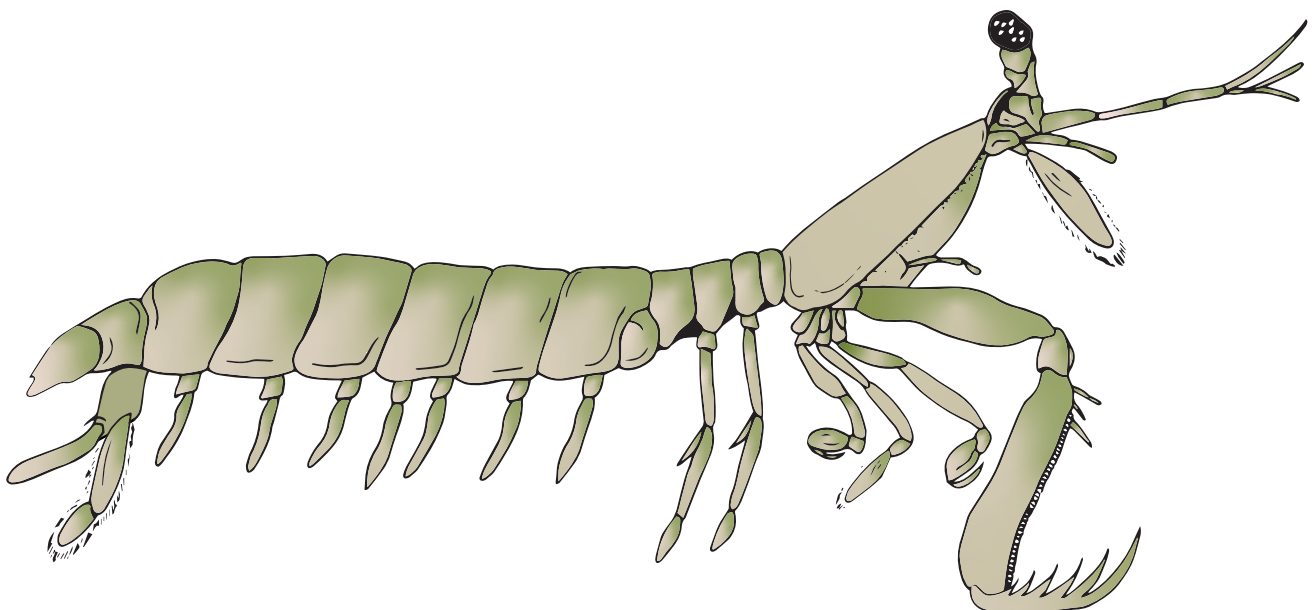
- ANTENNAE
- EXOSKELETON
- CAMOUFLAGE
- CARAPACE
- CLAWS
- EGGS
- GILLS
- GLUE
- JOINTED LEGS
- SEGMENTED
- SPIKES



Mantis shrimp have far more limbs than you or me. Check out the special features of this marine predator - nicknamed thumb splitter.



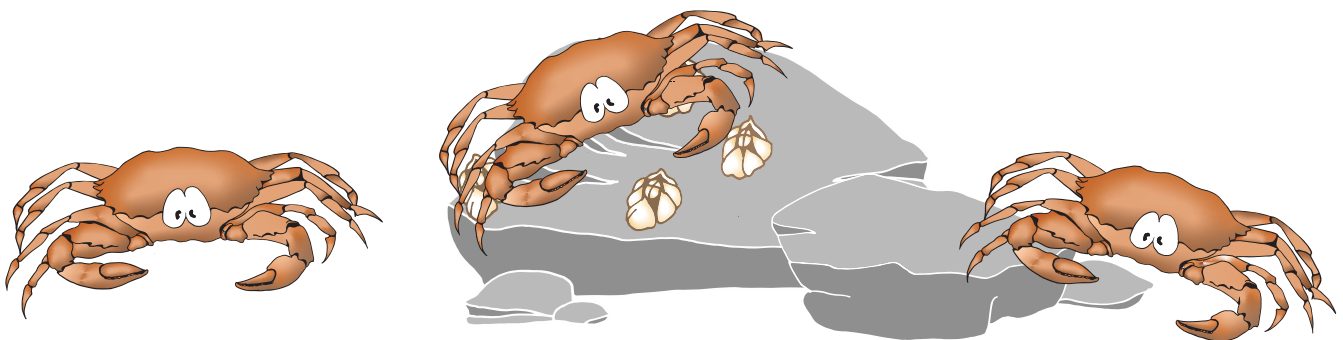
Spot the difference: Expose this imposter by circling 8 differences



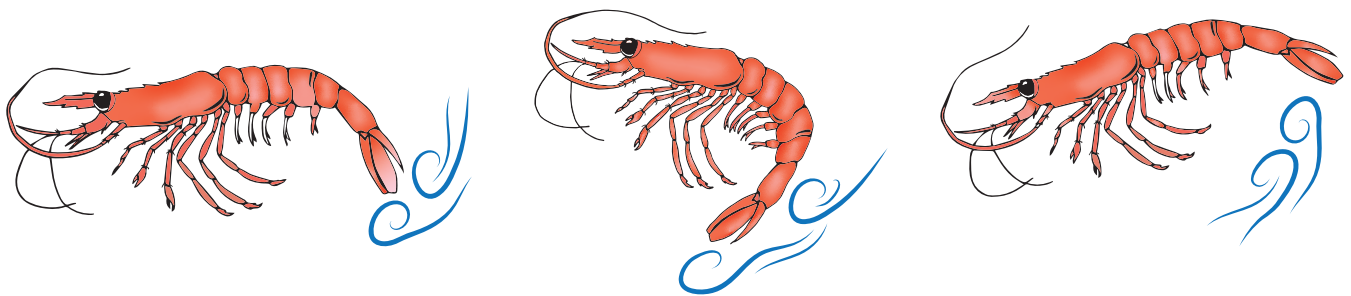
Crustaceans have changed over many, many years to make just the right limbs to scuttle, glide, hop, or swim about their habitat.

Check out the limbs that keep these crustaceans safe from predators and well-fed on their favourite meals.

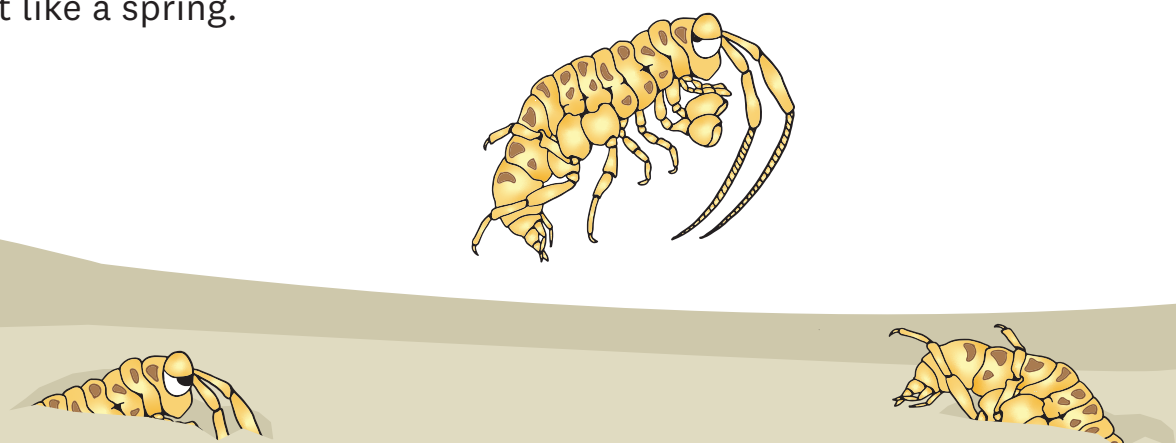
Look at how the crab's legs are hinging, the stiff legs can't change direction so these pals move most speedily when they scuttle sideways.



See how small the shrimp's swimming legs are? This doesn't stop them from travelling long distances, and if they're after speed they use their tail to propel their body backwards!



The back legs of sand hoppers are built to land a jump bigger than your average step! They boost the jump by tucking their tail under their body and flicking it back out like a spring.



Practise moving like a crustacean! Can you get around as easily as these crusty creatures can? Or do they just make it look easy...?

How to play crustacean tag

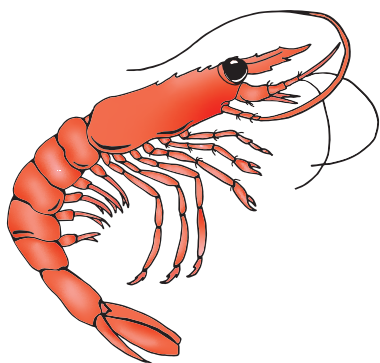
In this twist on the classic game of tag, each player will take on the role of a crab, shrimp, or sand hopper.

Crab: Our crawly crabs can only scuttle sideways.

Shrimp: Our slippery shrimp can only run backwards.

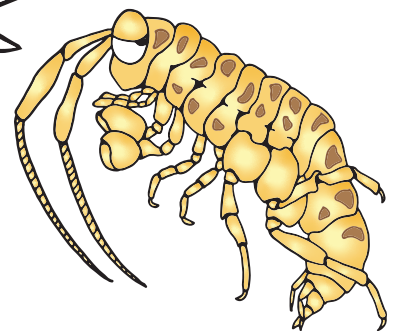
Sand hopper: Our springy sand hoppers can only jump, but in any direction.

Select your starting tagger and spread out. While you're "it" you can run like a human!

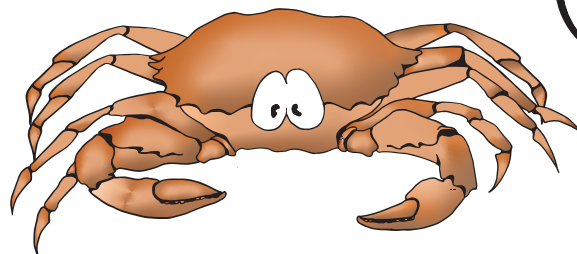


Try not to fall backwards, landlubber!

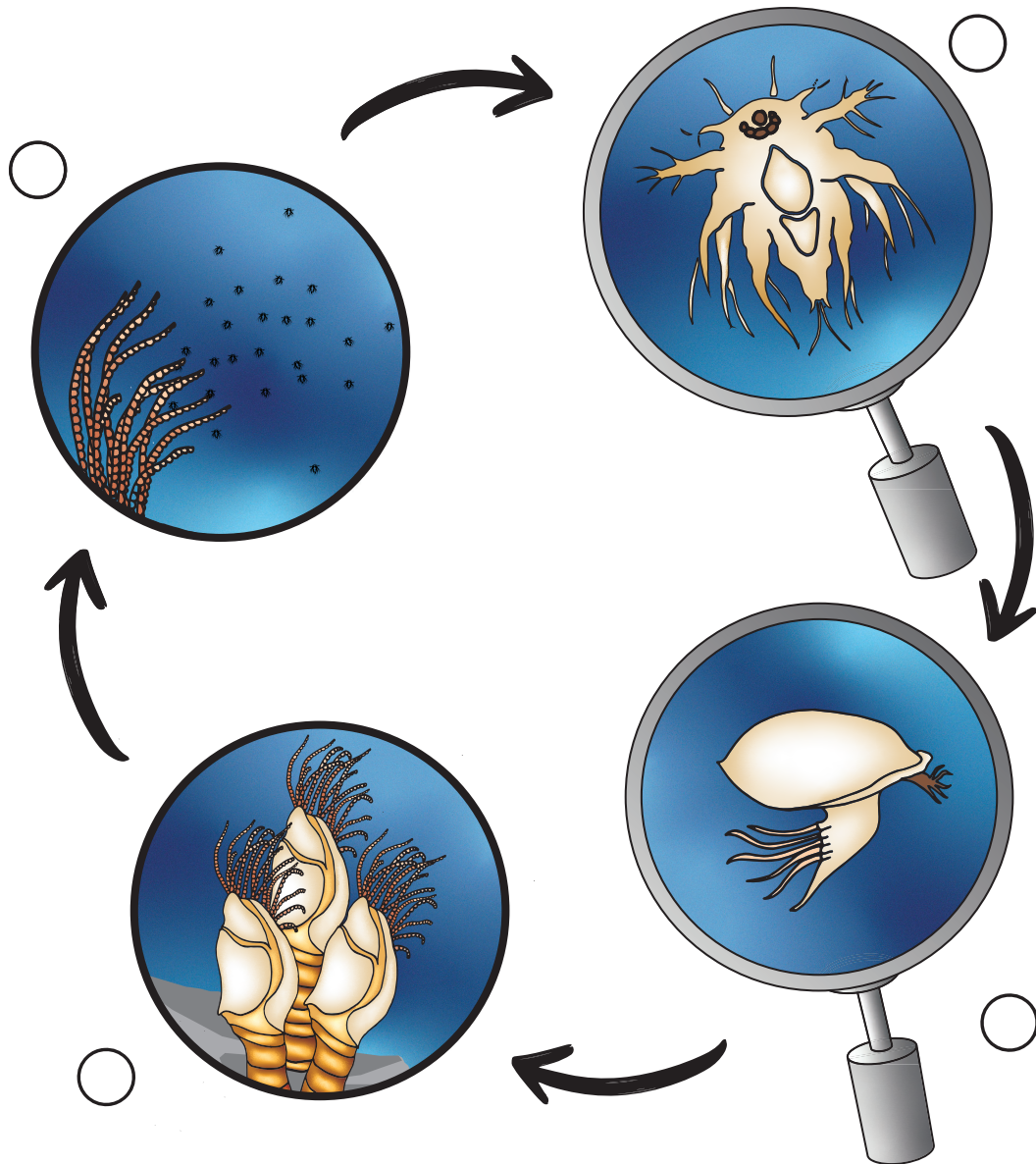
Keep the spring in your jump!



Make sure to stretch before you scuttle!



Follow the life cycle of this goose barnacle as it shapeshifts between forms.



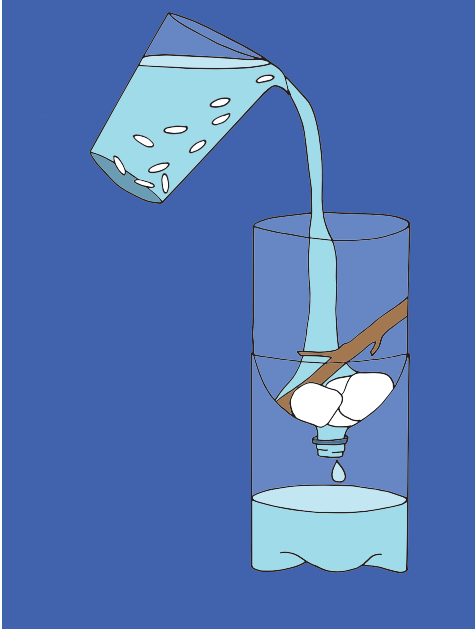
Careful, these descriptions are all jumbled up! Put them in order by matching the letter to the correct image on the life cycle above.

1. The larva rides the seas currents in search of a suitable surface to call home.
2. Larva no longer, at last the young barnacle chooses its rocky home, where it will stay firmly attached for its 20-year life.
3. After eggs hatch inside the adult, tiny larvae are released into the water through feather-like cirri.
4. The larva drifts through the water for several weeks, catching food to morph into a more complex creature.



Barnacles are filter feeders, which means their lunch comes to them!

Make your own filtering system to catch food from water in the same way many other crustaceans do.



For this experiment you will need:

- Plastic bottle from your recycling bin
- Filter materials (cotton balls, coffee filter, paper towels, or twigs could be a good start)
- Cup of water with food particles in it (uncooked rice or even scrunched up leaves work well)
- Scissors.

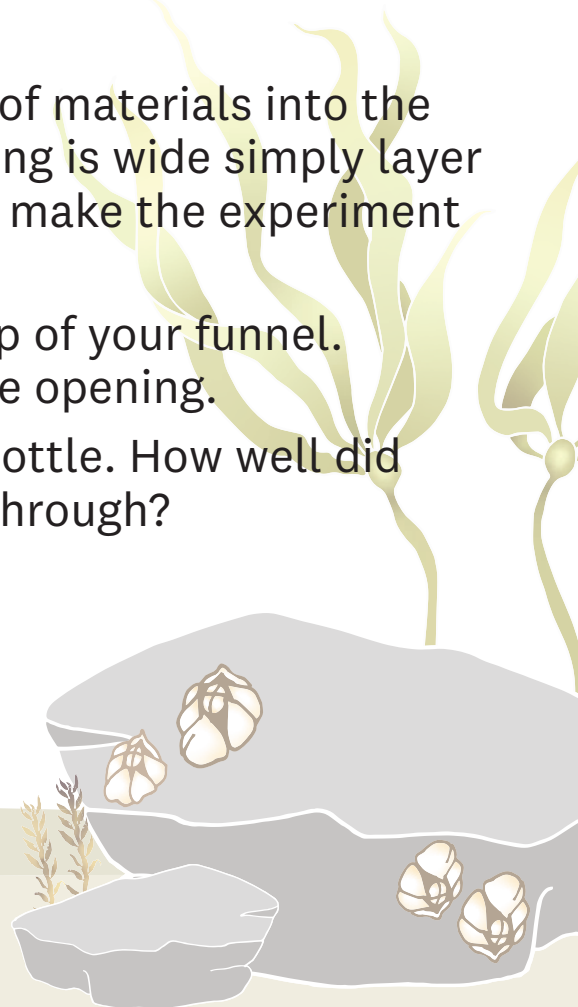
Take the lid off your bottle, then ask a grown-up to help you cut the bottle in half. Place the top half upside down inside the bottom half to make a funnel.

Time to make your filter by placing a layer of materials into the hollow top of the bottle. If the bottle opening is wide simply layer more materials. A mixture of materials will make the experiment more interesting.

Slowly pour the prepared water into the top of your funnel. Watch as the water drips through the bottle opening.

Check out the water at the bottom of the bottle. How well did your filter catch food? Did any pieces slip through?

See what other filtering materials work for this experiment.

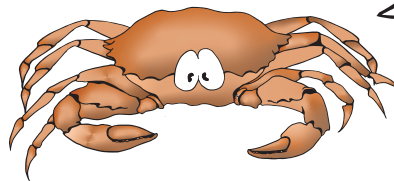


Follow clues given by the crustaceans to place them in the right habitat.



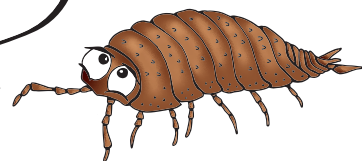


I like to dig
squelchy
burrows



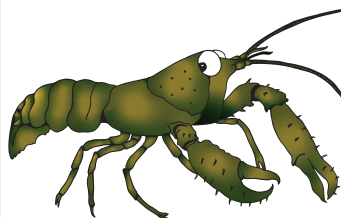
1. Mud crab

my mottled
brown shell
blends in
with bark



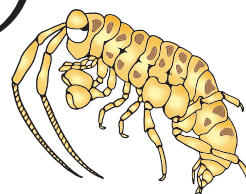
2. Slater

Unlike my
cousins I
prefer my food
unsalted



3. Fresh water kōura

Remember
me from your
trips to the
beach?



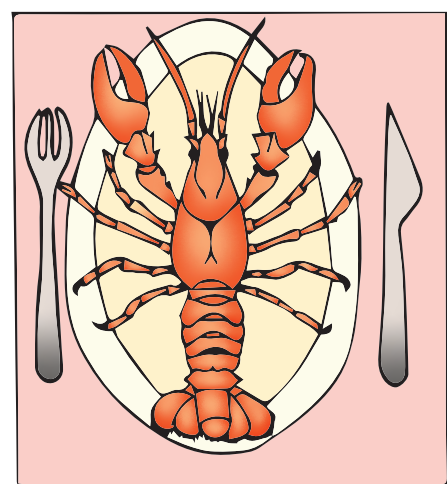
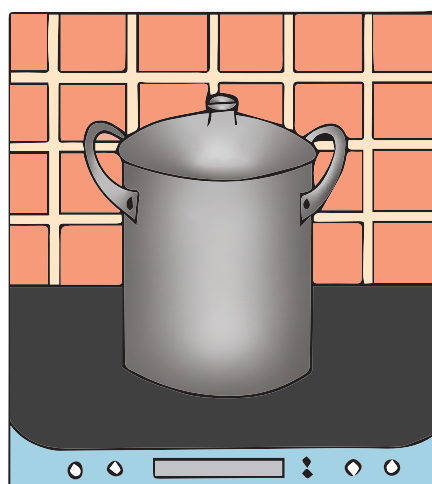
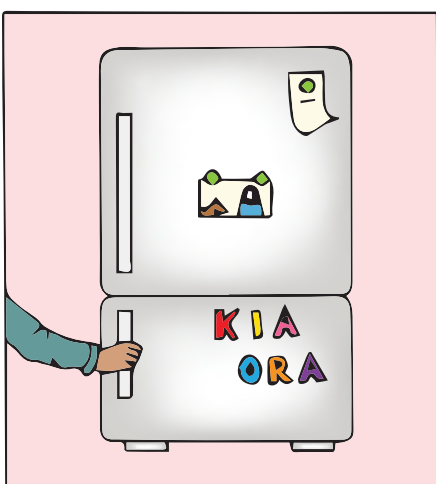
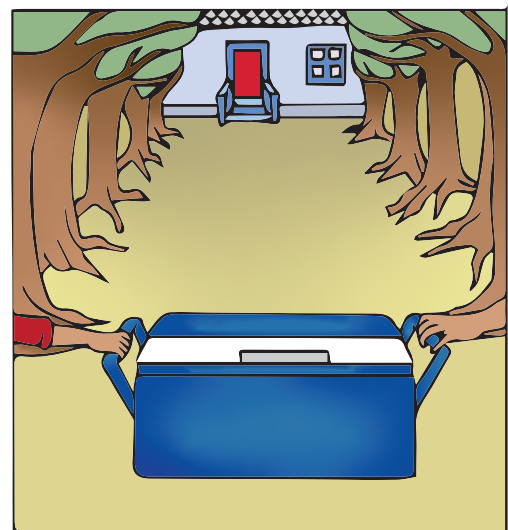
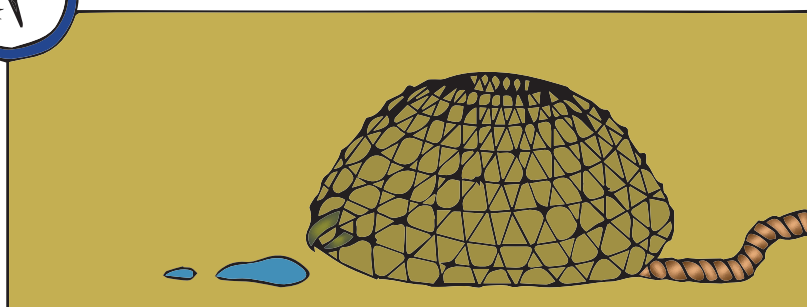
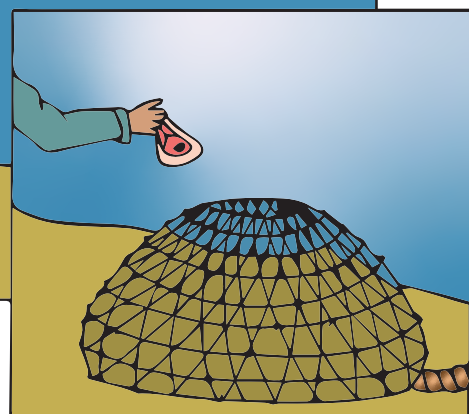
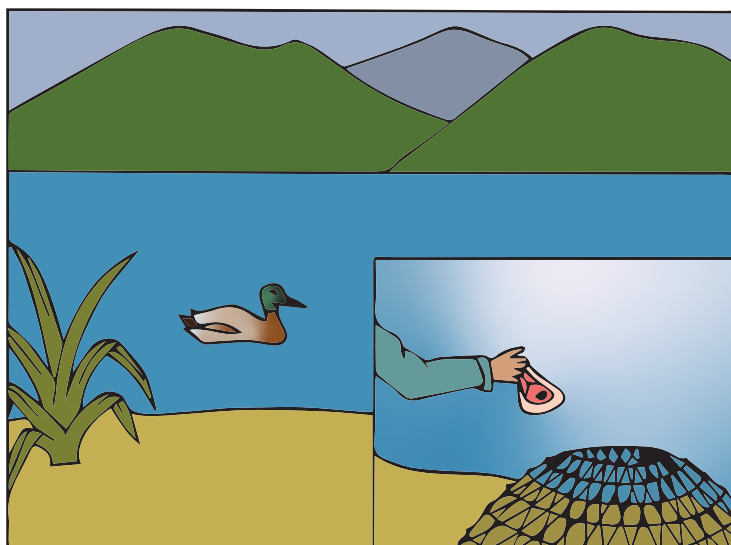
4. Sand hopper



I like to drift
on the sea's
currents

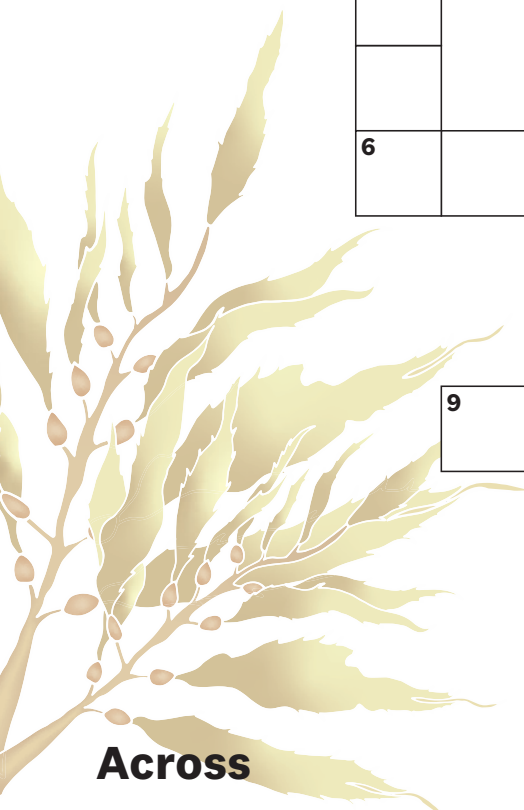
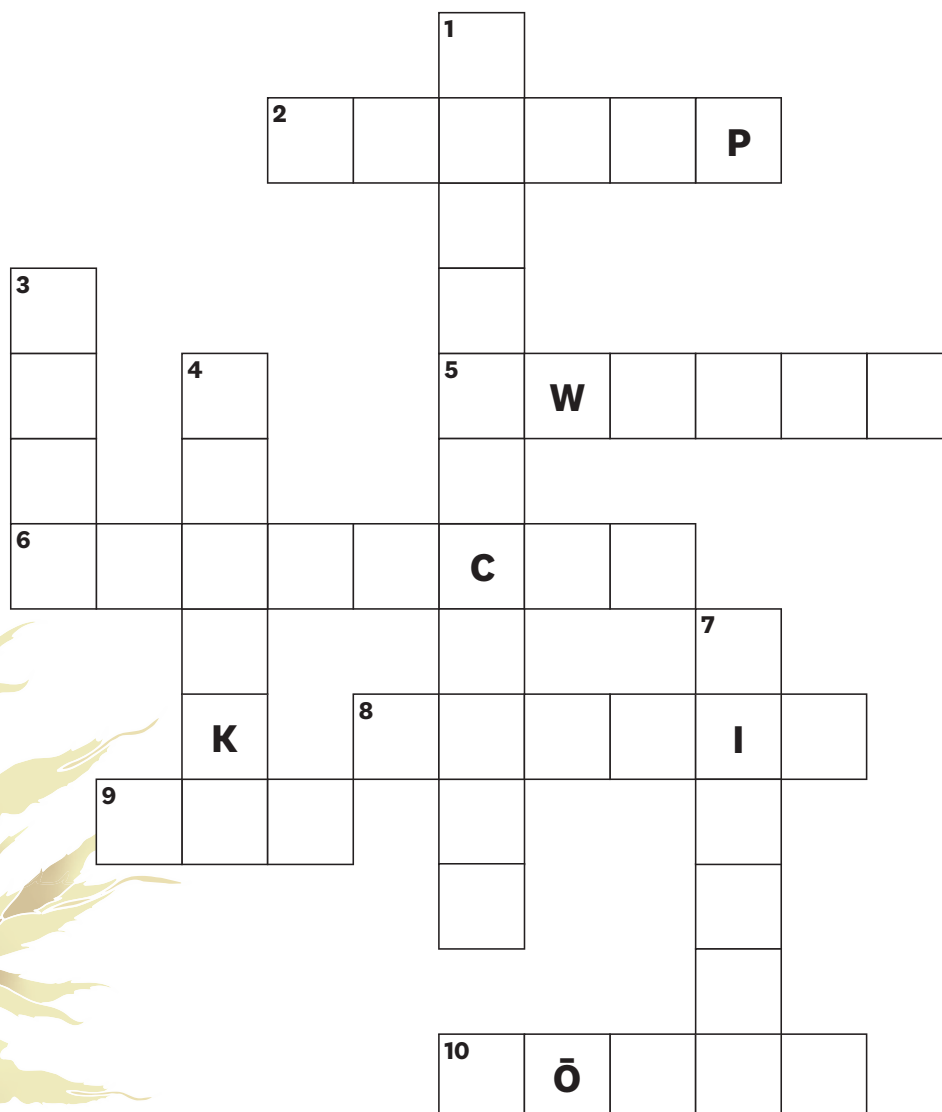
5. Goose barnacle

Kōura have kept the puku (tummy) of many generations full. Catching kōura takes skill and a lot of patience...



Kupu (word) practice time!

Read the clues and fill in the crossword with the missing kupu.

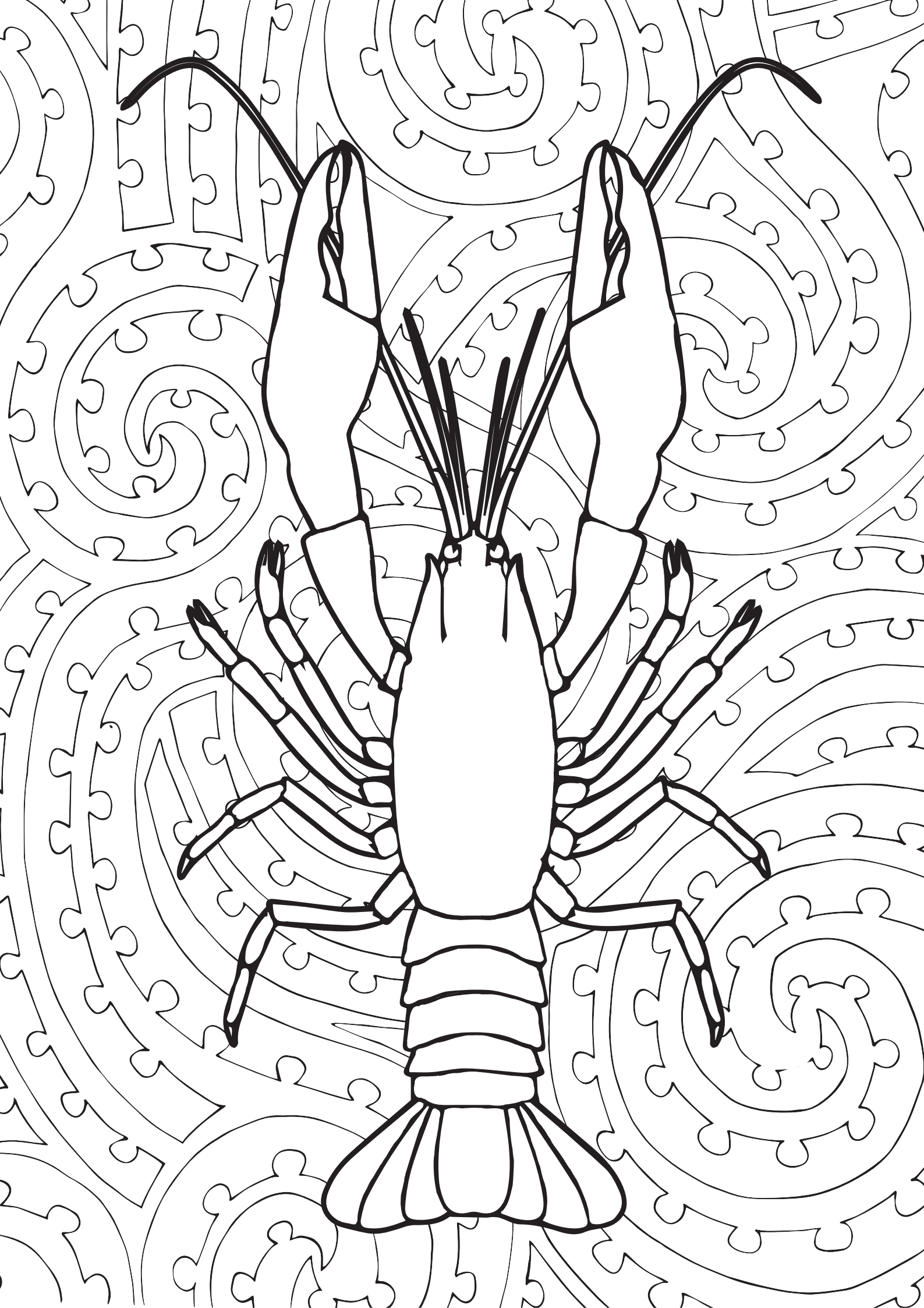


Across

2. _____ use their tail to boost backwards.
5. Goose barnacles can live for _____ years.
6. A _____ searches for the perfect surface to stick to.
8. _____ shrimp can use camouflage to escape predators.
9. Most crustaceans choose the ___ to be their home.
10. _____ live either in salt water or fresh water, never both.

Down

1. C_____ are all members of the same whānau.
3. A ___ moves most speedily when scuttling sideways.
4. _____ are traditional pots used to trap kōura.
7. _____ feeders catch food that is floating in the water.





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