



Ellie and the unusual creature

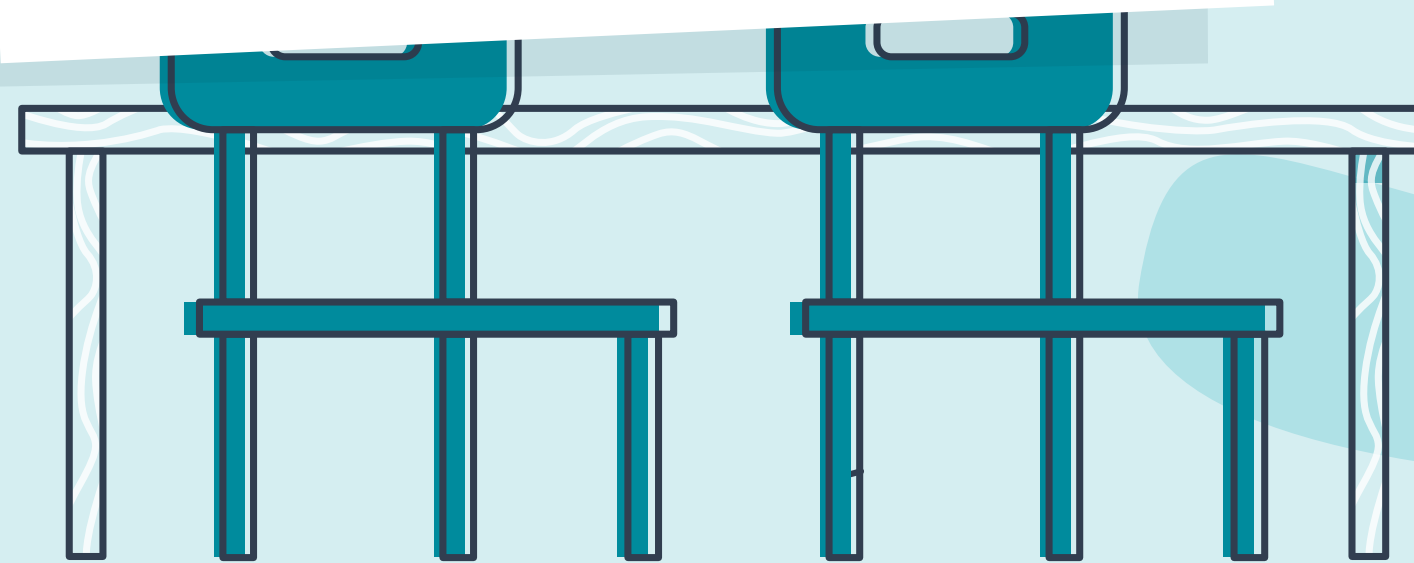
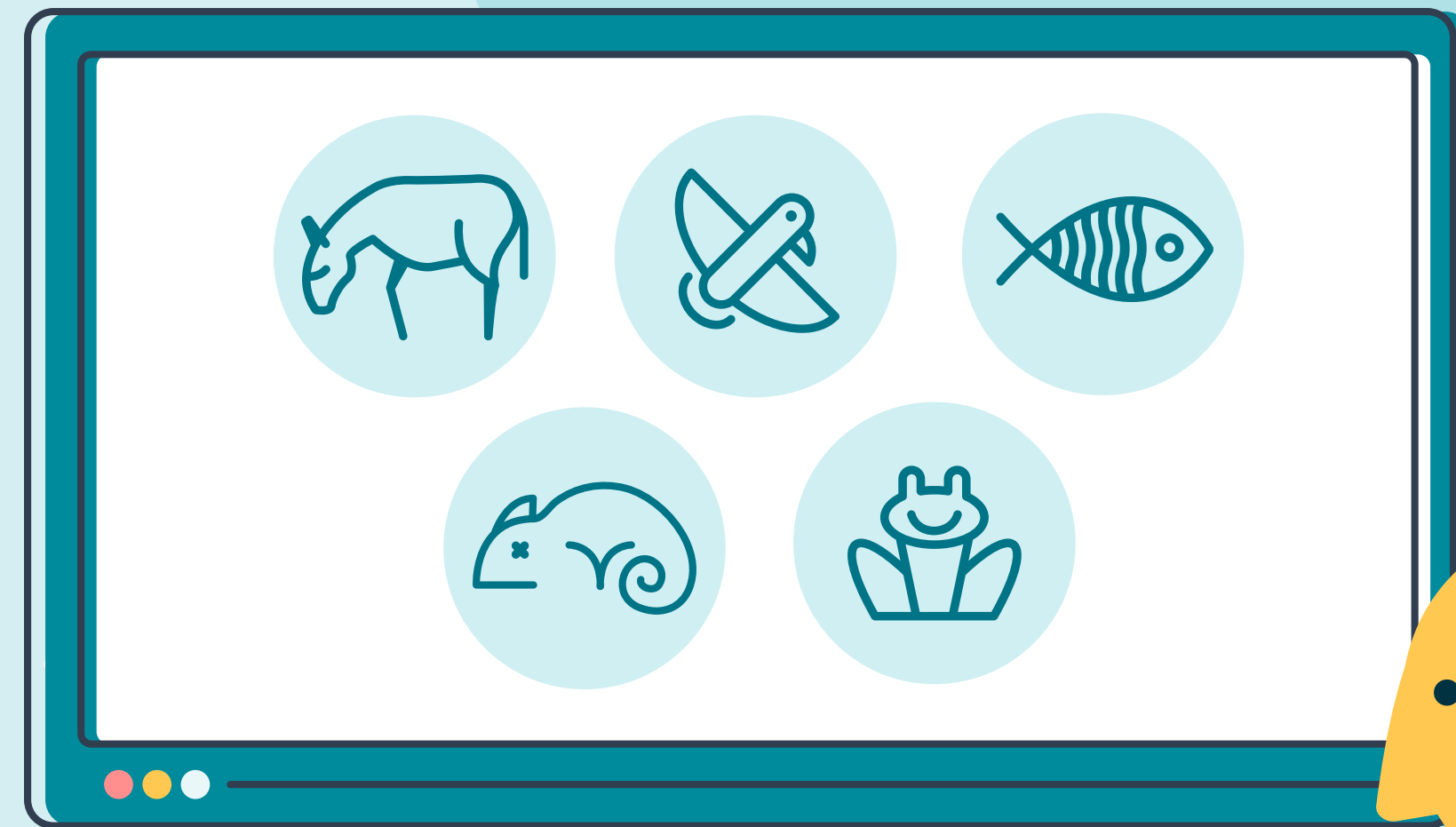


It was the beginning of the afternoon and Ellie was really excited because a special guest was visiting her class.

“My name is Dr Russell, I’m a scientist. Today we are going to learn about animals. Can anyone tell me what groups we can divide different animals into?”

The children looked at the pictures on the whiteboard.

“Mammals, birds, fish, reptiles and amphibians,” said Ellie.



“That’s right” said Dr Russell.
“What’s your name?” she asked.

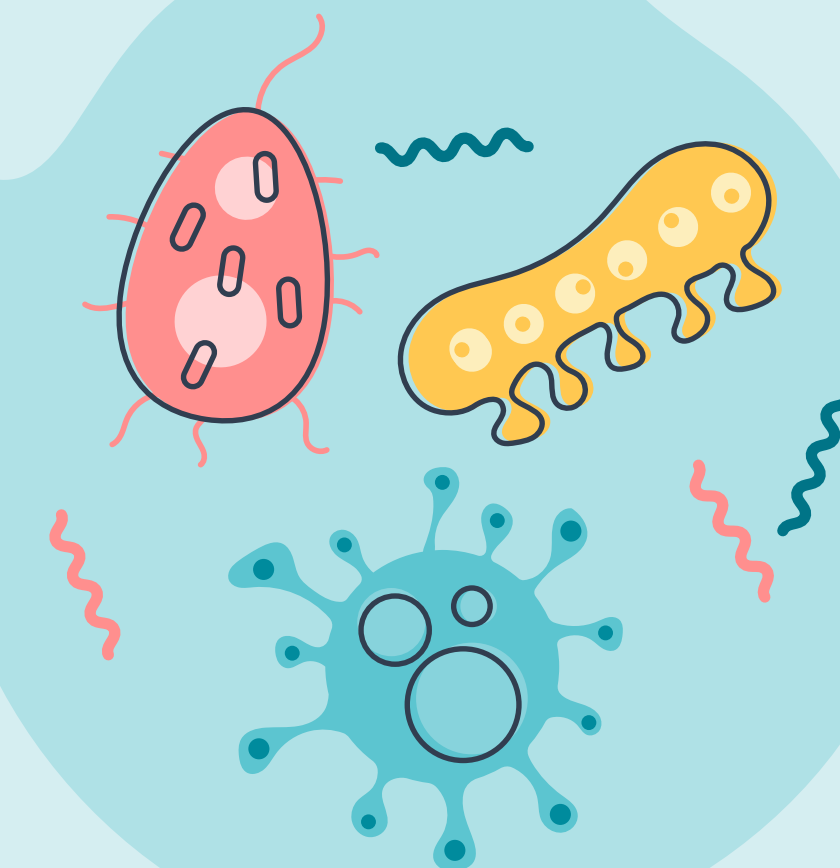
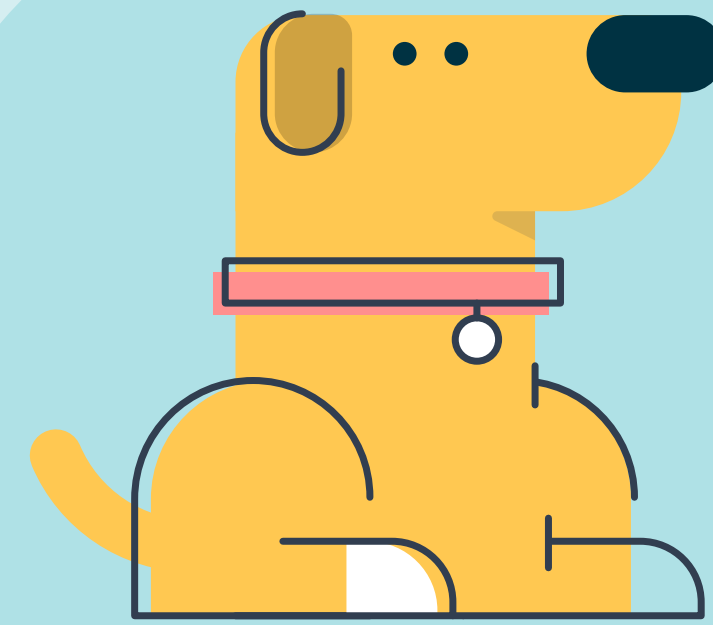
With a big grin, Ellie told Dr Russell her name.

“Superb knowledge, Ellie,”
replied Dr Russell.

“I work on a project called
‘The Darwin Tree of Life’,”
Dr Russell continued. “And I use
these groups of animals in my job.
I am trying to collect DNA from
every type of animal, fungus, plant
and microscopic creature in Britain
and Ireland. Will you help me?”

The children shouted “Yes!”

“The DNA will help us learn about
all these living things, so we can
help them survive,” said Dr Russell.

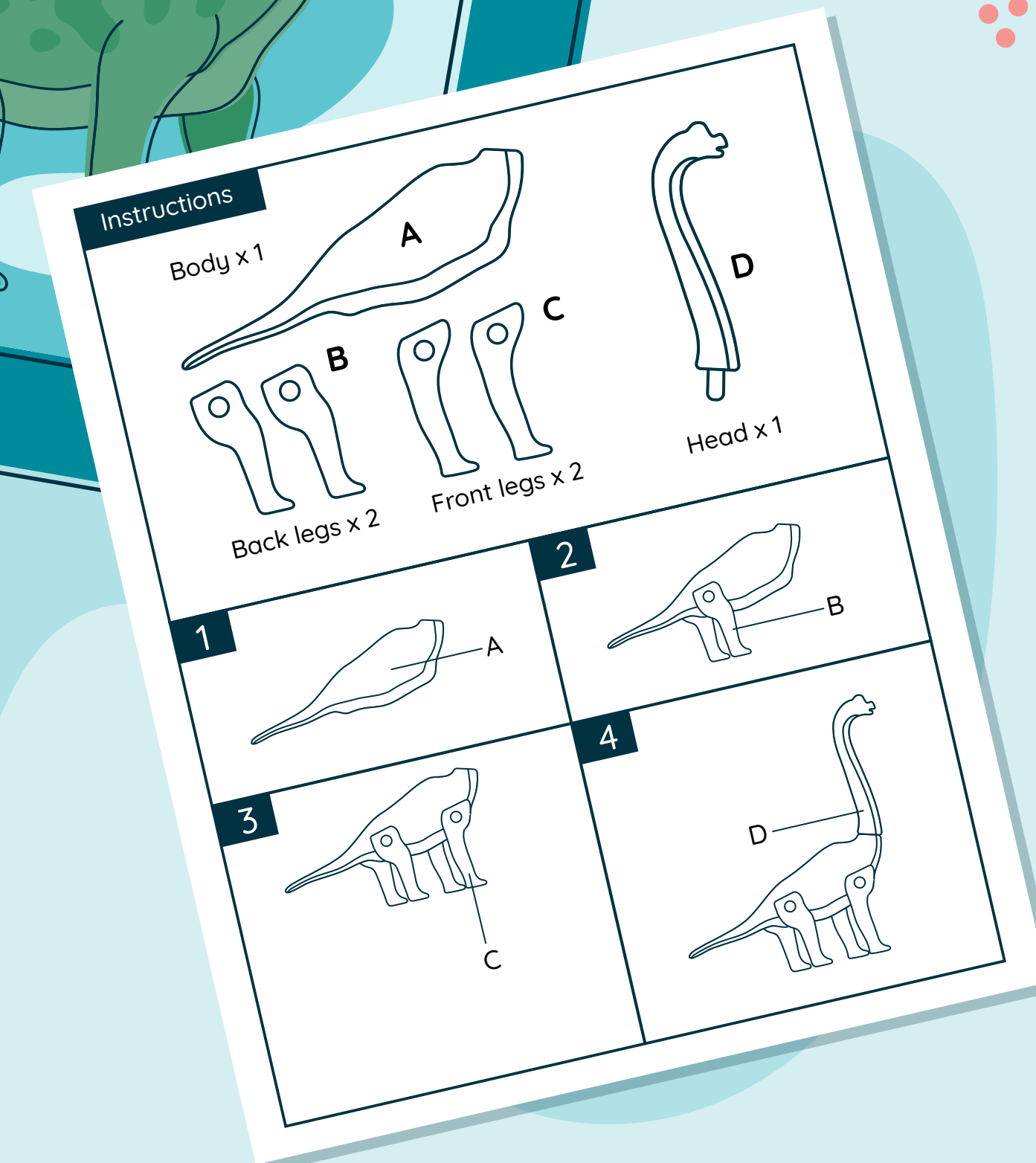
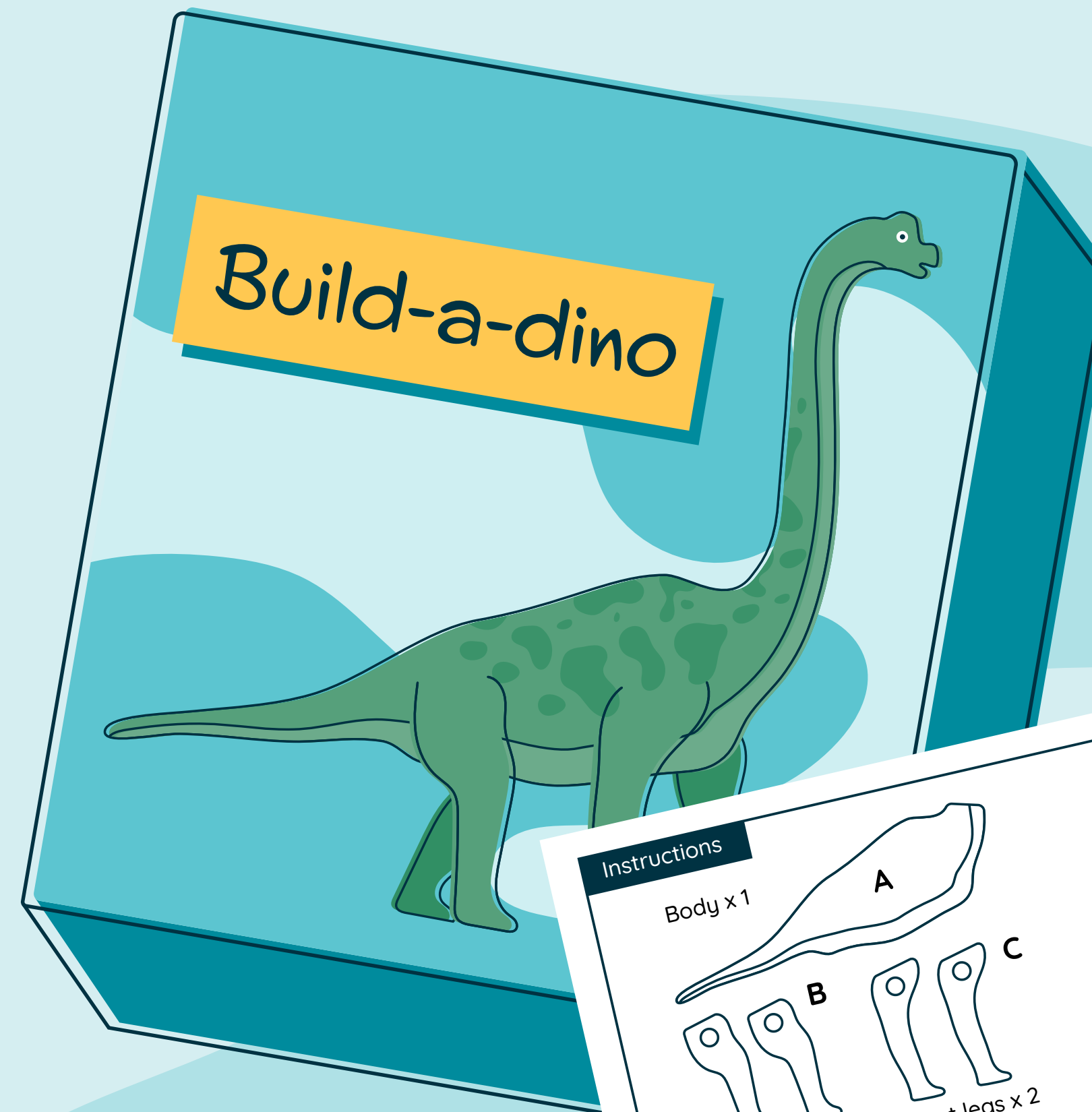


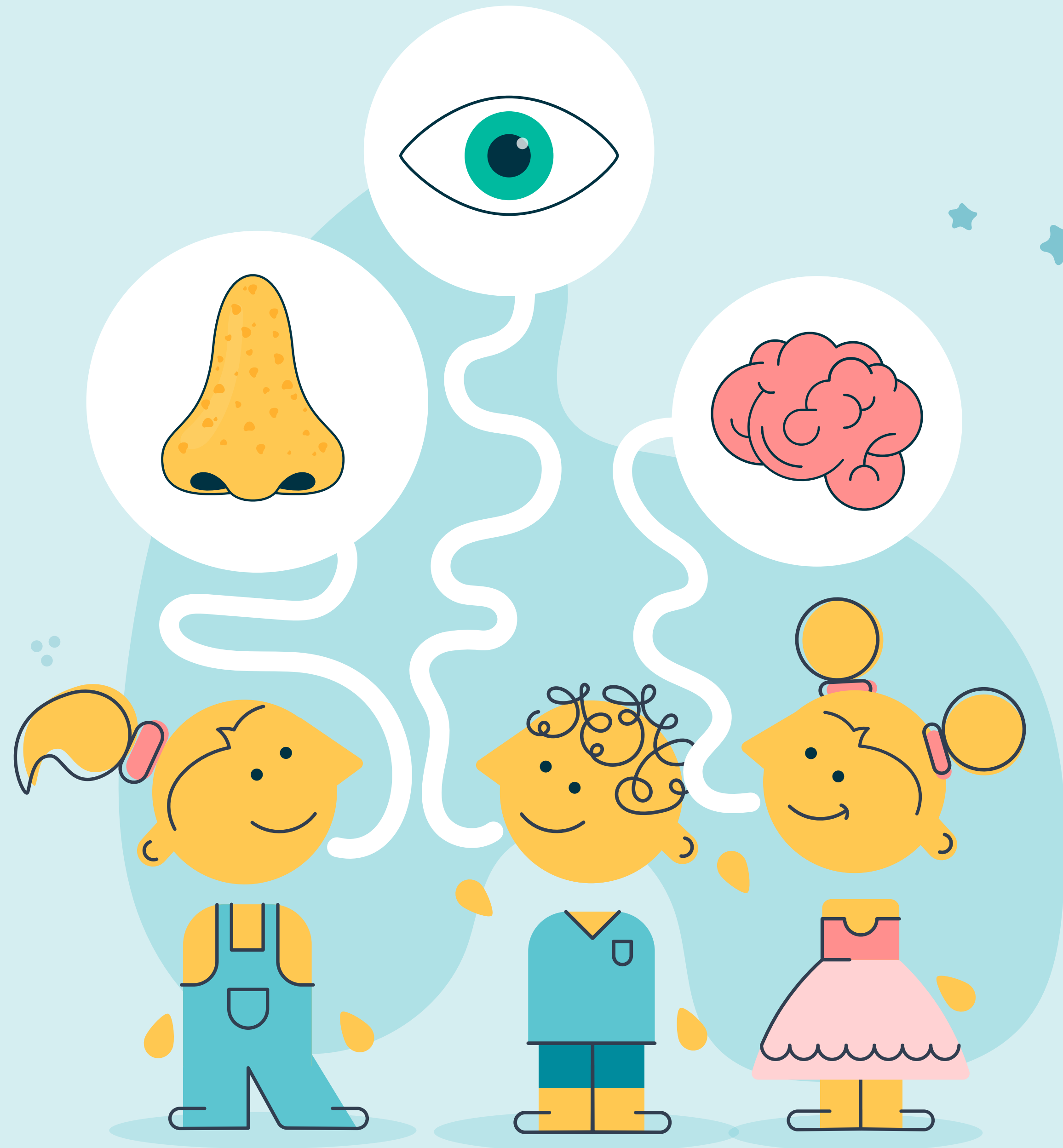
Mr Jones, the children's teacher, asked "What is DNA?"

"Let me explain" replied Dr Russell, and with that she held up a box. "What do you think could be in this box, that will help me build a toy Dinosaur from all the simple building blocks?"

Priya put up her hand. "Some instructions!"

"Correct!" smiled Dr Russell. "You are like a boxed set of building blocks and you have your own set of instructions to build you. It's called your DNA. All living things have DNA."





“What things do you think might be in your instructions? Your DNA?” Dr Russell asked the class.

“Whether you have freckles like me!” suggested Ellie.

“How to make my brain!” said Sarah.

“The colour of my eyes! Mine are green,” said James.

“All great answers,” said Dr Russell.

“Fascinating too. You possibly did not know this but only 2 percent of people have green eyes. Most people in the world have brown eyes,” continued Dr Russell.

ANIMAL WORKSHEET



MAMMALS

- ★ Have hair or fur.
- ★ Give birth to 'live young'.
- ★ Mammal mother nurse their young with milk.
- ★ Have lungs and need air to breathe.
- ★ **Warm blooded.**



FISH

- ★ Breathe under water using gills, not lungs.
- ★ Live in water.
- ★ Have scales and fins.
- ★ Lay many eggs.
- ★ **Warm blooded.**



REPTILES

- ★ Have scales, not fur.
- ★ Have dry skin.
- ★ Usually lay eggs, sometimes 'live young'.
- ★ Most have 4 legs except snakes.
- ★ **Cold blooded.**



BIRDS

- ★ Have feathers & wings.
- ★ Lay eggs.
- ★ Have 2 legs.
- ★ Ear holes instead of ears.
- ★ **Warm blooded.**



AMPHIBIANS

- ★ Live on land & in water.
- ★ Webbed feet.
- ★ Breathe with lungs & gills.
- ★ Moist smooth skin.
- ★ 4 legs (sometimes none).
- ★ Lay many eggs.
- ★ **Cold blooded.**

“Well, I need DNA from different groups of animals. Let’s look outside and see what we can find!”

Mr Jones gave the children a sheet to help them identify which group the animals belong to.

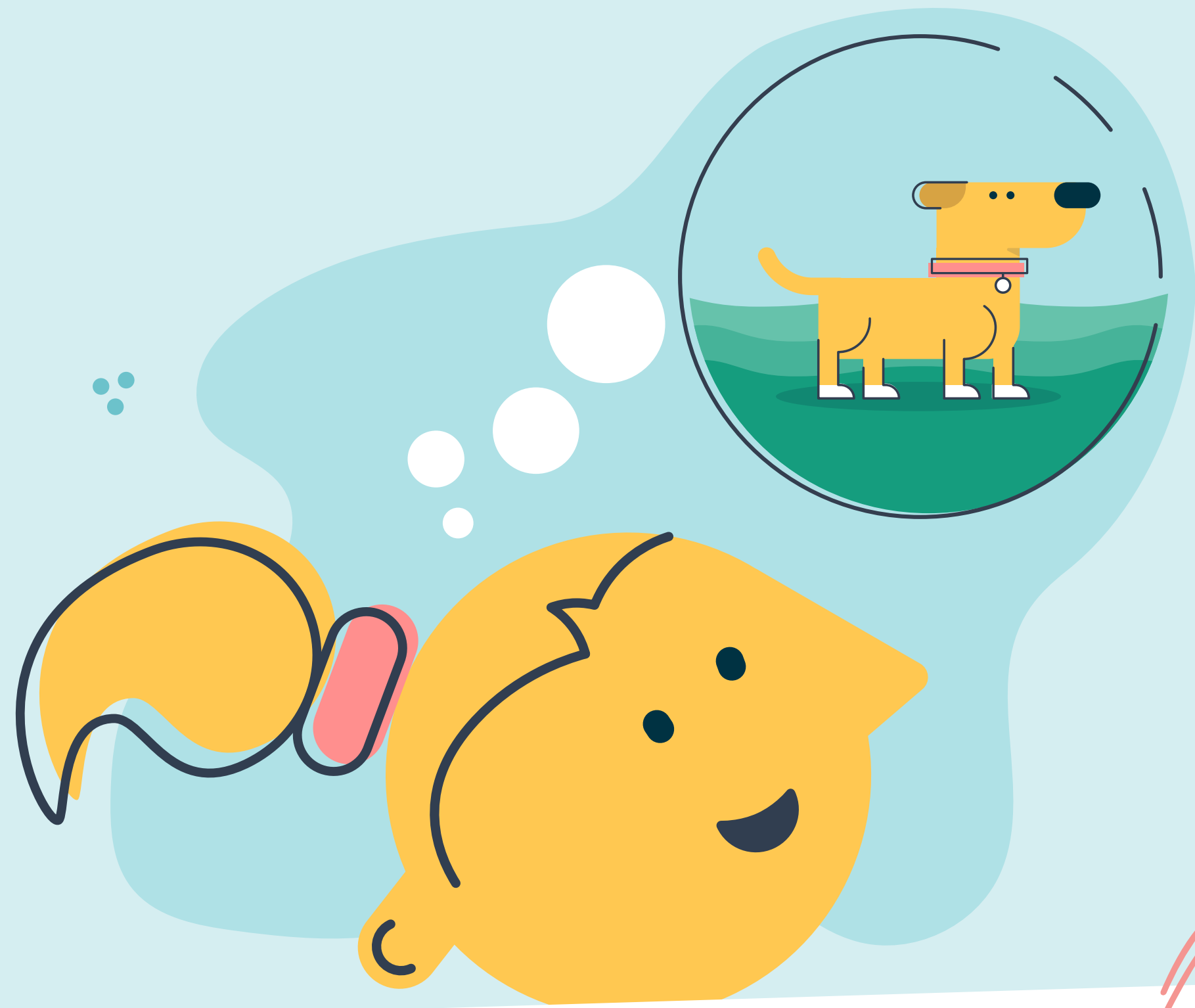
“Look under things, look high and low,” said Mr Jones.

Ellie, Priya and Pat decided to dig under the trees. Suddenly, they saw something in the soil! Ellie screamed. “What is it?”

Dr Russell came over to take a look.

“It’s rare!” said Dr Russell. “Just the kind of creature we need to get DNA from for the ‘Darwin Tree of Life Project!’”





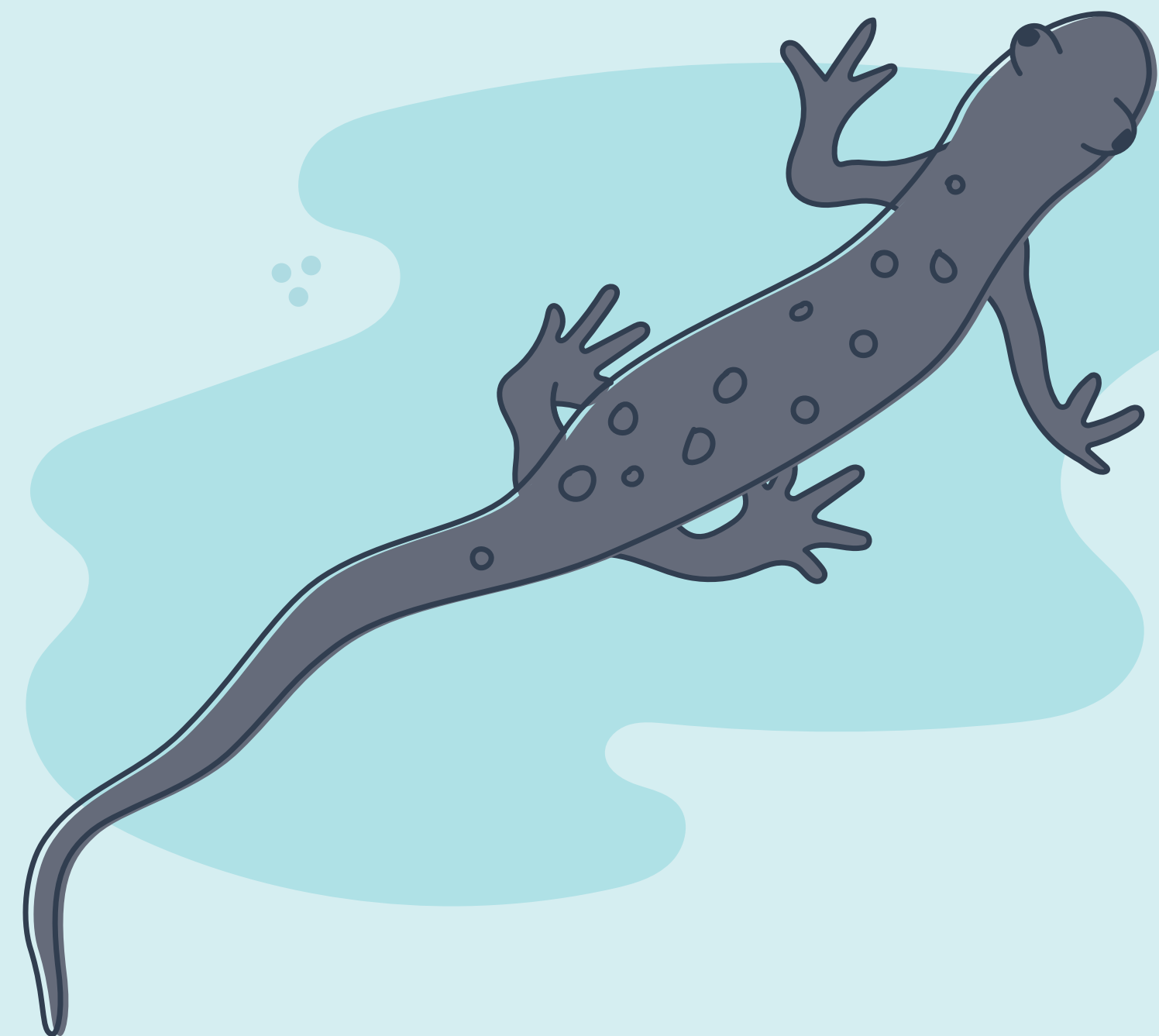
“What animal group do you think it belongs to?” asked Dr. Russell. “Is it a mammal perhaps, like a dog or a cat?”

Ellie thought of her dog, Rusty, but didn't think he looked like this creature she had just found.

“It doesn't have fur like a cat,” said Priya.

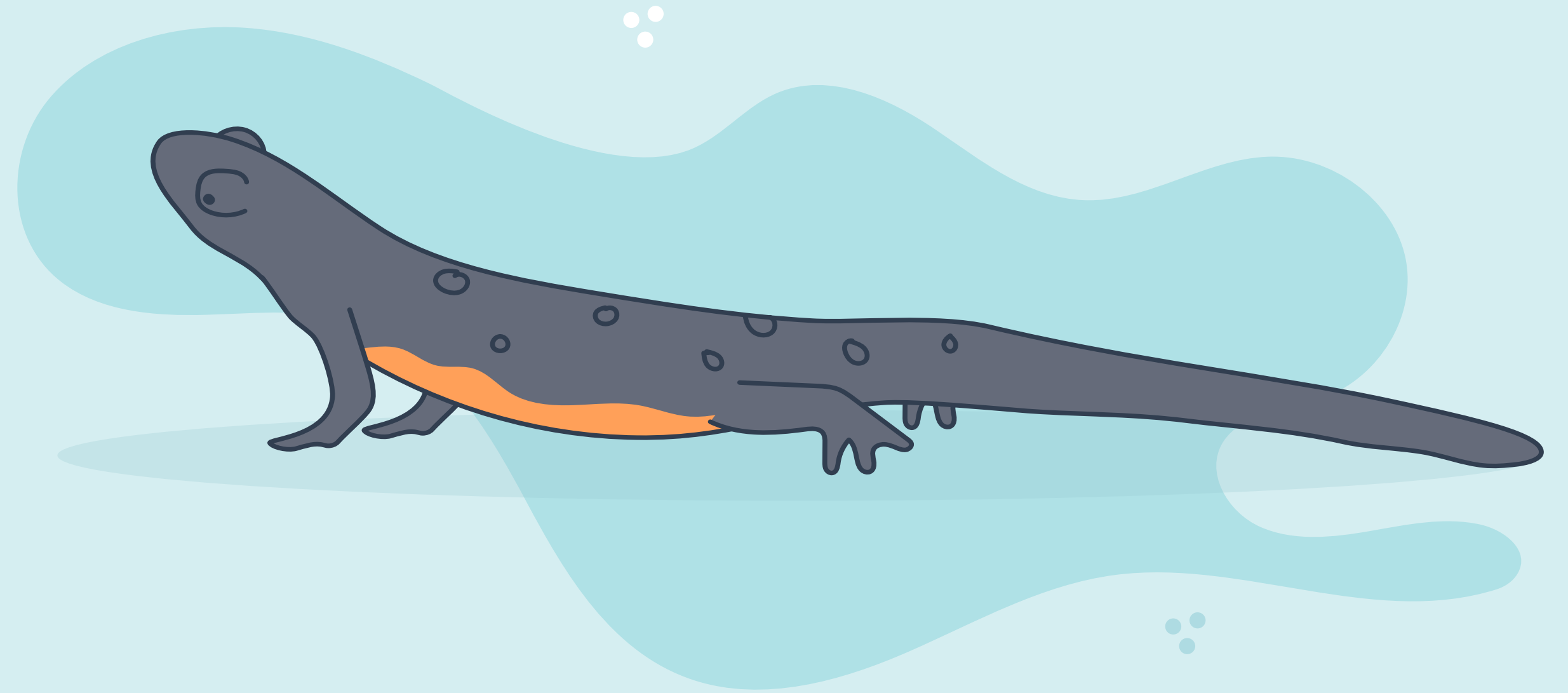
“This creature lays eggs,” said Dr Russell.

“So, its not a mammal,” said Ellie. “So what then could it be?” she asked.

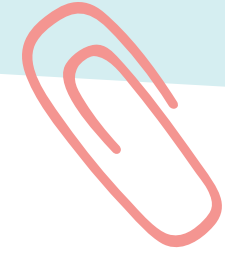


“Do you think it’s a bird?”
asked Mr Jones. “We know
it lays eggs.”

Ellie looked at a robin sitting
on a branch in the tree. It had
two legs, wings and feathers.



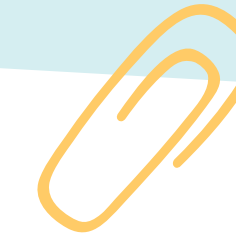
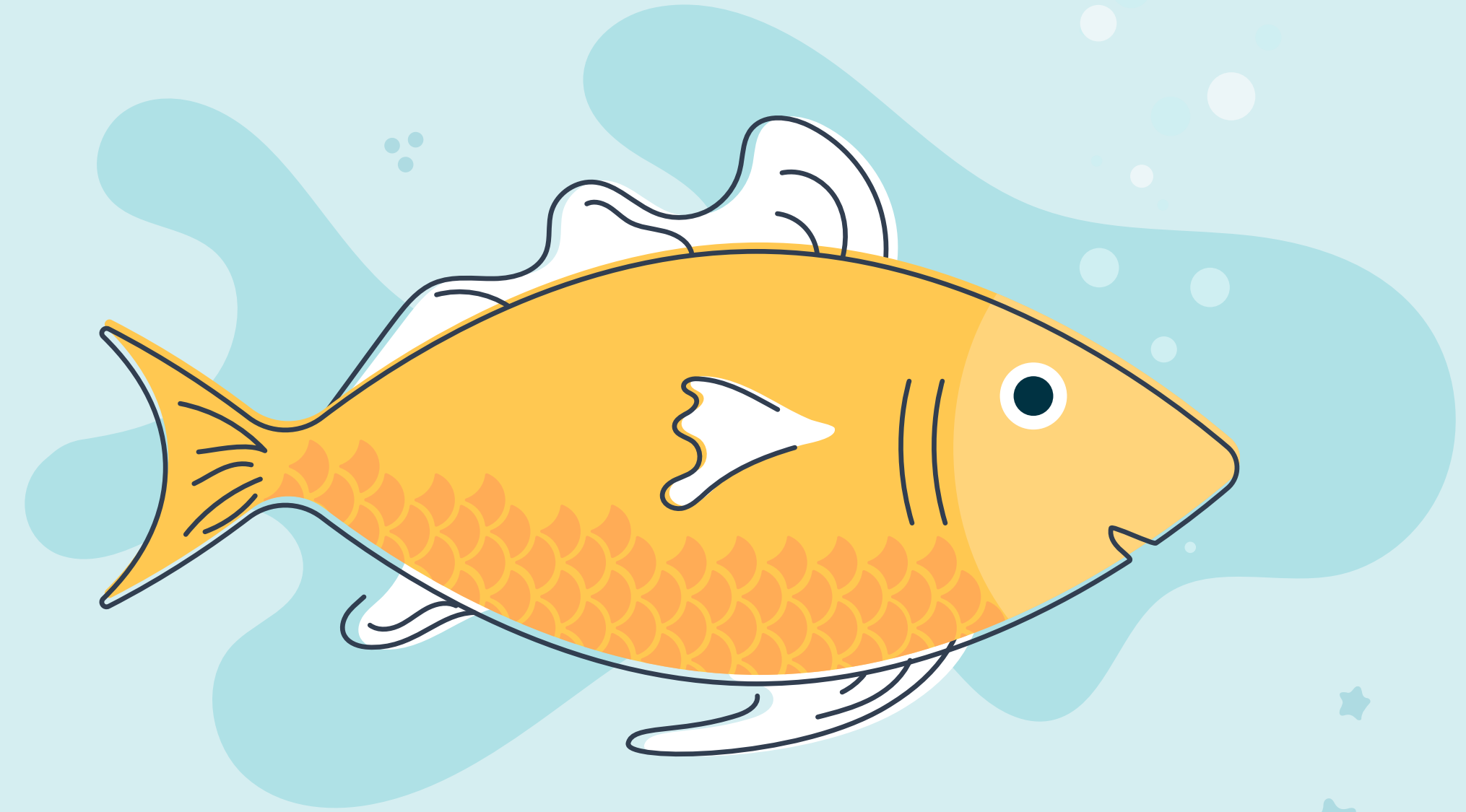
“No” said Ellie. “It does not
look like a bird. The skin is
quite smooth and it has four
legs. So I’m still not sure what
it could be.”



“It can live in water,” said Dr Russell.

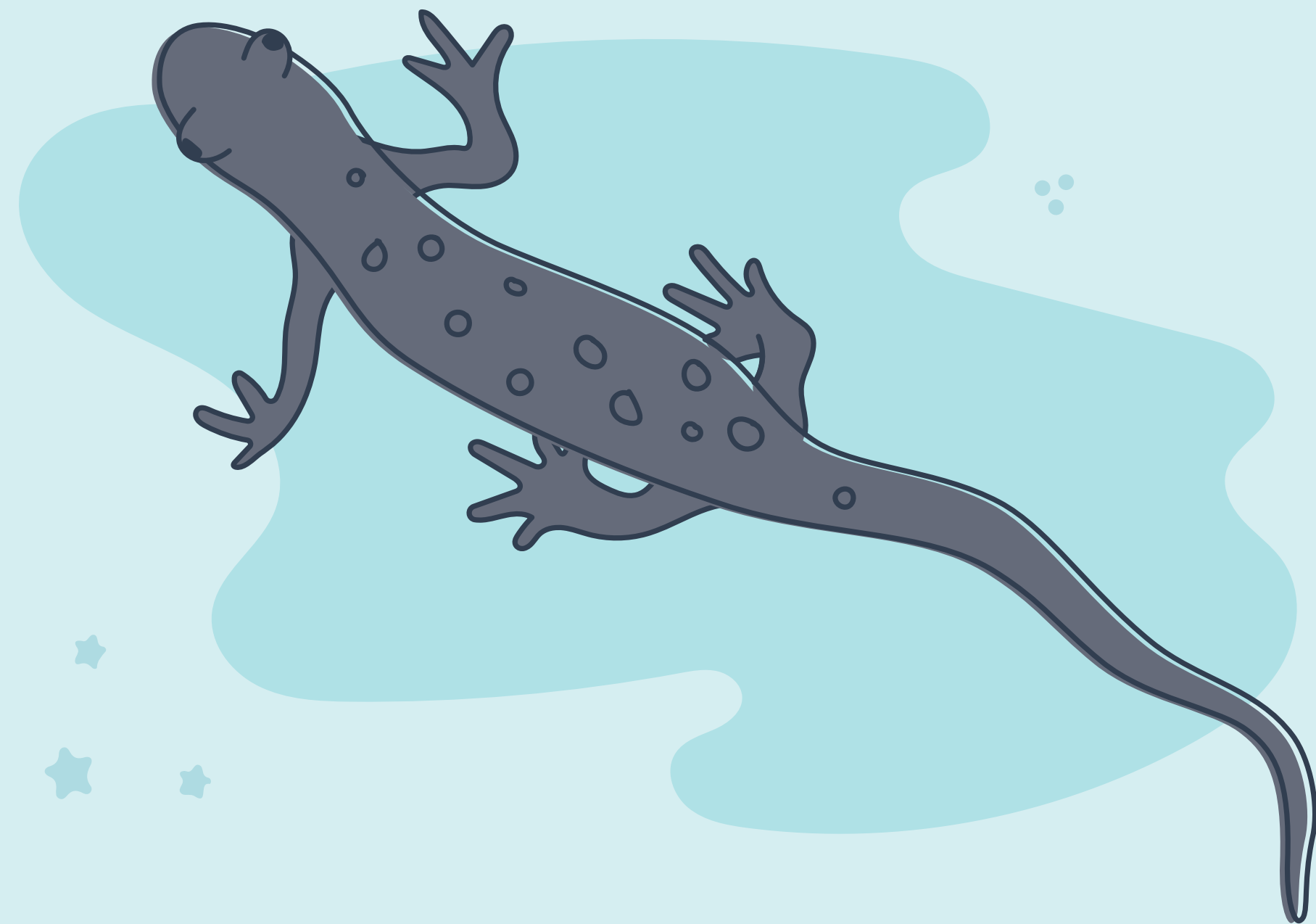
“It must be a fish!” said Priya.

“It can’t be!” said Ellie. “It was in the soil and it doesn’t have scales.”



“I don’t think it has gills either, so actually it’s not a fish,” agreed Priya.

This time it was Pat who asked the question: “What could it be then?”





The creature suddenly fell backwards. Its tummy was bright orange, with black spots.

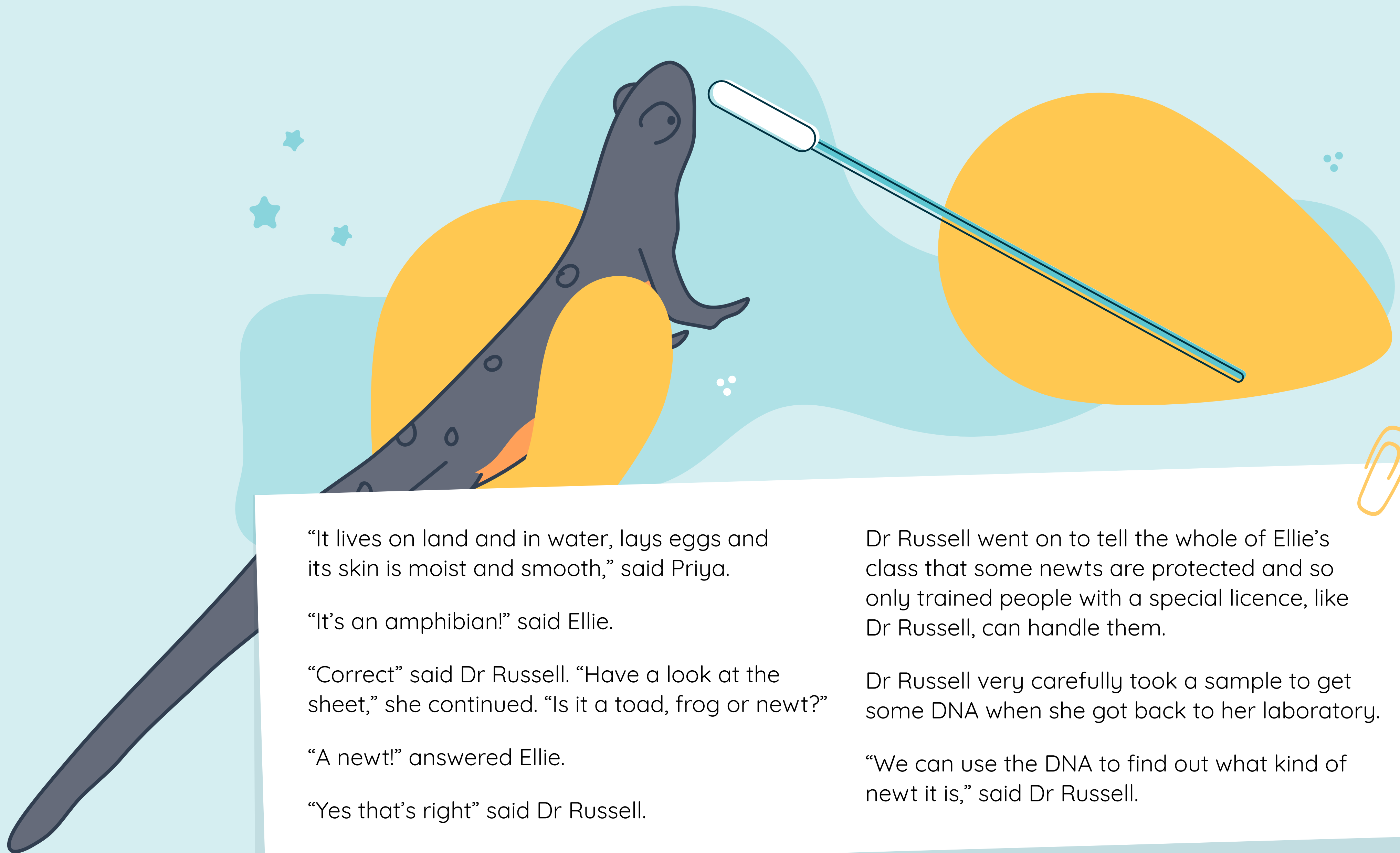
“It’s like my brother’s Leopard Gecko!” said Pat.

“So it’s a reptile!” suggested Ellie.

All three looked again at their sheet that Mr Jones had given them to help identify which group the animals belong to.

“I’m not so sure Pat” said Priya. “Look, its skin is smooth and wet, not dry and scaly.”

This time Mr Jones asked the question: “So what can it be?”



“It lives on land and in water, lays eggs and its skin is moist and smooth,” said Priya.

“It’s an amphibian!” said Ellie.

“Correct” said Dr Russell. “Have a look at the sheet,” she continued. “Is it a toad, frog or newt?”

“A newt!” answered Ellie.

“Yes that’s right” said Dr Russell.

Dr Russell went on to tell the whole of Ellie’s class that some newts are protected and so only trained people with a special licence, like Dr Russell, can handle them.

Dr Russell very carefully took a sample to get some DNA when she got back to her laboratory.

“We can use the DNA to find out what kind of newt it is,” said Dr Russell.

FACT

Human DNA has 3.5 billion letters,
newt DNA is 6 times bigger

Our newt	G	T	C	T	A	C
Smooth newt	G	T	A	T	A	C
Great Crested newt	G	T	C	T	A	C
Palmate newt	G	T	A	T	T	T

A few weeks later, Dr Russell revisited Ellie's class and showed the children the results.

"We have 26 letters in our alphabet. DNA has just four, A, C, G and T" said Dr Russell.

"Look at the letters, children. The top letters are from our newt. Can you find a match?" asked Dr Russell.

"It's a Great Crested newt," said James.

"That's right!" replied Dr Russell. "This pattern is a small part of the newt DNA. In the laboratory we look at all the DNA from the newt. In fact there are billions of letters."

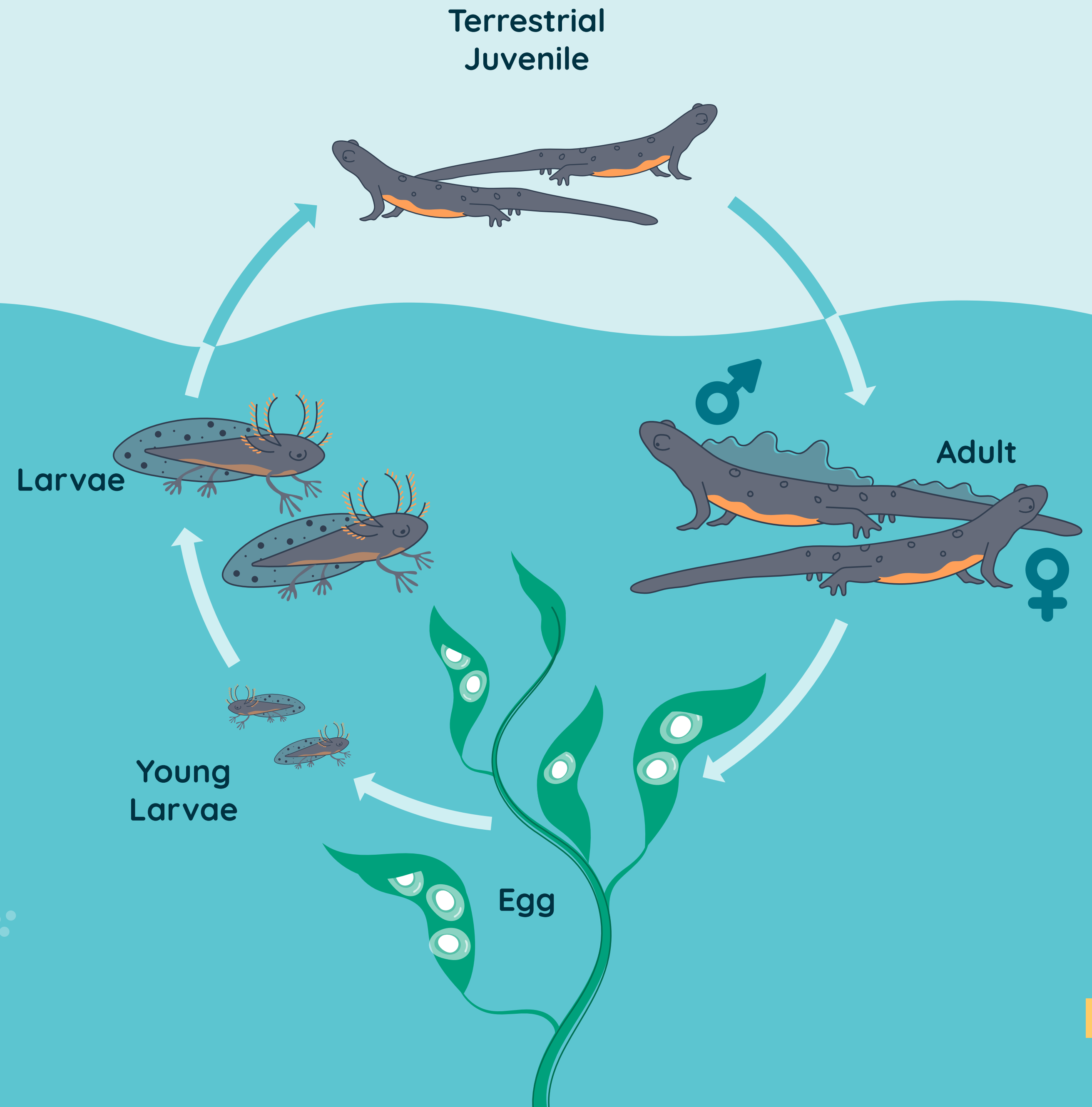
“Well we have something to show you!” said Mr Jones.

The children led Dr Russell to the school pond.

“Look! Can you see the newt eggs?” asked Mr Jones. “The larvae are hatching.”

“That’s fantastic! You are helping the Great Crested newt survive in your school, how wonderful” said Dr Russell, “and we are helping it survive using DNA! Please tell me if you find any other rare animals.”

Ellie thought of her favourite teddy, Mags. “A teddy bear that thinks, talks, loves me lots and comes with me on lots of adventures – surely Mags has got to be a rare animal” thought Ellie.





For more stories featuring Ellie,
her family, friends and teddies,
as well as accompanying
teaching resources, visit:
www.abpischools.org.uk



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