

THE SECRET EXPLORERS[®] AND THE JURASSIC RESCUE



Chapter One

JOURNEY TO THE JURASSIC



Tamiko shuffled along the beach on her hands and knees. The sharp pebbles dug into her skin, but she hardly noticed. She was focused on her favourite thing – hunting for fossils! There were millions of them mixed in with the sand and seaweed of Nemuro beach, where she lived in Japan. But spotting them was hard, and you had to concentrate.

Tamiko sifted through the sand with her fingers. The sharp edge of a stone caught her eye.

“Ha!” she said.

Tamiko lifted the stone from its sandy bed and brushed it clean. It was an ammonite fossil! She’d known as soon as she saw its spiral shell. Ammonites were sea creatures that had lived at the same time as the dinosaurs. They were related to the octopus and squid that swam in the seas today.





The ammonite nestled in Tamiko's hand had once been alive, but over millions of years its remains had turned into stone.

Tamiko couldn't wait to study her new treasure. She put the ammonite in her pocket and strolled home, passing tourists who'd come to see the small beachside town. She paused outside her favourite shop and gazed through the large window. Inside was a glittering display of crystals and semi-precious stones. The shop had fossils for sale, too, which were kept in a case at the back.

But something else caught her eye. On the shop door was a glowing compass symbol! A thrill ran through Tamiko. Her hand went to the matching compass badge

on her T-shirt. The compass was the symbol for the Secret Explorers.

"Looks like we've got a new mission!" she said.

Taking a deep breath, Tamiko opened the shop door. But instead of the usual glass cases full of crystals and fossils, Tamiko walked into a dazzling white light. A strong wind whipped her short black hair around her head. She felt as if she was flying – and then the light faded.



Spots were dancing in her eyes and Tamiko blinked them away. She was back in the Exploration Station! She grinned with delight as she took in the familiar room. It had rows of humming computer screens set into the black stone walls. There were display cases here too, just like the ones in the Nemuro fossil shop. They were full of meteorites, shells and other finds from previous missions. The domed ceiling had a huge picture of the stars and planets of Milky Way, and on the floor was a huge map of the world.



Tamiko was the first to arrive.
“Tamiko – reporting for duty!” she said aloud to the Exploration Station, before settling down in one of the comfy chairs.
It wasn’t long before the

other Secret Explorers appeared in the glowing doorway.

“Leah – here!” said a tall girl with a bright smile, saluting as she always did. She had a smudge of earth on her cheek.

“Been gardening, Leah?” Tamiko asked with a grin. Leah was the Biology Explorer, and knew everything about plants and animals.

Leah looked proudly at her muddy fingernails. “You know it, Tamiko!”

Kiki, the Engineering Explorer, was next. She pushed her glasses firmly onto her nose. “Kiki – here!” she said.

“Ollie – here!” said a red-haired boy. In his hands he was holding a magazine about the Amazon River. Ollie was the Rainforest Explorer.



“Roshni – here!” said a girl with long dark hair tied up in a ponytail. As the Space Explorer, Roshni knew all about stars, planets and galaxies.

“Connor – here!” Connor’s hair was wet. It looked like the Marine Explorer had been investigating the aquatic life he loved.

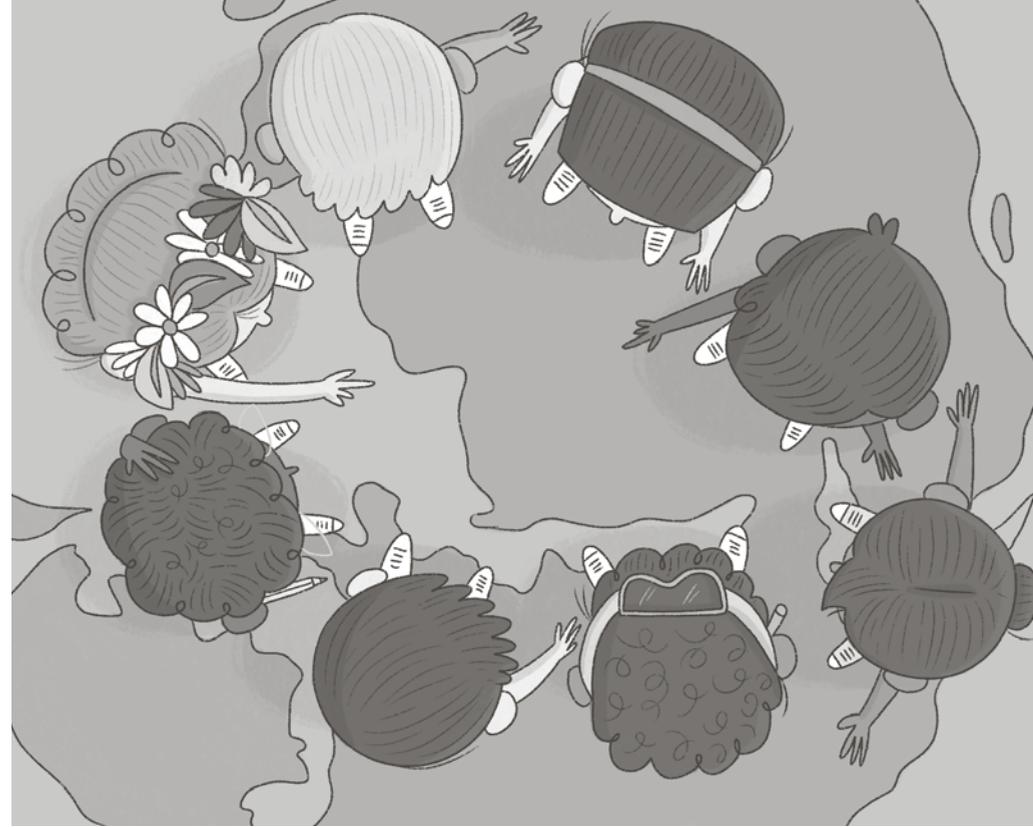
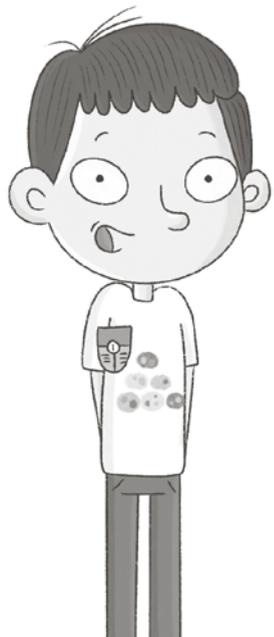
A boy holding a book about the Aztecs came through. “Gustavo – here!” said the History Explorer.

The last member of the team arrived.

“Cheng – here!”

Tamiko grinned at Cheng, the Geology Explorer. Cheng’s love of rocks meant they had a lot to talk about.

They gathered around the huge floor map that showed the world. The map



usually glowed in the spot where the mission would take place. But something else happened this time.

“Hey!” said Tamiko in surprise. “Is it me, or is the map... moving?”

The continents were shifting around, sliding and bumping into each other. As the Secret Explorers watched, the world changed



shape completely. Instead of Africa, Antarctica, Asia, Australia, Europe, North America and South America, there were just two big continents.

“That’s what the world looked like during the Jurassic Period,” said Cheng. “One hundred and fifty million years ago!”

The Secret Explorers exchanged excited glances. It looked like two of them were going to travel back to the time of the dinosaurs! *I hope it’s me*, Tamiko thought. I would love to see actual living dinosaurs!

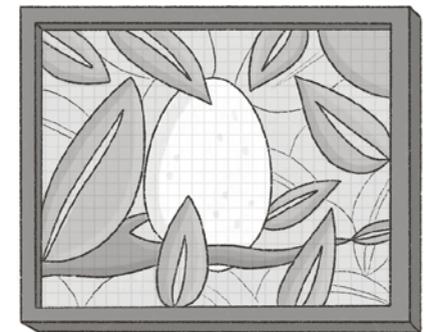
A screen appeared in the area of land that would one day be central Europe. It glowed and expanded. The screen showed a leafy background and a roundish, white object. Tamiko stared at it in wonder.

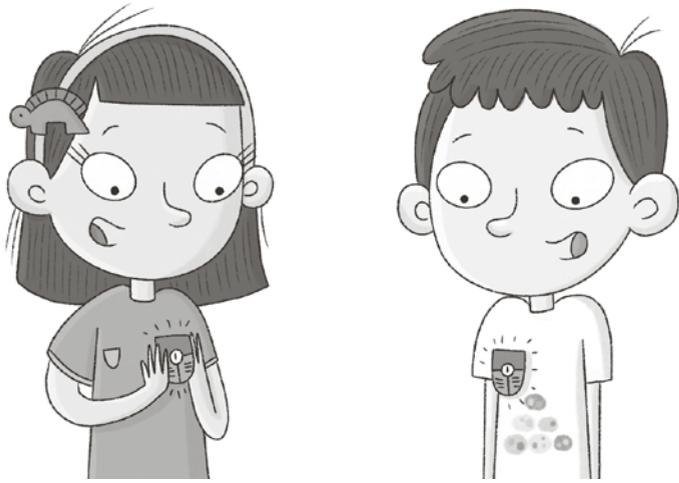
“It’s a dinosaur egg!” she exclaimed. “Maybe our mission is to protect it.”

The Exploration Station always picked two Secret Explorers for each mission. Tamiko crossed her fingers. She looked down at her chest... and sure enough, her compass badge was glowing.

“All RIGHT!” she said with a whoop. “I’m in!”

Cheng’s badge lit up. “Me too!” he said.





Gustavo grinned. "A Dinosaur Explorer and a Geology Explorer," he said. "The perfect combination for a mission to the Jurassic! The Exploration Station always knows who to choose."

Cheng exchanged a high-five with Tamiko.

Kiki headed to a big red button on the wall. She pushed it and a battered old go-kart called the Beagle rose out of the floor. It didn't look like much, but it wasn't named after Charles Darwin's famous exploration

ship for nothing. There was more to the Beagle than met the eye...

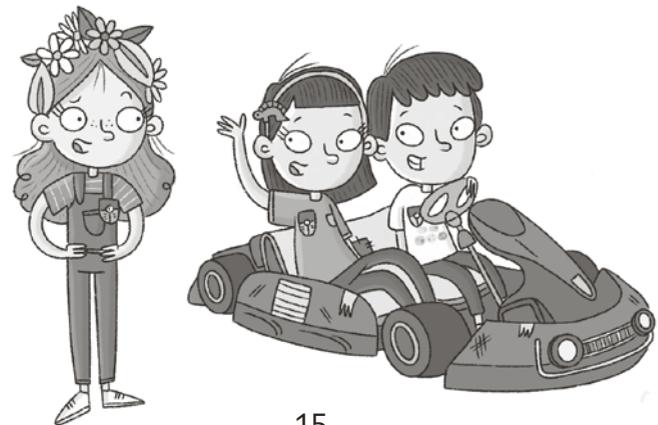
The other Secret Explorers took their places at the computer terminals, ready to give Tamiko and Cheng any help they needed on their mission.

"Good luck, guys," said Ollie.

"Don't get eaten by a T. rex!" said Leah.

"Tyrannosaurus rex lived during the Cretaceous Period, which came after the Jurassic," Tamiko reassured her. "But we'll definitely be careful!"

Tamiko and Cheng climbed into the



Beagle and sat down. Tamiko took the wonky steering wheel.

“Ready when you are,” said Cheng with a nod.

Tamiko pressed the “START” button. The Beagle began to shake and rattle, like it was hurtling down a very steep hill. Tamiko held on tight.

There was a blinding flash of light and the Exploration Station disappeared. The steering wheel transformed beneath Tamiko’s hands into a sturdy set of handlebars, and the old seats became deep and comfortable.

There was a splash and the light faded. Tamiko blinked. She and Cheng were now wearing helmets, and she was holding onto the handlebars of a chunky quad bike. Its wheels were half-submerged in a murky green swamp. On the banks, trees with

delicate leaves drooped over the water and bright green ferns sprouted from the soil. Strange sounds filled the air. Everything smelled earthy and different.

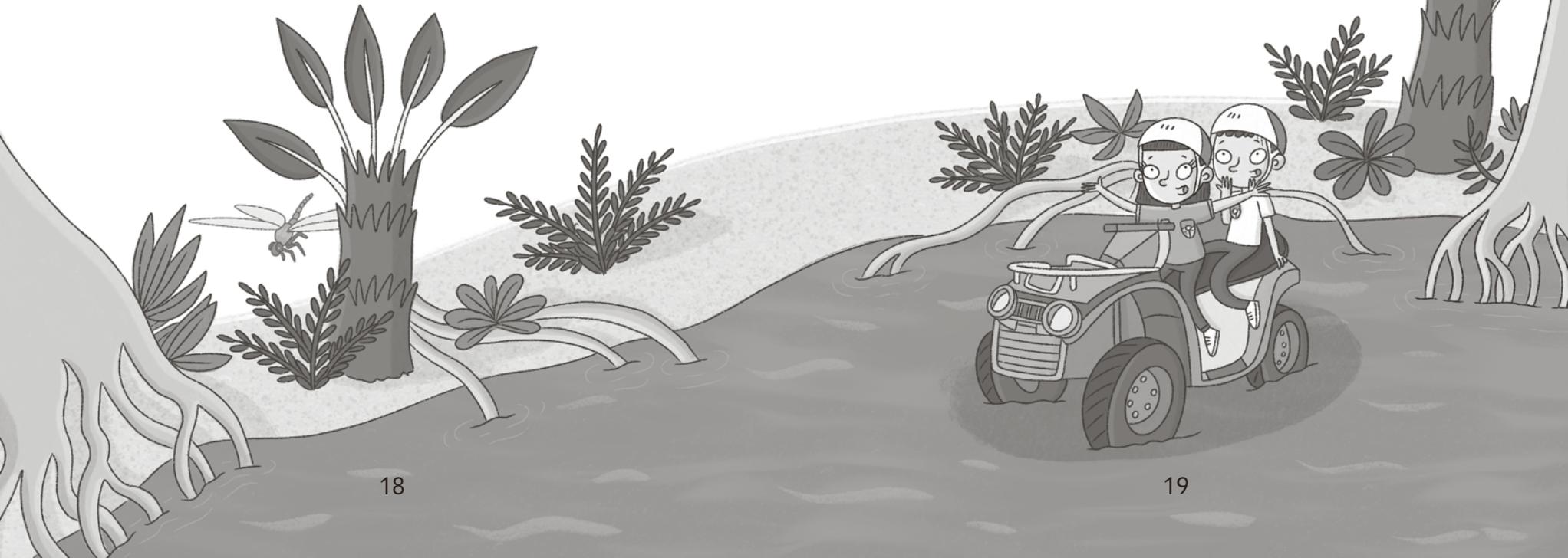
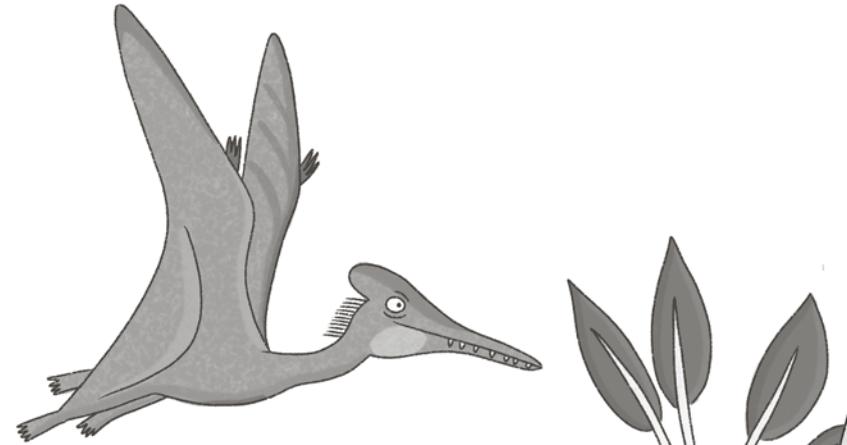
“Check out this place!” said Cheng.



A whirring sound overhead made Tamiko duck. She felt the whoosh of air as a creature with vast leathery wings flew right over the top of their heads.

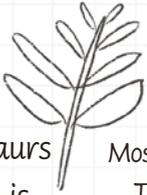
“Wow,” she breathed. It was a Klobiodon – a type of enormous pterosaur! It opened its long beak, revealing sharp teeth, and screeched.

Tamiko grinned at Cheng. “Welcome to the Jurassic!”



DINOSAUR TIMELINE

The time when dinosaurs dominated the Earth is called the Mesozoic Era. It lasted for over 180 million years. This era is divided into three time periods called the Triassic, Jurassic, and Cretaceous. During these periods, the climate changed and different plants and animals appeared.

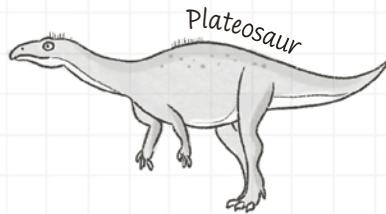


TRIASSIC PERIOD

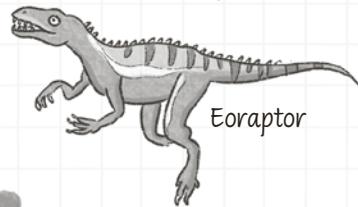
Most of the Earth was hot and dry. There weren't many plants and the land was a desert. Small dinosaurs and tiny mammals began to appear for the first time.



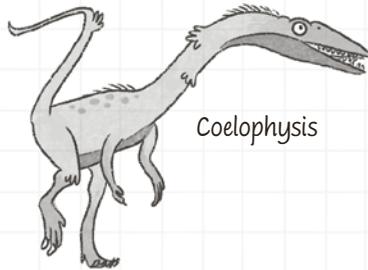
250–200 million years ago



Plateosaurus



Eoraptor

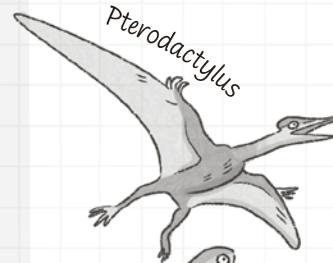


Coelophysis

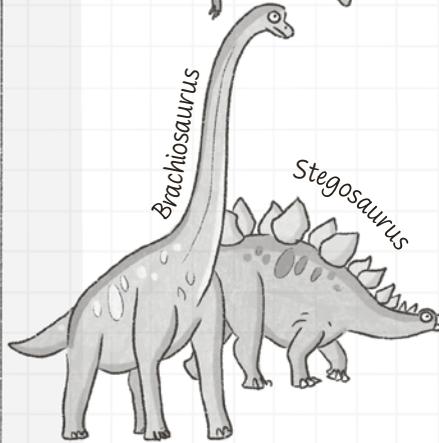
JURASSIC PERIOD

The Earth became much wetter. Forests and lush vegetation grew, providing food for enormous plant-eating dinosaurs. Dragonflies and the first birds also appeared.

200–145 million years ago



Pterodactylus



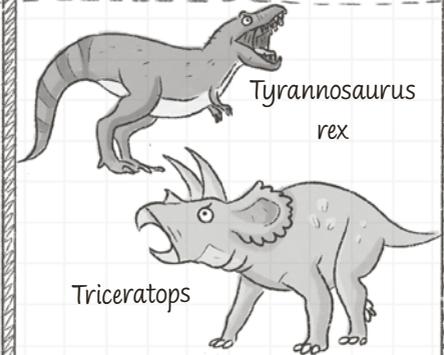
Brachiosaurus

Stegosaurus

CRETACEOUS PERIOD

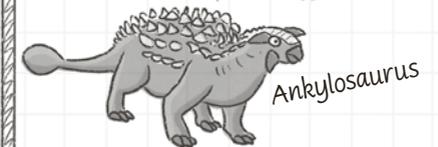
The temperature dropped, creating a warm, wet climate. Dinosaurs were the most powerful creatures on Earth – but at the end of the Cretaceous, many of them became extinct.

145–66 million years ago



Tyrannosaurus
rex

Triceratops



Ankylosaurus



Velociraptor

TAMIKO'S
MISSION
NOTES

WHO'S THAT DINO?

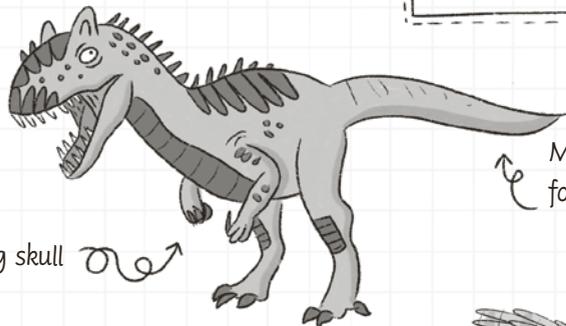
Our mission took us back in time to the Jurassic.
Here are some of the dinosaurs we met...



Allosaurus (al-oh-Sore-uss)

Fearsome predator with dozens of sharp, serrated teeth. It hunted herbivores, such as Stegosaurus, as well as smaller predators.

- Size: 12 m (39 ft) long
- Habitat: Open woodlands
- Diet: Meat



Big skull

Muscular tail for balance

Jaws with teeth, like a dinosaur

Archaeopteryx (ar-kee-OP-ter-ix)

One of the oldest members of the bird family. The discovery of Archaeopteryx proved there is a link between dinosaurs and birds.

- Δ Size: 45 cm (1.5 ft) long
- Δ Habitat: Forests
- Δ Diet: Insects and reptiles



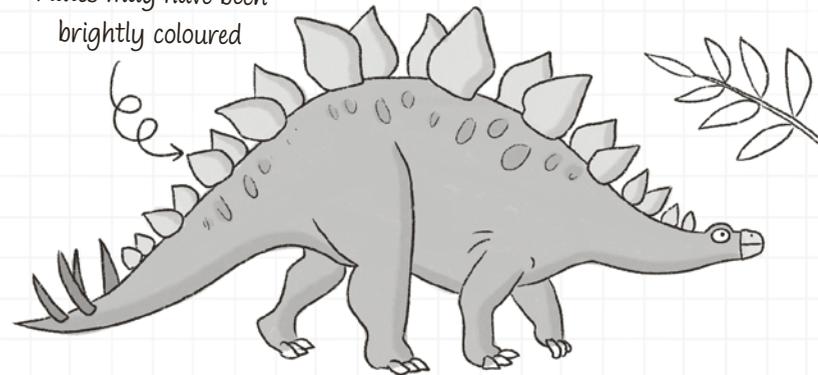
Feathers and wings, like a bird

Stegosaurus (STEG-oh-SORE-uss)

A big plant-eater with a spiky tail for fighting off predators. It was the size of an elephant, but its brain was only the size of an apple!

- Size: 9 m (30 ft) long
- Habitat: Forests
- Diet: Plants

Plates may have been brightly coloured

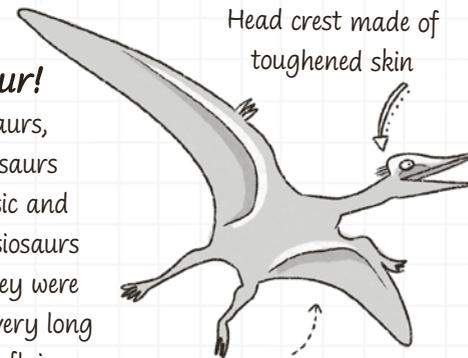


NOT a dinosaur!

As well as the dinosaurs, plesiosaurs and pterosaurs lived during the Jurassic and Cretaceous periods. Plesiosaurs lived in the oceans – they were giant meat-eaters with very long necks. Pterosaurs were flying reptiles, and included Pterodactylus.

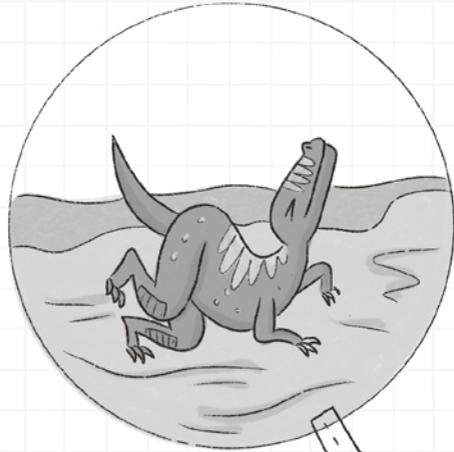
Head crest made of toughened skin

Wings made of stretchy skin and muscle



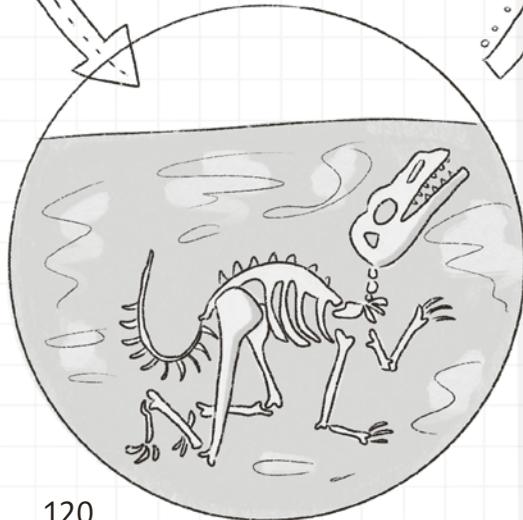
HOW A FOSSIL IS MADE

Fossils are the remains of things that have been dead for millions of years. All sorts of life forms have fossilised, from spectacular Stegosaurus skeletons to tiny ammonite shells. Fossils help us understand how life on our planet has changed over millions of years. Scientists called palaeontologists dig up and study fossils.

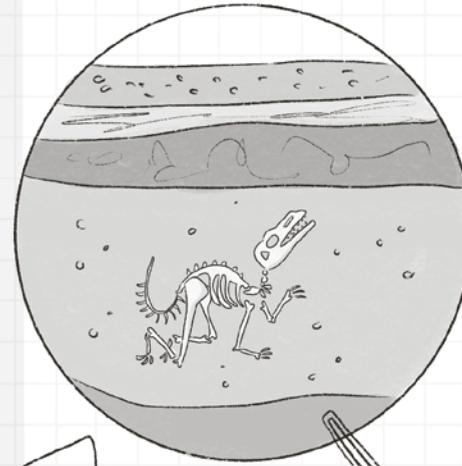


STEP 1 A creature dies and its body sinks into the mud by a river.

STEP 2 The creature is buried in layers of mud, sand, and ash over a period of millions of years.

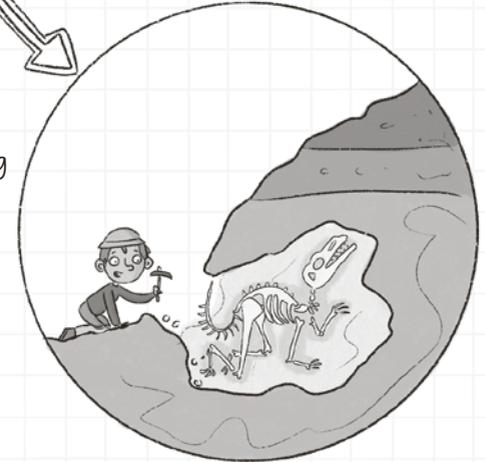


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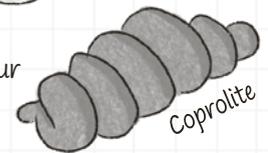
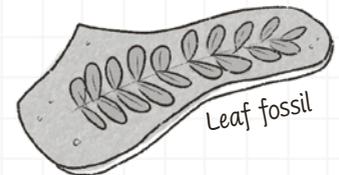
STEP 3 The skeleton of the creature turns from bone to stone.

STEP 4 The fossilised creature is uncovered by palaeontologists. They dig out the fossil and coat it in plaster to protect it. The fossil is then sent to a laboratory to be studied or to a museum to be displayed.



Types of fossil

- * Body fossils, such as bones, teeth, and shells
- * Petrified fossils, which are soft tissues, such as muscle and leaves
- * Trace fossils, such as fossilised footprints, which tell scientists about a creature's behaviour
- * Coprolites – fossilised poos!



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