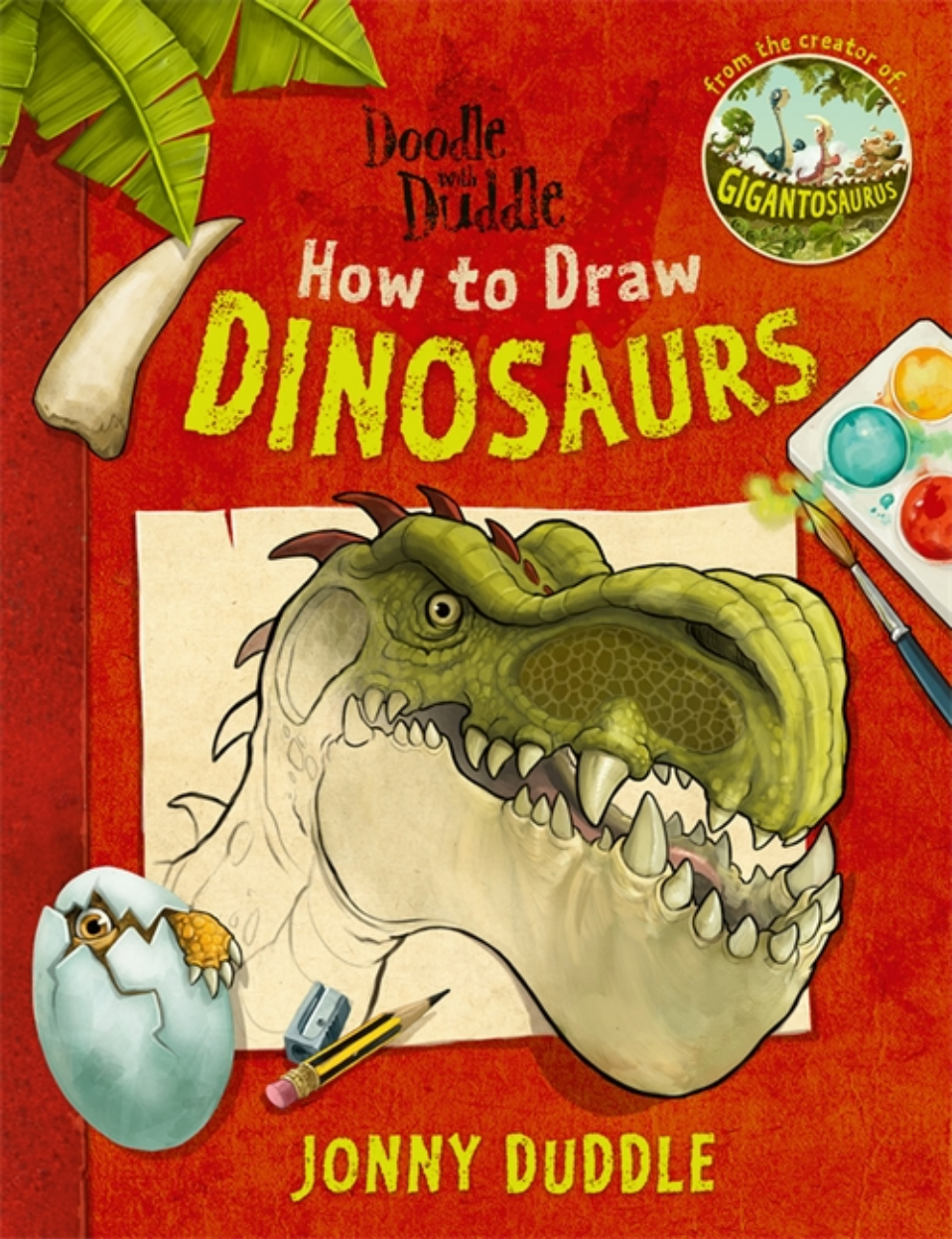
from the creator of...
GIGANTOSAURUS
Doodle with Duddle
How to Draw
DINOSAURS
JONNY DUDDLE

Doodle with Duddle

dino doodling

This journal belongs to

.....

For Tamlynatops.
Who sends me on never-ending
doodling adventures...
- Jonnysaurus

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Doodle with Duddle

How to Draw DINOSAURS

JONNY DUDDLE

templar books

HELLO BUDDING DINO-DOODLERS!

My name is Jonny Duddle and I've been doodling since I could hold a pencil. I doodled at school, I doodled at university, and now that I'm a grown-up, doodling is my job. I spend all day doodling at home and writing books, and one of my favourite things to doodle is dinosaurs. I even wrote a prehistoric book called *Gigantosaurus*. If you've picked up *How to Draw Dinosaurs*, you must like doodling dinosaurs too.

Luckily for you, this is my dino-doodling journal, and I'm going to take you on an adventure. I'll teach you how to draw these amazing creatures, and sprinkle some fascinating facts along the way.

Drawing can be tricky (I still find it hard sometimes), but by the end of this book, you'll be a much more confident dino-doodler. Before embarking on a doodling adventure, I like to be prepared. Check out the stuff I take with me and LET'S DOODLE!

Pith helmet
For keeping the hot Welsh sun off my shiny head.

Bag
For pencils, sketchbooks, fossils and chocolate.

Pencil
For doodling dinosaurs.

Sketchbook
For doodling and writing stuff down before I forget.

Knobbly knees
Maybe you don't need these...

You don't need expensive equipment or art materials to be an artist, you just need a pencil to start. Every artist doodles with something different. I've tried everything over the years, but here are a few of my favourites:

Pencils
Any pencil will do. I like soft pencils that make dark lines. You might want an eraser to rub out lines that go wrong.

Coloured pencils
I doodle with coloured pencils a lot (look at my sketchbook pages here). You could try coloured pencils, or crayons or chalk.

Pens
Felt tips, ink pens and biros are all good for drawing, but you need to be confident as you can't rub them out!

Paints
I like watercolours because you can take them anywhere. Just add water to mix millions of colours.

Sketchbooks
My drawings are messy and rarely go right first time!

INTRODUCING THE DINOSAURS

To get started, I'd like to introduce you to some of my favourite dinosaurs. In the story I wrote, there were four little dinosaurs on the trail of the fearsome Gigantosaurus. You'll learn how to doodle them all – including Giganto – on this dino-doodling journey!

But how did these characters come to life, I hear you ask? Well, the Gigantosaurus story started in my sketchbook. Sketchbooks are brilliant for drawing things you see on your travels, and writing down ideas. Years ago, I visited the Natural History Museum in London and sketched some dinosaur skeletons, which inspired me to write a tale.

While doodling characters, I wrote a list of all my favourite dinosaurs. I was a bit annoyed when I realised the four I had picked didn't exist at the same time. I carried on and hoped nobody would mind, but have a look at the timeline below to see just how far apart they existed in real life!

Have you read the *Gigantosaurus* book? Or maybe you have seen it on TV, in which case, you might know the characters by slightly different names. Maybe you've never heard of them at all! Here are some handy introductions...

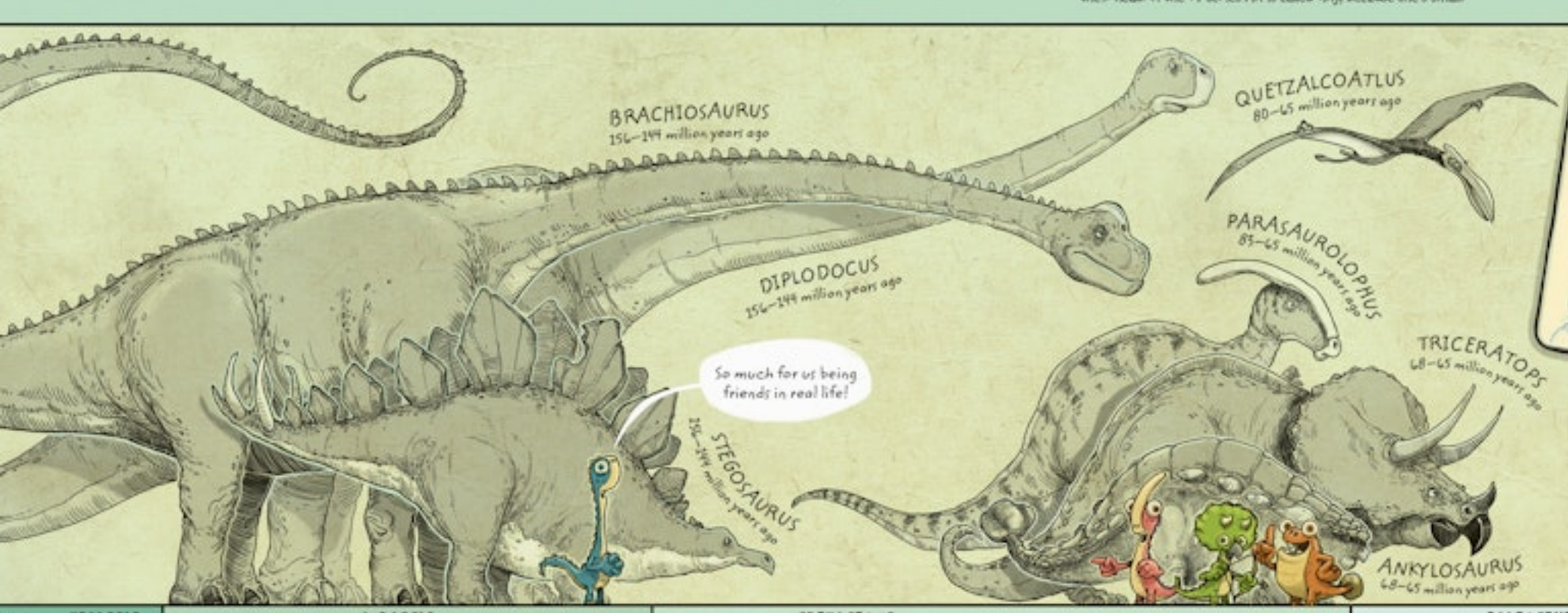
Bonehead is an Ankylosaurus, and they lived 68–65 million years ago. I called him Bonehead because Ankylosaurs have very, very hard heads. In the TV series, *she* is called Nazu.

Tiny is a Diplodocus. I called him Tiny because he was the biggest (I thought that was funny). Diplodocus lived between 156–144 million years ago. In the TV series, Tiny is called Bill.

Bill is a Parasaurolophus, and they lived 83–65 million years ago. I called him Bill because he has a beak (or bill). In the TV series, Bill is called Rocky.

Fin is a Triceratops, and they lived 68–65 million years ago (so Fin and Bonehead could have lived at the same time and been friends). I called her Fin because Triceratops have a frill, or fin, around their head. In the TV series Fin is called Tiny, because she's small.

These were my first sketchbook doodles of the four little dino-friends.



Diplodocus lived nearly 76 million years before Triceratops, who in turn became extinct 65 million years ago. So there were more years between a Diplodocus and Triceratops than there are between you and a Triceratops. Weird, huh?

HUMANS – HOMO SAPIENS from 225,000 years ago

← TRIASSIC	JURASSIC	CRETACEOUS	PALEOCENE	NEOCENE	QUATERNARY →	THE FUTURE...
	200 million years	150 million years	100 million years	50 million years		Today

DOODLE A... TRICERATOPS

Triceratops was like an oversized rhinoceros, but with extra horns and a huge heaving tail. It could grow up to nine metres long – that's longer than two cars! Palaeontologists have found more Triceratops fossils than any other dinosaur, so we know a LOT about them.

Triceratops' bony frill could be as wide as two metres – that's wider than me lying down, even wearing my big hat!

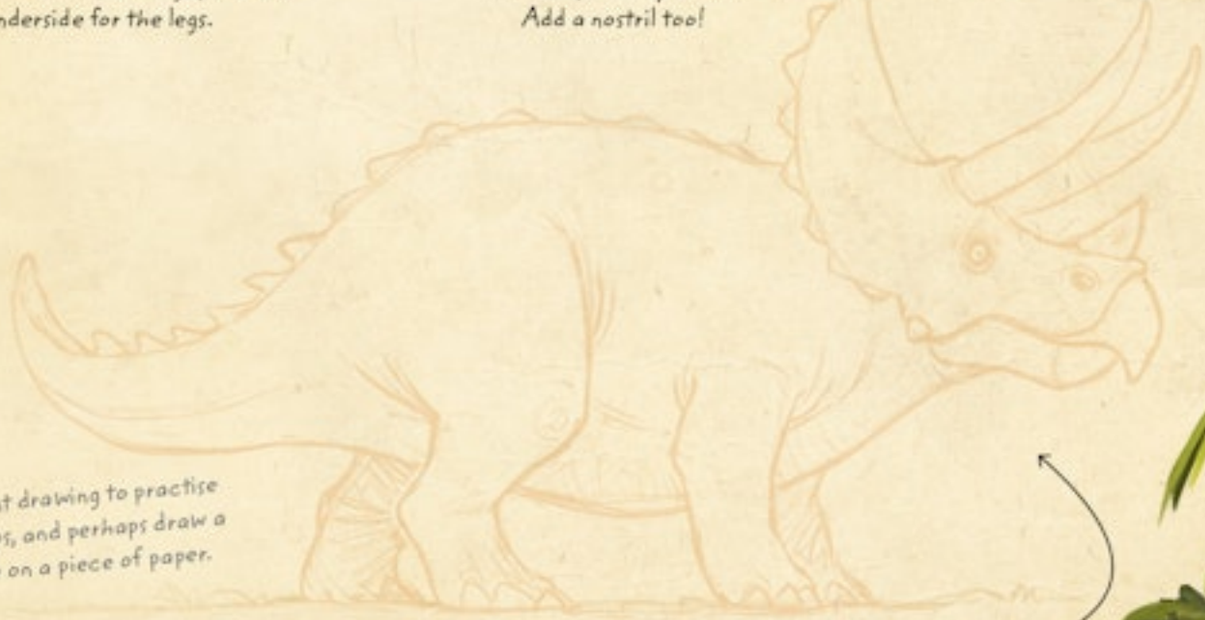
Triceratops' horns were made from a material called keratin – you have some in your fingernails, but hopefully you trim them so they're less long and pointy.

The 'tri' in Triceratops means three. Think tricycle, triangle or tripod. Triceratops had three horns.

The shape of a Triceratop is like an egg, with a tail and a pointy head. Try drawing it lightly first. When you press harder to make a darker line, leave gaps on the underside for the legs.

Add four chunky legs, three horns, a small circle for the eye and a pointed beak. Draw a bumpy frill that joins to Triceratops' curvy mouth. Add a nostril too!

Draw in details: wrinkles where the legs join the body, bumps along its back, scales and shading on the far-side legs and horn.



Use this faint drawing to practise a Triceratops, and perhaps draw a bigger one on a piece of paper.

What colour would your Triceratops be? Would it have patterns on its body or its bony frill?

HOW TO DOODLE... FIN

Fin is a Triceratops who is a little bit shy. Have a go at doodling her using this step-by-step guide!

1

Draw Fin's beak first: three curved lines with a tiny crease where the mouth meets her face.

2

Draw a line for the bottom beak. Add a round eye either side and two black pupils, leaving a dot of white.

3

Draw the frill around Fin's head. It can be wavy, or just round. Add two stumpy horns just above her eyes.

4

Next, lightly draw the body like a teardrop. Leave gaps for the tail and the near-side leg and arm.

5

Doodle a curved tail and two legs. The leg in front extends into the body a bit, the other goes behind.

6

Draw Fin's arms and the beady thumb on the right hand, plus three round fingers. The left hand is like three small sausages hanging from the arm.

7

Add bumps around the frill and along Fin's back and tail. Draw a line along her body where her colour is different.

8

Doodle more details: creases on her knees and around her eyes and horns. Draw a circle around each pupil.

9

For the bow, draw two curved bits of wood, with strings going from the hand to the tips, and an arrow.

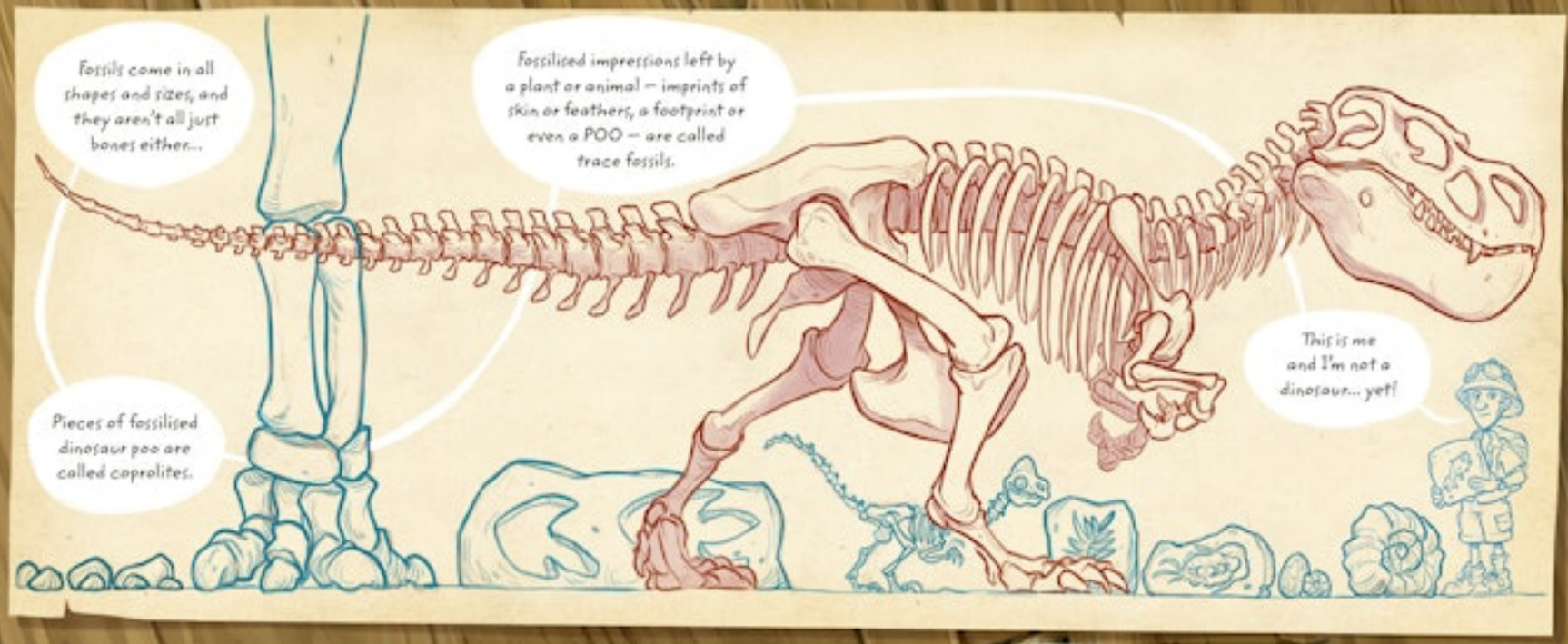
You can add colour to your drawing if you like. Fin is green, with a tan belly and bony bits, a grey beak and green eyes.

Try drawing Fin on top of this faint doodle before doodling her from scratch in the space below!

FASCINATING FOSSILS

How do we know so much about dinosaurs? We learn from fossils – the ancient remains of an animal or plant that have turned to stone over millions of years. Fossils can range in size from tiny shells to an enormous Triceratops skull.

What do you think this fossil could be? Try drawing the dinosaur over the top!

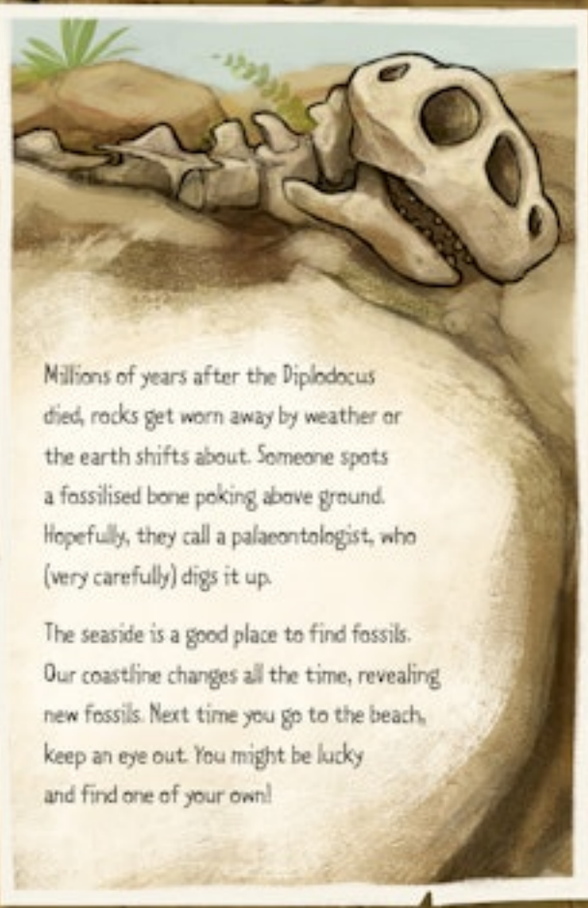


How Fossils Form

Imagine a Diplodocus has died, its body lying beside a river. The skin and muscle slowly rots away, leaving just the bones and teeth. Over time, the river covers the skeleton in mud and silt.

Many more layers of mud build up on top of the Diplodocus' skeleton. This squashes the layers of earth below and eventually, over thousands of years, the earth turns into rock.

Water seeps into the bones sandwiched between layers of rock, very slowly turning them into stone as the water leaves behind minerals. This can take millions of years, but gradually the bones become fossils.



Millions of years after the Diplodocus died, rocks get worn away by weather or the earth shifts about. Someone spots a fossilised bone poking above ground. Hopefully, they call a palaeontologist, who (very carefully) digs it up.

The seaside is a good place to find fossils. Our coastline changes all the time, revealing new fossils. Next time you go to the beach, keep an eye out. You might be lucky and find one of your own!

SKELETONS

As palaeontologists discover more fossils and build more dinosaur skeletons, a clearer picture emerges of what dinosaurs looked like.

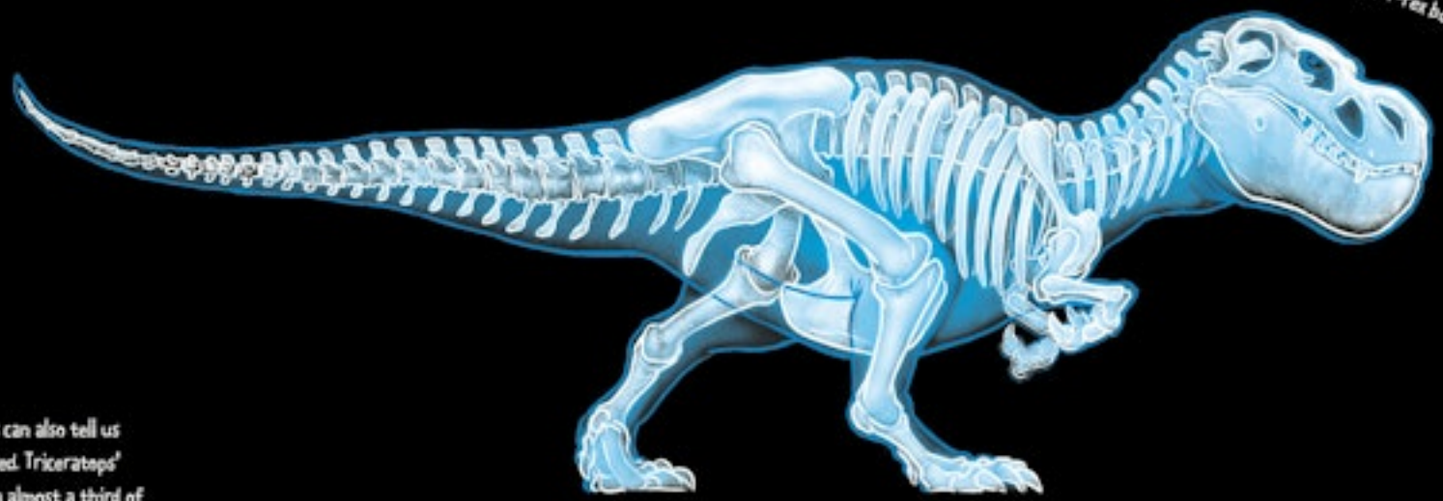
It's rare to find a complete dinosaur skeleton. Museums often assemble them by using bones from a few dinosaurs of the same type. Prehistoric flood waters may have separated the bones, or a hungry predator might've stolen bones for a tasty snack!

In 2023, a Tyrannosaurus rex skeleton sold for $5 million US dollars, but it was actually made up from three different T-rex skeletons. Only half the skeleton was fossilised bone, with the rest made up of plaster casts of other T-rex bones.

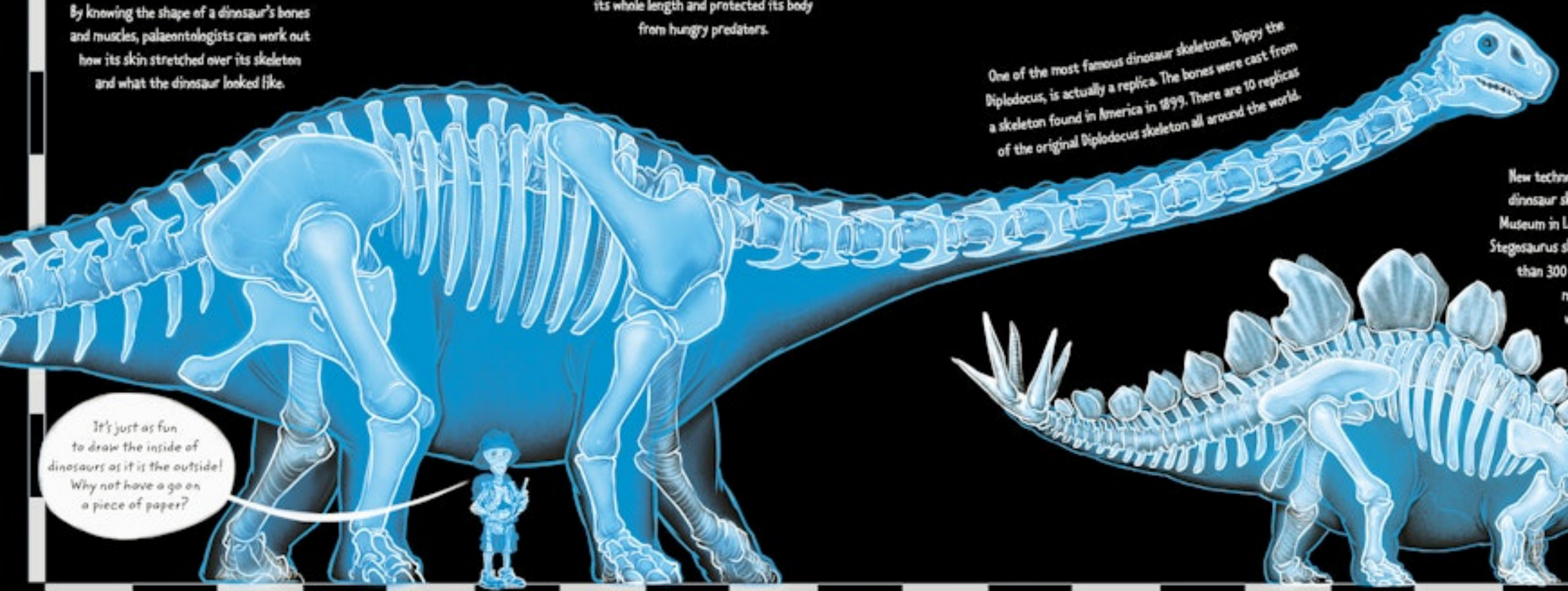
Skeletons give clues to the shape of muscles, how they attached to bones and the way each muscle worked.

By knowing the shape of a dinosaur's bones and muscles, palaeontologists can work out how its skin stretched over its skeleton and what the dinosaur looked like.

Dinosaur skeletons can also tell us about how they lived. Triceratops' 3-metre-long skull wa almost a third of its whole length and protected its body from hungry predators.



One of the most famous dinosaur skeletons, Dippy the Diplodocus, is actually a replica. The bones were cast from a skeleton found in America in 1899. There are 10 replicas of the original Diplodocus skeleton all around the world.



New technology can help us understand dinosaur skeletons. The Natural History Museum in London has an almost complete Stegosaurus skeleton. By photographing more than 300 bones, they built a 3D computer model. This revealed its shape, weight and how the Stegosaurus might have moved.

SAUROPODS

Sauropods were the largest animals EVER to have walked the earth! While palaeontologists might disagree about how big specific sauropods really were, we CAN be sure that titanosaurs like Argentinosaurus, Patagotitan and Dreadnoughtus were absolutely GIGANTIC. At around 60 tonnes, a Dreadnoughtus weighed more than 12 elephants. These plant-eating beasts had incredibly strong legs, long tails and towering necks with tiny heads.

The largest dinosaur femur (thigh bone) ever found belonged to the Patagotitan, an enormous titanosaur from South America. It was discovered by a farmer looking for his lost sheep, and was 2.4 metres tall. That's much taller than me!

If you could name a sauropod, what would you call it?

~~MEGASAURUS~~
~~VERYBIGOSAURUS~~

A typical sauropod loved its greens, eating at least 45 kilograms of plants every single day. I reckon that's about 150 lettuces!

If you're wondering how a sauropod could hold such a long and heavy neck in the air, their neck bones were full of holes, like honeycomb, which helped keep them light but strong.

The heaviest **Argentinosaurus** may have weighed up to 100 tonnes, and reached 40 metres in length, from its nose to the tip of its tail!

ARGENTINOSAURUS

BRACHIOSAURUS

Brachiosaurus' forelimbs were taller than its hind legs, which gave it a steeper tummy than most sauropods and angled its neck high into the air. This must have been ideal for ripping leaves off the tallest trees.

Camarosaurus was a medium-sized sauropod with a shorter neck, and is the most common sauropod fossil found in North America. It had a blunt nose and an arched skull that gave it a very square head, with 19-centimetre-long teeth shaped like chisels, for eating tough plants.

CAMAROSAURUS

Diplodocus was an extremely long dinosaur. Its tail made up almost half of its length – reaching 12 metres or more!

DIPLODOCUS

Europasaurus was a small sauropod that lived in the late Jurassic period. They were isolated from the rest of the dinosaur world on an island, which might be why they only weighed about 800 kilograms – a similar weight to a horse, but they were less fluffy and had a MUCH longer neck!

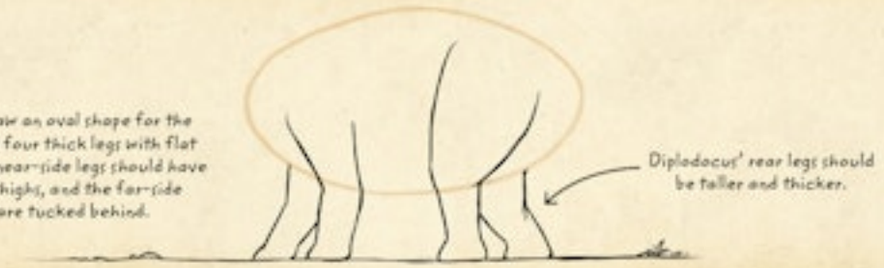
EUROPASAURUS

DOODLE A... DIPLODOCUS

Diplodocus wasn't the biggest sauropod, but it was still a colossal creature that could stretch as long as 27 metres – longer than TWO double decker buses! Have a go at doodling one below.

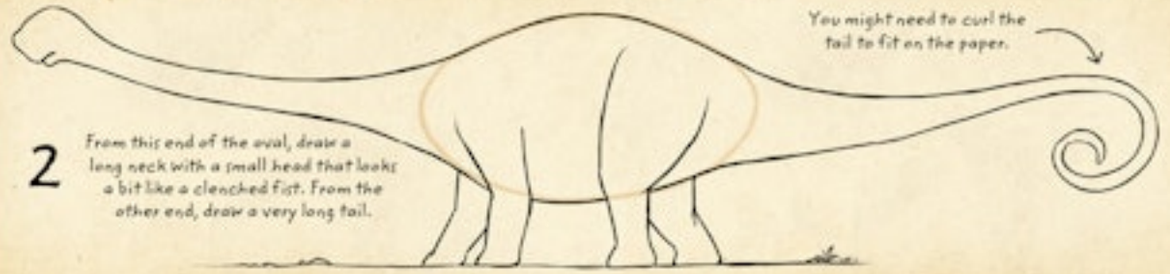
1

Lightly draw an oval shape for the body. Add four thick legs with flat feet – the near-side legs should have chunky thighs, and the far-side legs are tucked behind.



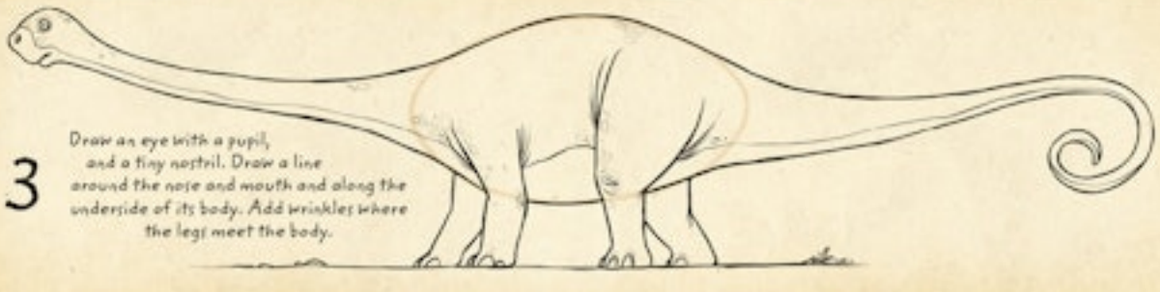
2

From this end of the oval, draw a long neck with a small head that looks a bit like a clenched fist. From the other end, draw a very long tail.



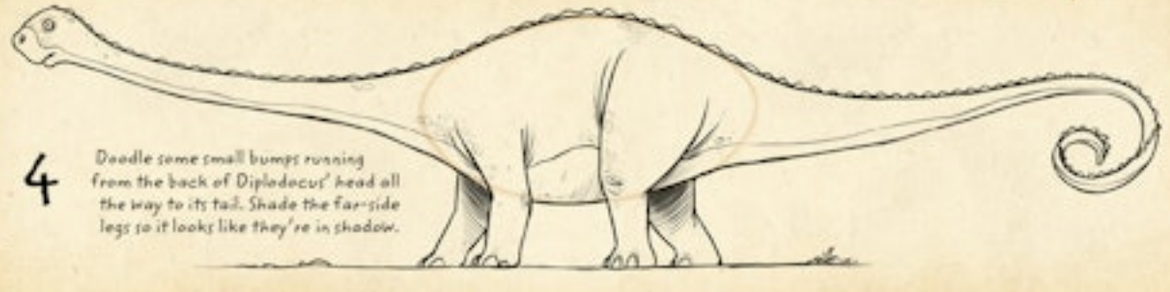
3

Draw an eye with a pupil, and a tiny nostril. Draw a line around the nose and mouth and along the underside of its body. Add wrinkles where the legs meet the body.



4

Doodle some small bumps running from the back of Diplodocus' head all the way to its tail. Shade the far-side legs so it looks like they're in shadow.



Draw over my faint doodle to practise, but if you find a really long piece of paper, you could draw a MUCH bigger Diplodocus!

While its body may be ginormous, Diplodocus had a teeny, tiny brain. It only weighed about 100 grams, whereas a human brain weighs 1400 grams. My daughter says I have a very thick skull and a Diplodocus' brain. She's so mean!

Diplodocus had an incredible neck over 6 metres long! But it only had 15 stretched vertebrae (bones) in its neck. You have 7 vertebrae in your neck. Luckily, they're much flatter, otherwise your neck would be 3 metres long...

Diplodocus had enormous leg muscles to heft about its enormous weight. A Diplodocus could weigh 30 tonnes (the same as 15 cars). Palaeontologists think it reared up on its hind legs to reach the highest plants, so it needed VERY strong legs indeed!

HOW TO DOODLE... TINY

Tiny is a young Diplodocus, who is actually quite big. He's probably the simplest to draw. Have a go!

1

Draw Tiny's head: a rounded square with a smiley mouth. In the top left, add an eye with a black dot in the middle.

2

Draw Tiny's other eye sticking out of the side of his head, and add a couple of nostrils at the top of his nose.

3

Draw a long neck, getting wider at the body. Add a bent arm and Tiny's hands: an oval with three egg shapes on one side

4

Draw the rest of Tiny's body: like a teardrop with a curved tail on the side. Add two legs with flat feet.

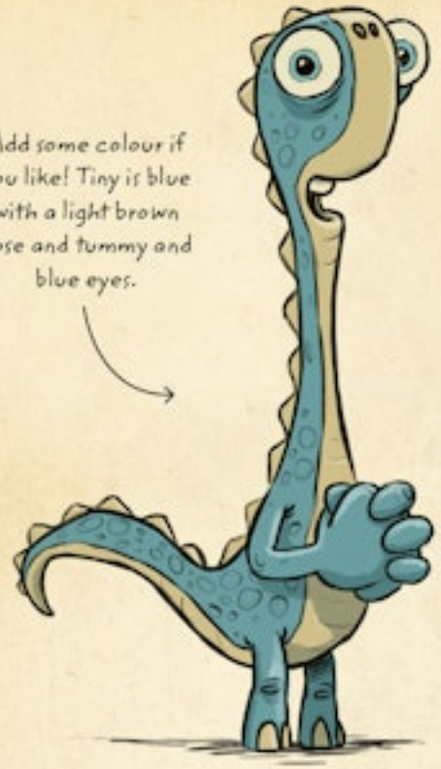
5

Draw a thin line between Tiny's eye and nostrils that follows his body, all the way to the tip of his tail. Add a row of bumps along his back.

6

Doodle lots of details, wrinkles, scaly skin and some toenails. Shade the back leg, just below his tummy.

Add some colour if you like! Tiny is blue with a light brown nose and tummy and blue eyes.



You could practise over my faint doodle before you draw your own Tiny in the space below!