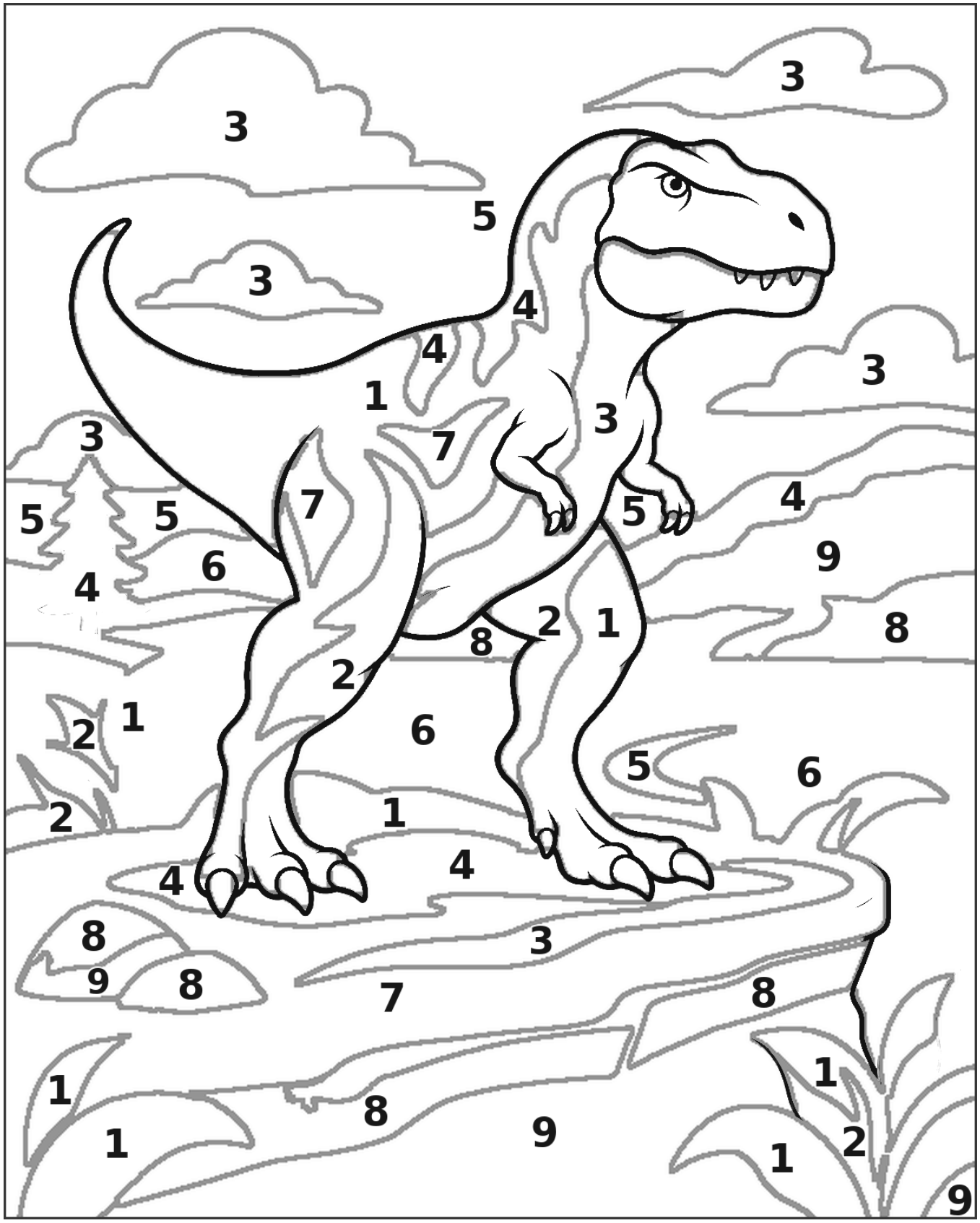
Tyrannosaurus rex

Why did T. rex have such tiny arms?





1 Olive
2 Deep olive
3 Cream
4 Blue spruce
5 Pale aqua
6 River teal
7 Golden sand
8 Heather
9 Plum

Did you know? Each hand had two clawed fingers. Those short arms had strong muscles, but scientists are still working out how T. rex used them. An early museum skeleton even had three claws on each hand. Later fossil finds showed that two was the right number.

Allosaurus



Could Allosaurus have met T. rex?



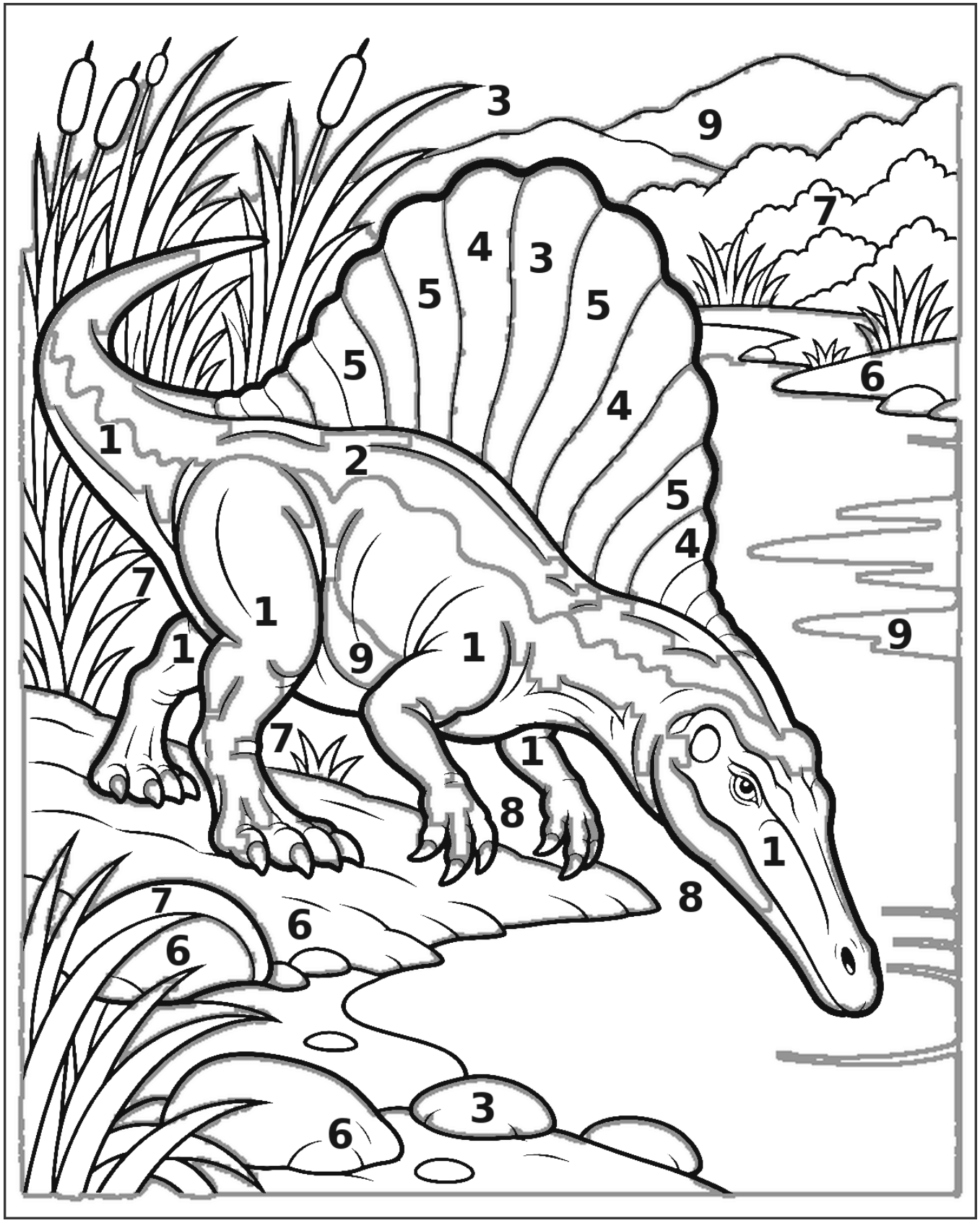
1 Copper
2 Raspberry
3 Cream
4 Aubergine
5 Sky blue
6 Slate
7 Lavender
8 Gold
9 Fern green

Did you know? Allosaurus lived in the Jurassic, tens of millions of years before T. rex. Look at its hands. Allosaurus had three fingers on each hand, while T. rex had two. Allosaurus also had small bony horns above its eyes.

Spinosaurus

Could Spinosaurus chase fish underwater?





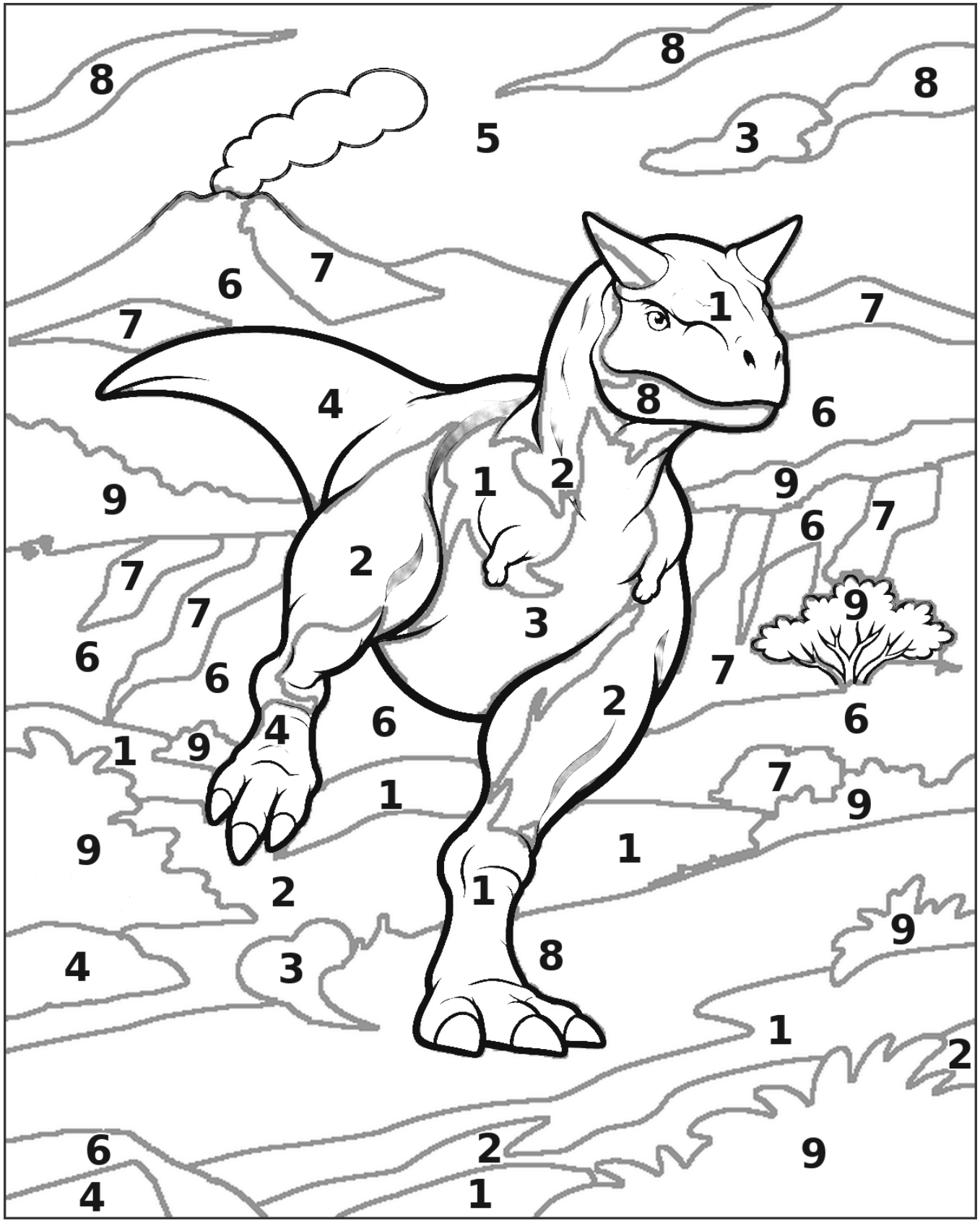
1 Slate blue
2 Indigo
3 Cream
4 Vermilion
5 Coral
6 Ochre
7 Reed green
8 River teal
9 Pale mint

Did you know? Spinosaurus had a long snout, cone-shaped teeth and a deep, fin-like tail. Those clues link it to life around water. Scientists still debate whether it chased fish underwater or mostly caught them in shallow water.

Carnotaurus

Why was it called the meat-eating bull?





1 Auburn
2 Brick
3 Cream
4 Deep plum
5 Peach sky
6 Slate
7 Mauve
8 Sandstone
9 Blue spruce

Did you know? Carnotaurus had a pair of bony horns above its eyes. The horns inspired its bull-like name, even though it walked on two legs and ate meat. Fossils from Argentina also show that its arms were unusually short.

Velociraptor

How do we know Velociraptor had feathers?





1 Prussian blue
2 Cornflower
3 Buff
4 Copper
5 Ivory sky
6 Pine green
7 Fern green
8 Apricot stone
9 Heather

Did you know? Scientists found tiny bumps on a fossil forearm. Birds have similar bumps where large feathers attach. The bumps show that Velociraptor had feathers on its arms, even though the feathers themselves did not survive in that fossil.

Compsognathus

How small could a meat-eating dinosaur be?





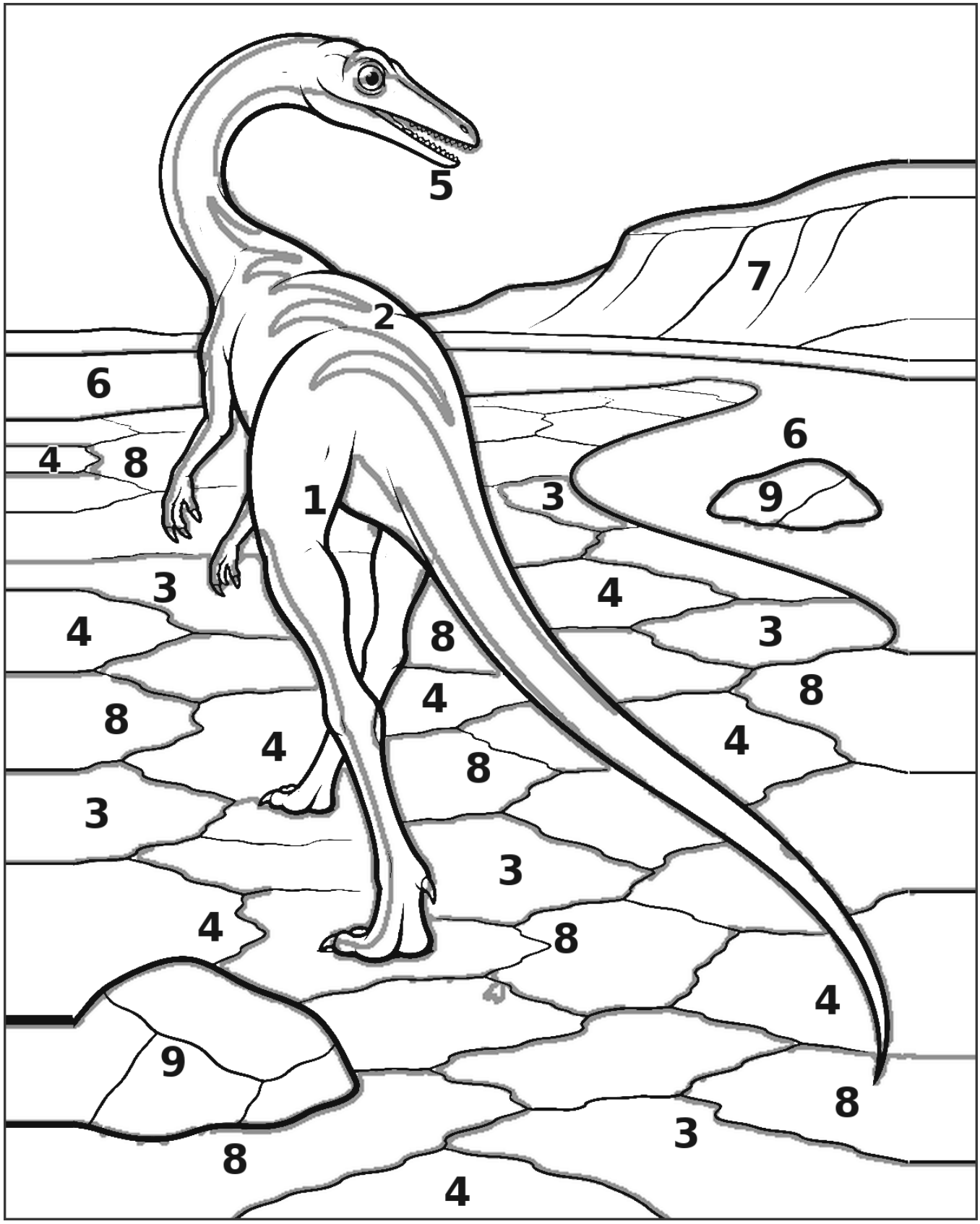
1 Honey
2 Cinnamon
3 Cream
4 Deep teal
5 Turquoise
6 Slate
7 Lilac
8 Fern green
9 Lime leaf

Did you know? Compsognathus could be about 70 centimetres long, including its tail. Imagine how much of that length was tail! It ran on two legs and had sharp teeth suited to catching small animals.

Coelophysis

What was hollow inside Coelophysis?



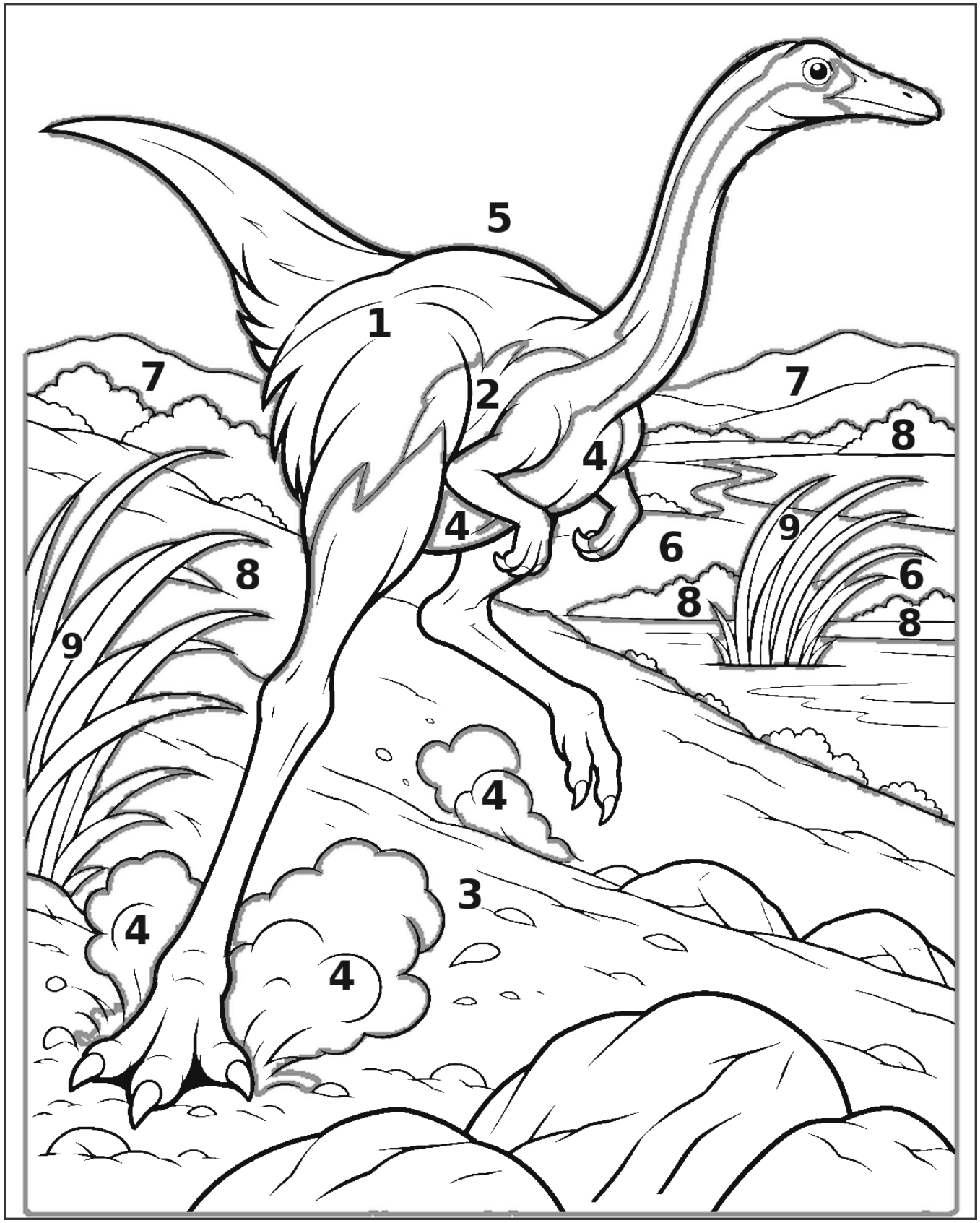


1 Jade
2 Petrol blue
3 Cream gold
4 Terracotta
5 Coral sky
6 Lagoon blue
7 Lavender rock
8 Clay orange
9 Sandstone

Did you know? The bones in its limbs had hollow spaces, which helped keep its body light. Coelophysis lived in the Late Triassic, when dinosaurs were still a young group. Its sharp teeth and grasping claws helped it catch small animals.

Gallimimus

What made Gallimimus a good runner?



1 Blackberry
2 Mulberry
3 Amber
4 Vanilla
5 Lilac sky
6 Stream blue
7 Periwinkle
8 Sage
9 Reed green

Did you know? Its long hind legs were built like those of other fast runners, including ostriches. The resemblance tells us about how Gallimimus moved. This dinosaur lived in what is now Mongolia and probably used its speed to escape predators.

Oviraptor

Was Oviraptor really an egg thief?





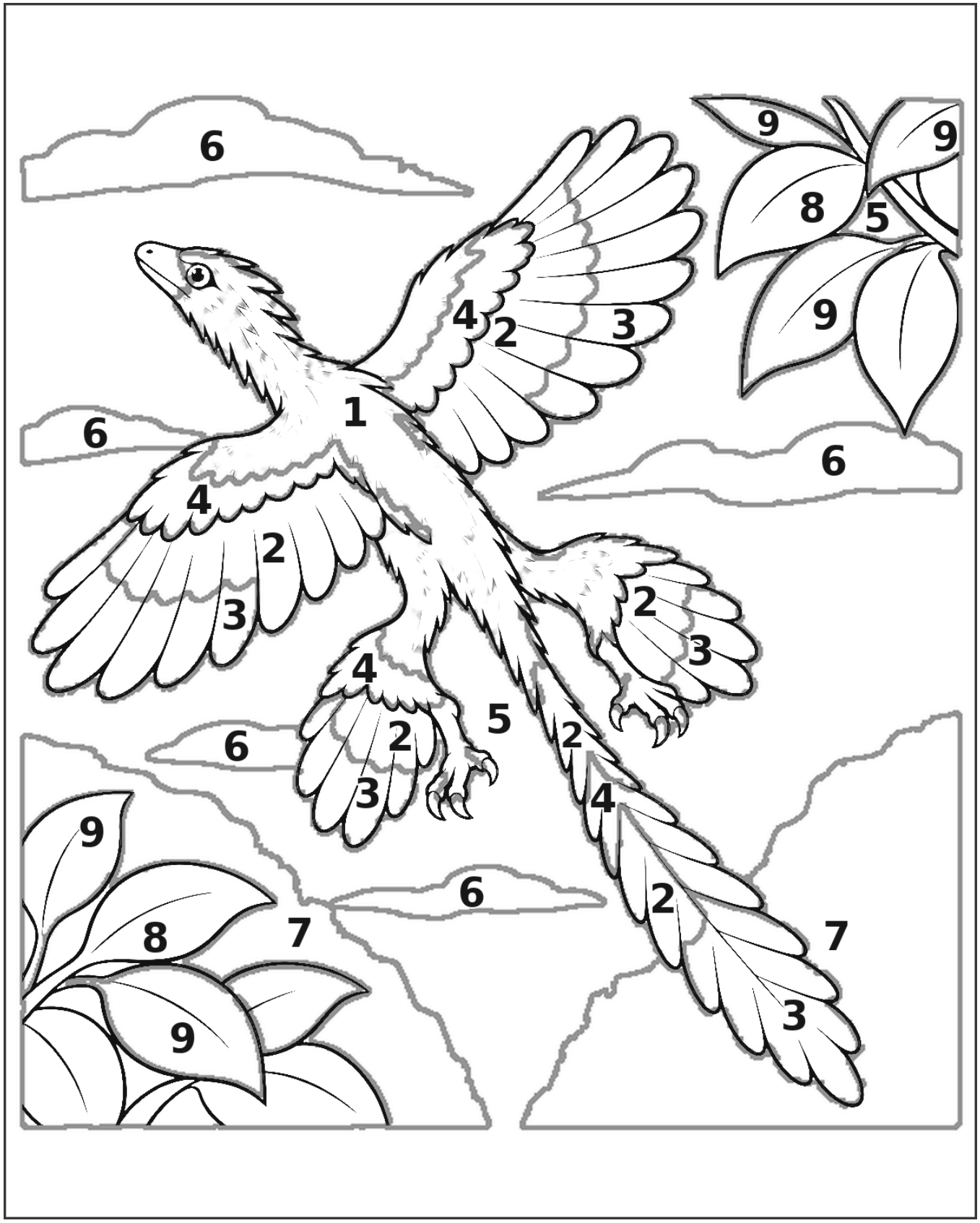
1 Orchid
2 Rose
3 Mulberry
4 Shell cream
5 Honey
6 Mesa teal
7 Sage
8 Mint haze
9 Plum stone

Did you know? Its name came from eggs found near its bones. At first researchers thought those eggs belonged to another kind of dinosaur. Later discoveries showed they came from Oviraptor relatives, and one close relative, Citipati, was even found sitting over its nest.

Microraptor

Why did Microraptor look as if it had four wings?



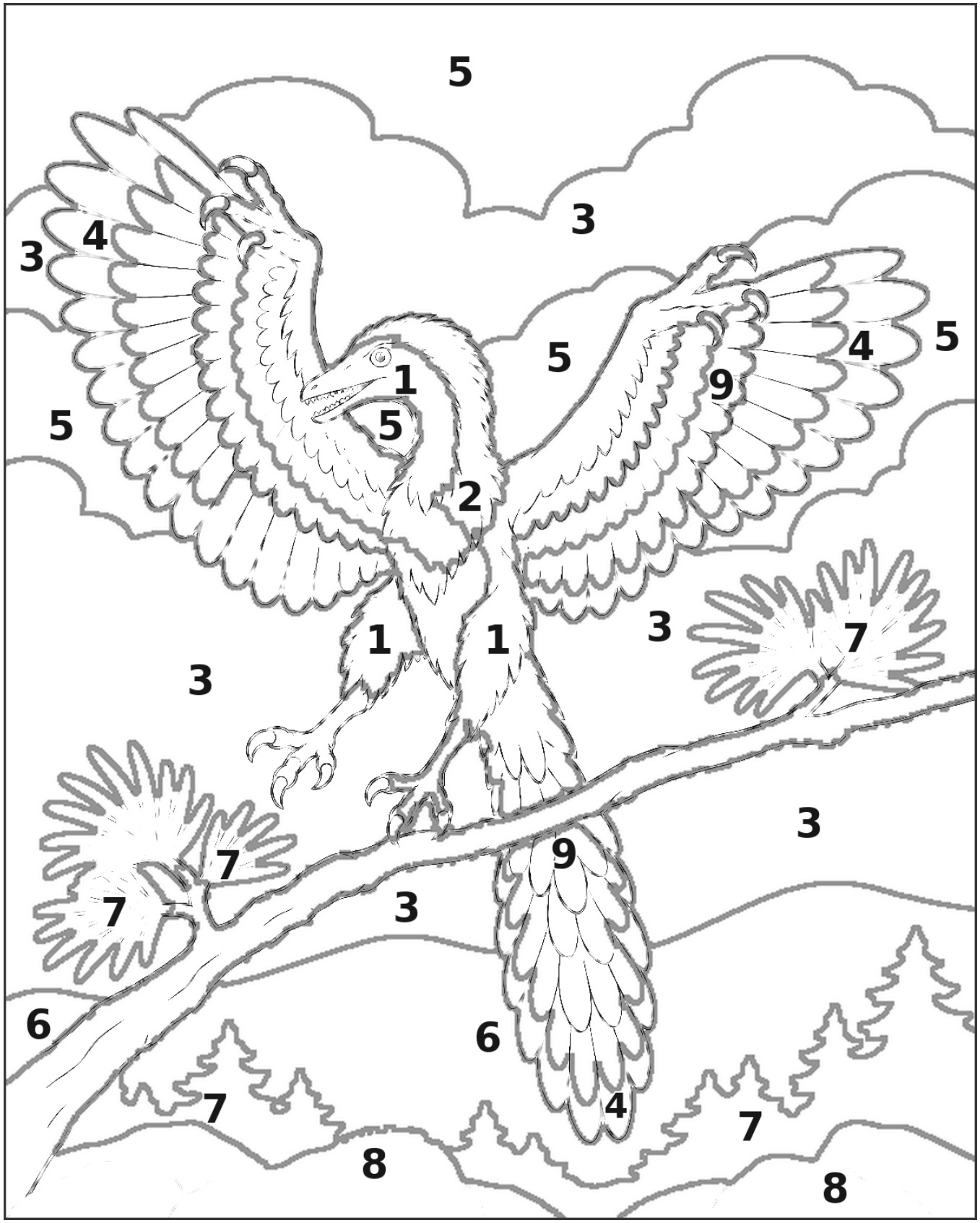


1 Night blue **2 Indigo** **3 Steel blue**
4 Peacock blue **5 Mint sky** **6 Cream**
7 Mist violet **8 Leaf green** **9 Lime**

Did you know? Long feathers grew on its legs as well as its arms. Some leg feathers were shaped like flight feathers in birds. Models suggest those feathered legs could help Microraptor glide, but researchers are still testing how it moved through the air.

Archaeopteryx

Which clues connect Archaeopteryx to birds?



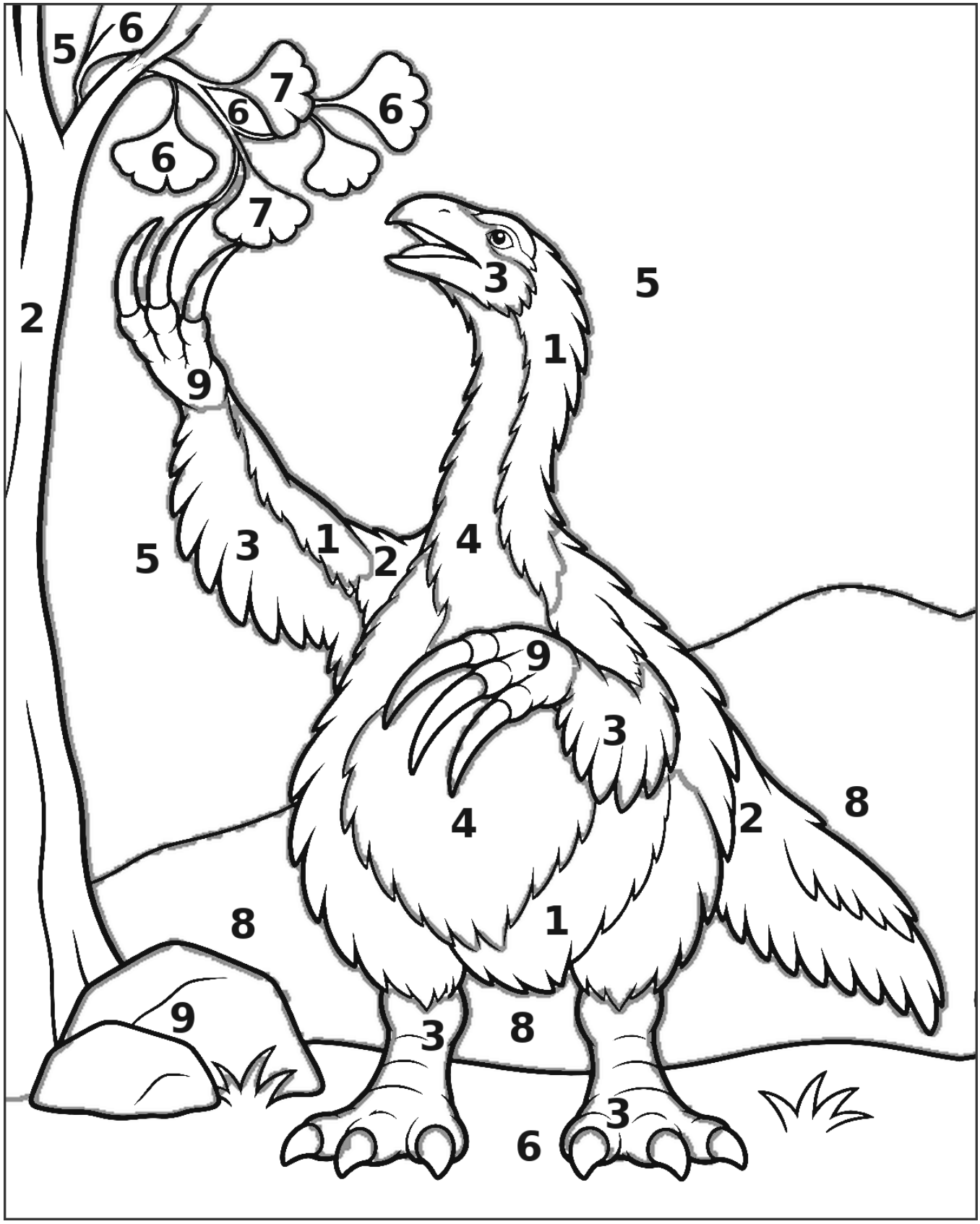
1 Burnt orange
2 Chestnut
3 Cream
4 Cocoa
5 Coral sky
6 Willow green
7 Pine green
8 Mauve
9 Honey

Did you know? Its fossils preserve long wing feathers, but its jaws had teeth and its tail was a long chain of bones. That mix helped scientists link birds to their dinosaur relatives. Living birds are the descendants of one branch of the dinosaur family.

Therizinosaurus

Do huge claws always mean a dinosaur hunted?





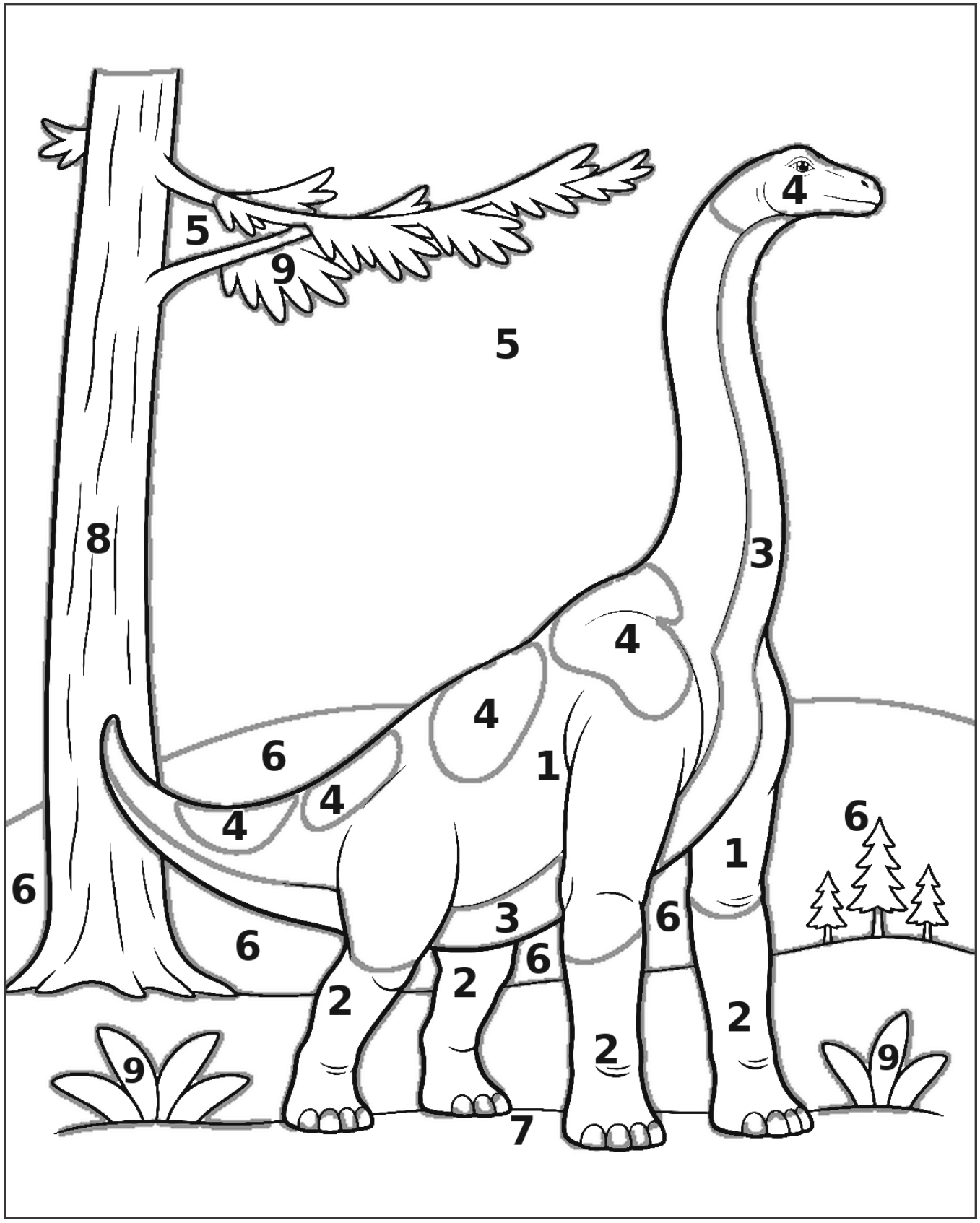
1 Rust	**2 Auburn**	**3 Ochre**
4 Cream	**5 Peach**	**6 Moss**
7 Leaf green	**8 Violet**	**9 Stone gray**

Did you know? Therizinosaurus had extremely long hand claws, but it belonged to a group of dinosaurs whose small heads and teeth point to a plant diet. The claws are easy to spot in a fossil. What the animal did with them is harder to tell.

Brachiosaurus

Why were the shoulders of Brachiosaurus so high?





1 Olive
2 Forest green
3 Pistachio
4 Amber
5 Sky blue
6 Blue gray
7 Yellow moss
8 Bark brown
9 Leaf green

Did you know? Its front legs were longer than its back legs. That raised its shoulders and gave its body a sloping shape. Together with its long neck, the tall front end helped it reach leaves high above the ground.

Diplodocus

Could a Diplodocus crack its tail like a whip?



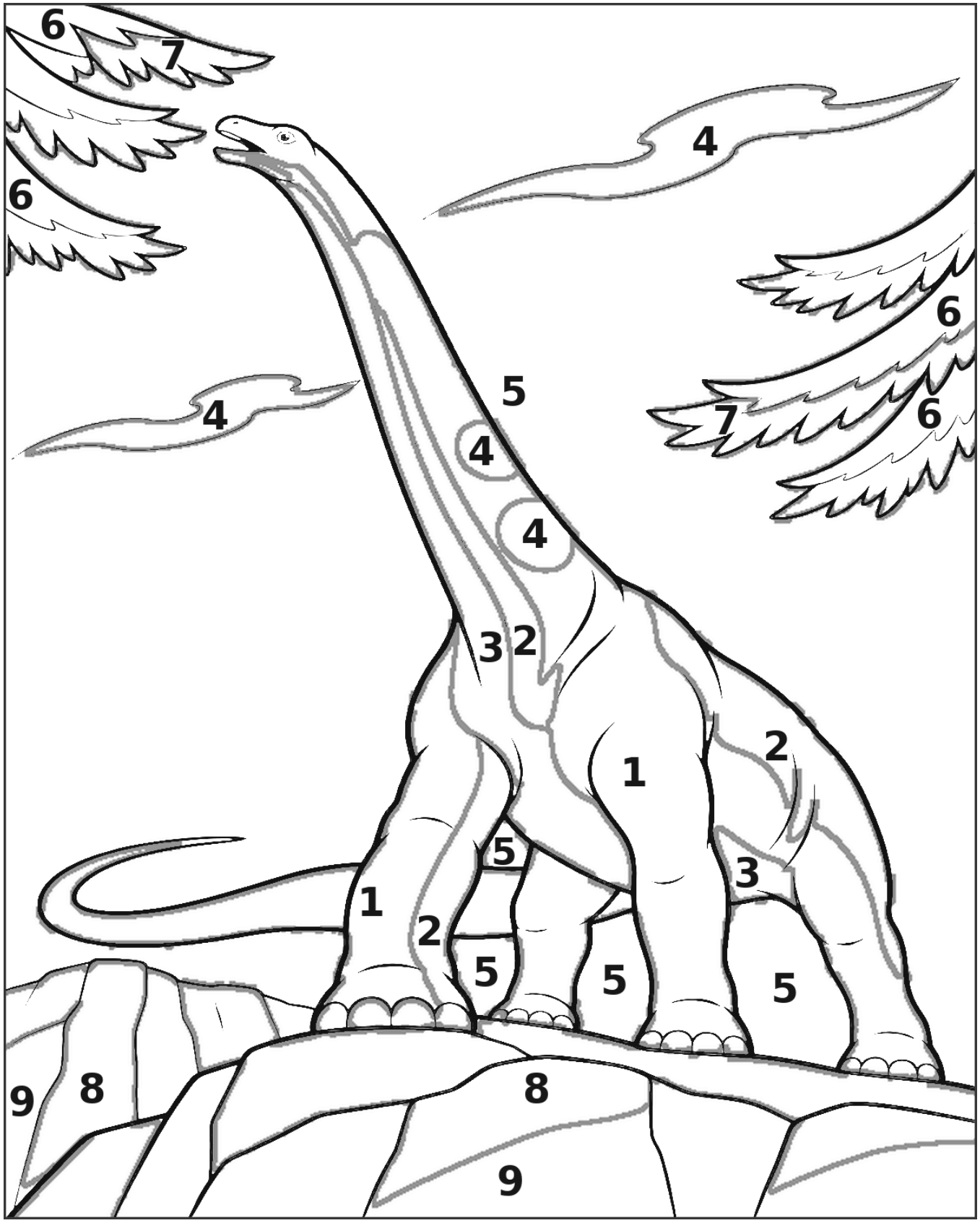


1 Blue teal
2 Petrol blue
3 Mint
4 Slate
5 River blue
6 Peach
7 Plum
8 Clay
9 Sand

Did you know? The tail tapered from a thick base to a narrow tip. Scientists have used computer models to test how fast tails like this could move. One model found they could swing quickly, but the tail tissues could not withstand a motion fast enough for a sonic boom.

Mamenchisaurus

How can scientists measure a neck with missing bones?



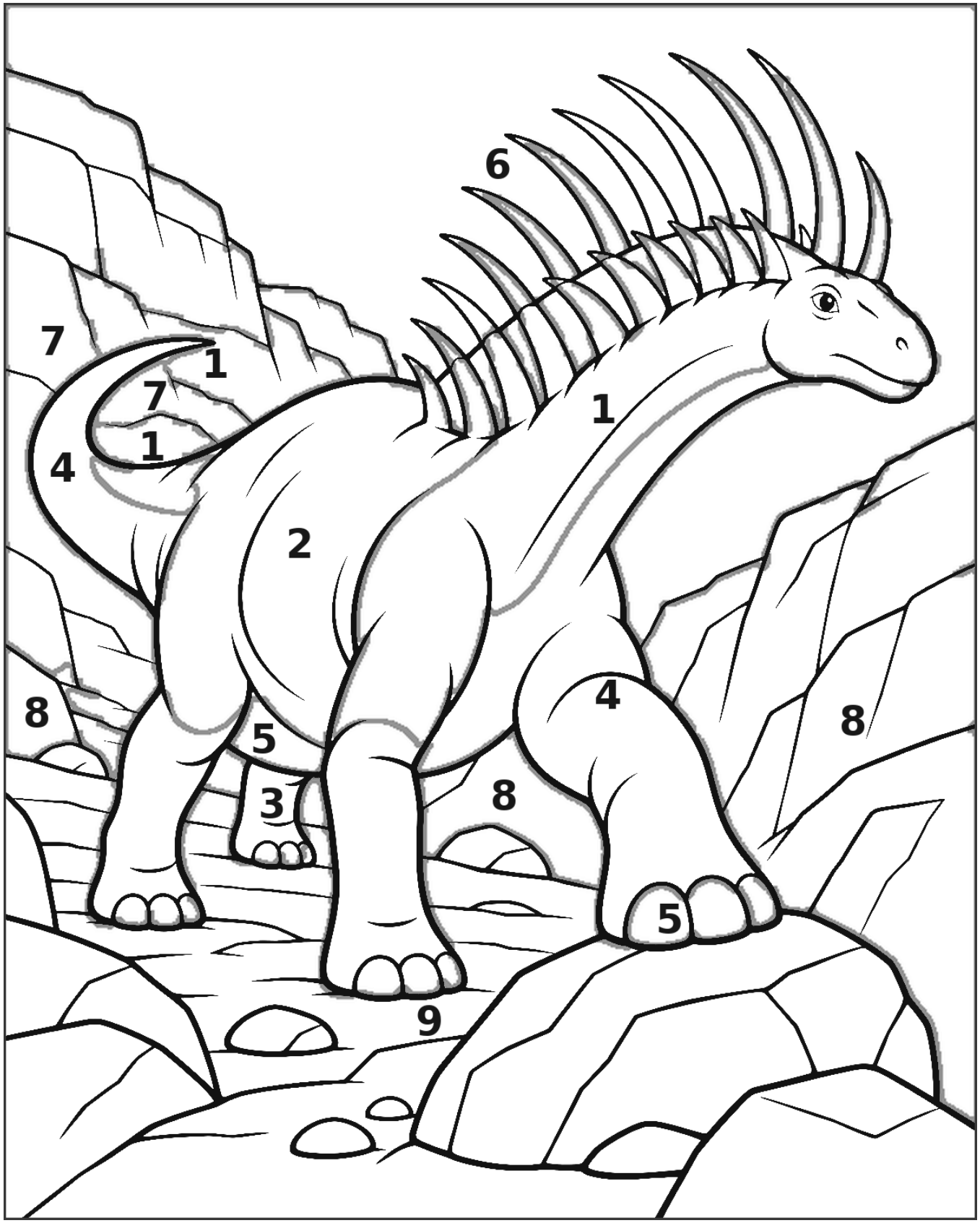
1 Wine red
2 Brick red
3 Coral
4 Peach
5 Cobalt blue
6 Spruce
7 Needle green
8 Lilac
9 Rock violet

Did you know? For one species of Mamenchisaurus, researchers measured the bones they had and compared them with the same bones in a close relative with a complete neck. Scaling up that pattern gave an estimate of about 15 metres. The missing bones make it an estimate.

Amargasaurus

What rose above the neck of Amargasaurus?





1 Ochre
2 Gold olive
3 Dark olive
4 Rust
5 Linen
6 Sky blue
7 Apricot
8 Mauve
9 Slate

Did you know? Many neck bones carried a pair of long bony spines. Scientists studying the bones found signs that tissue connected the spines. That supports the idea of a sail along the neck, although its exact shape is still uncertain.

Ankylosaurus

How was Ankylosaurus built like an armoured tank?



1 Olive
2 Brick red
3 Gold tan
4 Earth brown
5 Cream sky
6 Terracotta
7 Mauve
8 Blue teal
9 Leaf green

Did you know? Bony plates in the skin formed armour across its body, and a heavy bony club capped its tail. Studies of related dinosaurs suggest big clubs could deliver hard blows. The fossil bones show how the club was built, even when its exact use is uncertain.

Stegosaurus

What were the plates on its back for?





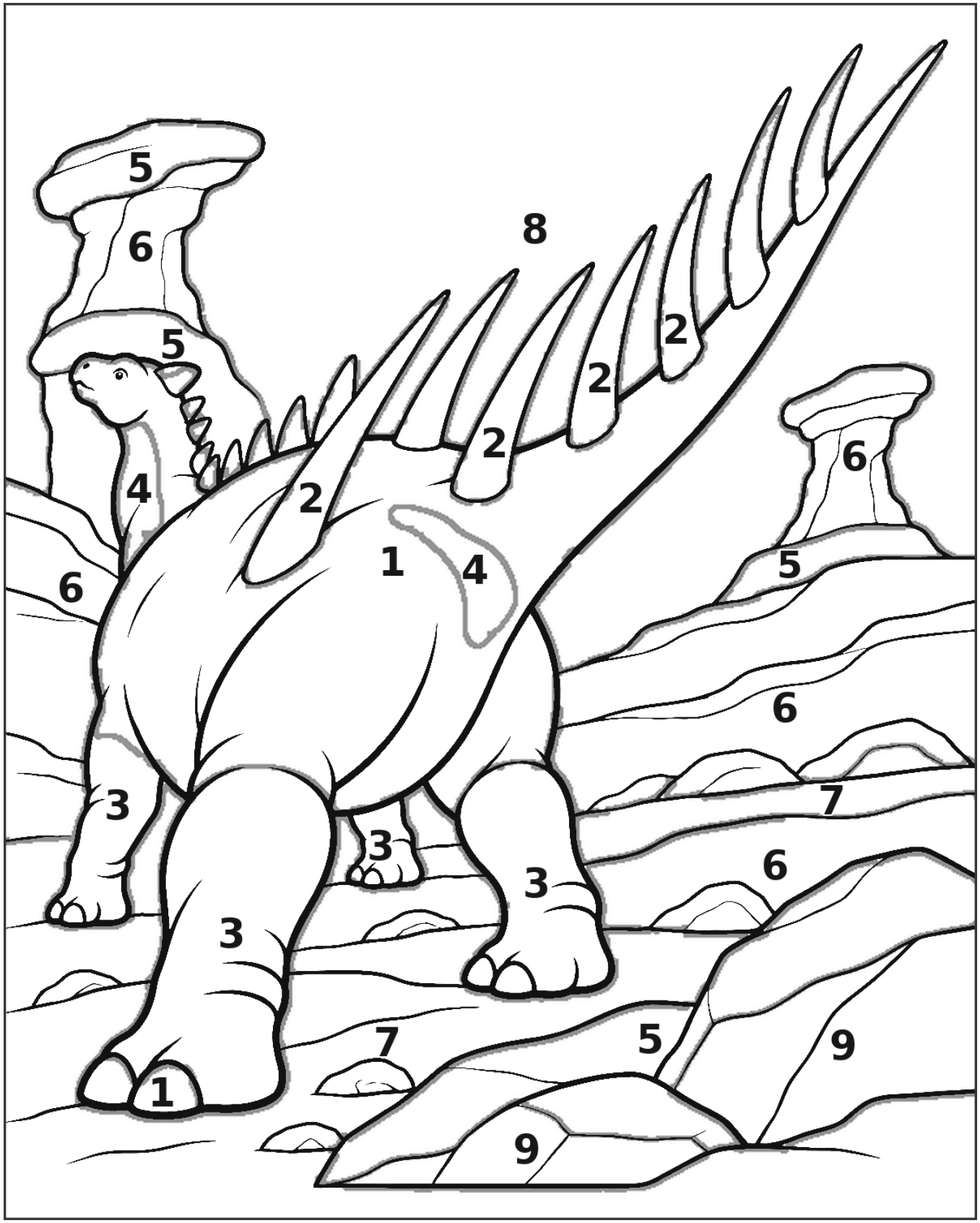
1 Slate blue
2 Deep blue
3 Warm cream
4 Brick red
5 Amber
6 Fern green
7 Yellow olive
8 Violet
9 Ivory sky

Did you know? Stegosaurus had tall bony plates on its back and a separate set of sharp spikes on its tail. Researchers have suggested that the plates helped it show off or exchange heat with the air. Fossils have not settled what the plates did.

Kentrosaurus



Where do the plates give way to spikes?



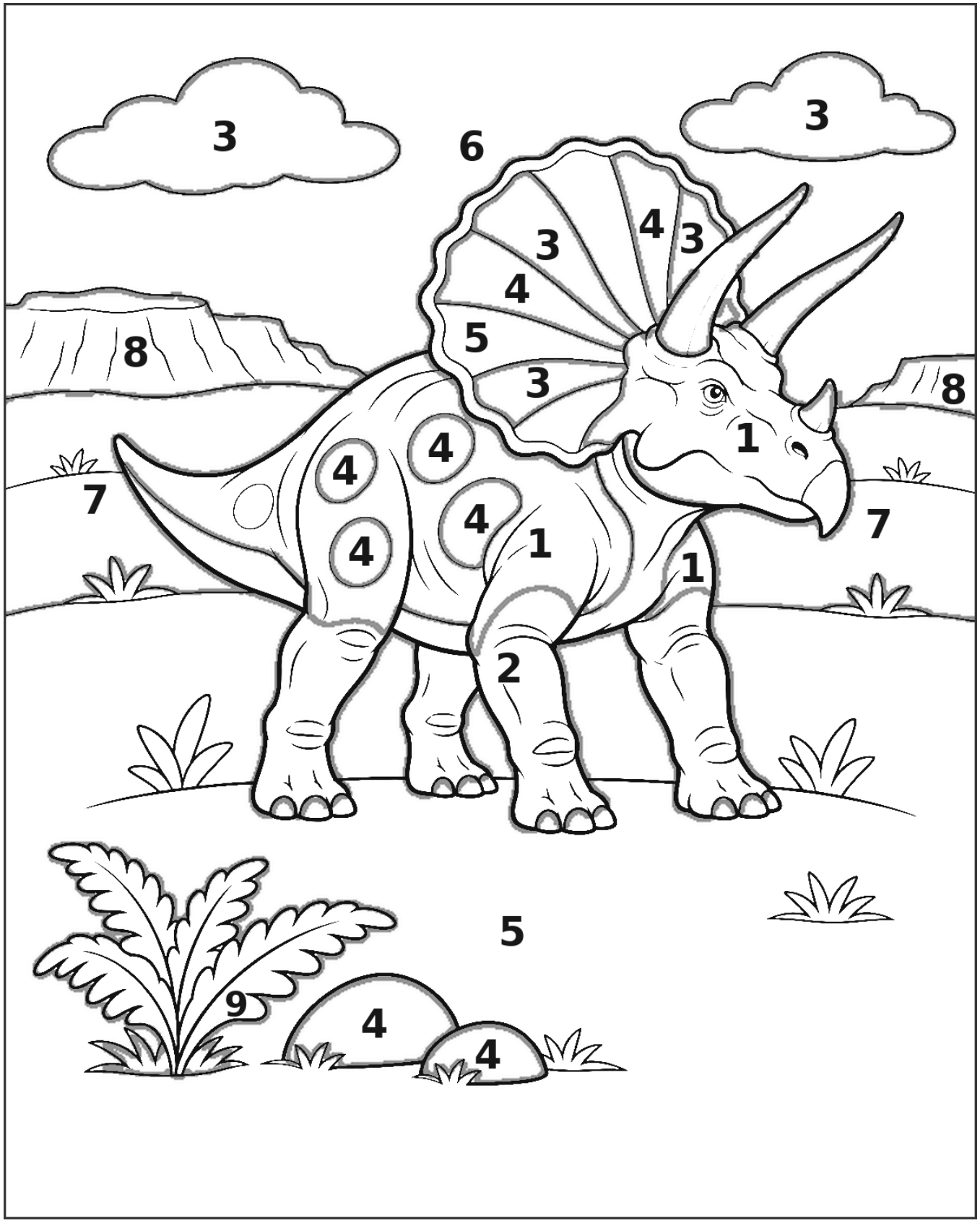
1 Plum
2 Cranberry
3 Burgundy
4 Dusty rose
5 Gold
6 Canyon red
7 Sage
8 Turquoise
9 Cocoa

Did you know? Kentrosaurus was a relative of Stegosaurus. Small plates lined the front part of its back, while longer spikes stood out farther back and along the tail. Fossils of Kentrosaurus were found at Tendaguru Hill in what is now Tanzania.

Triceratops

What can old injuries tell us about Triceratops?





1 Olive
2 Forest green
3 Ivory
4 Gold
5 Terracotta
6 Sky blue
7 Blue gray
8 Peach
9 Fern green

Did you know? Triceratops had three facial horns and a broad bony frill behind its head. Some fossil frills show injuries consistent with clashes between animals of the same species. The marks help scientists test ideas about how the horns and frill were used.

Styracosaurus

Where did Styracosaurus wear its biggest horn?





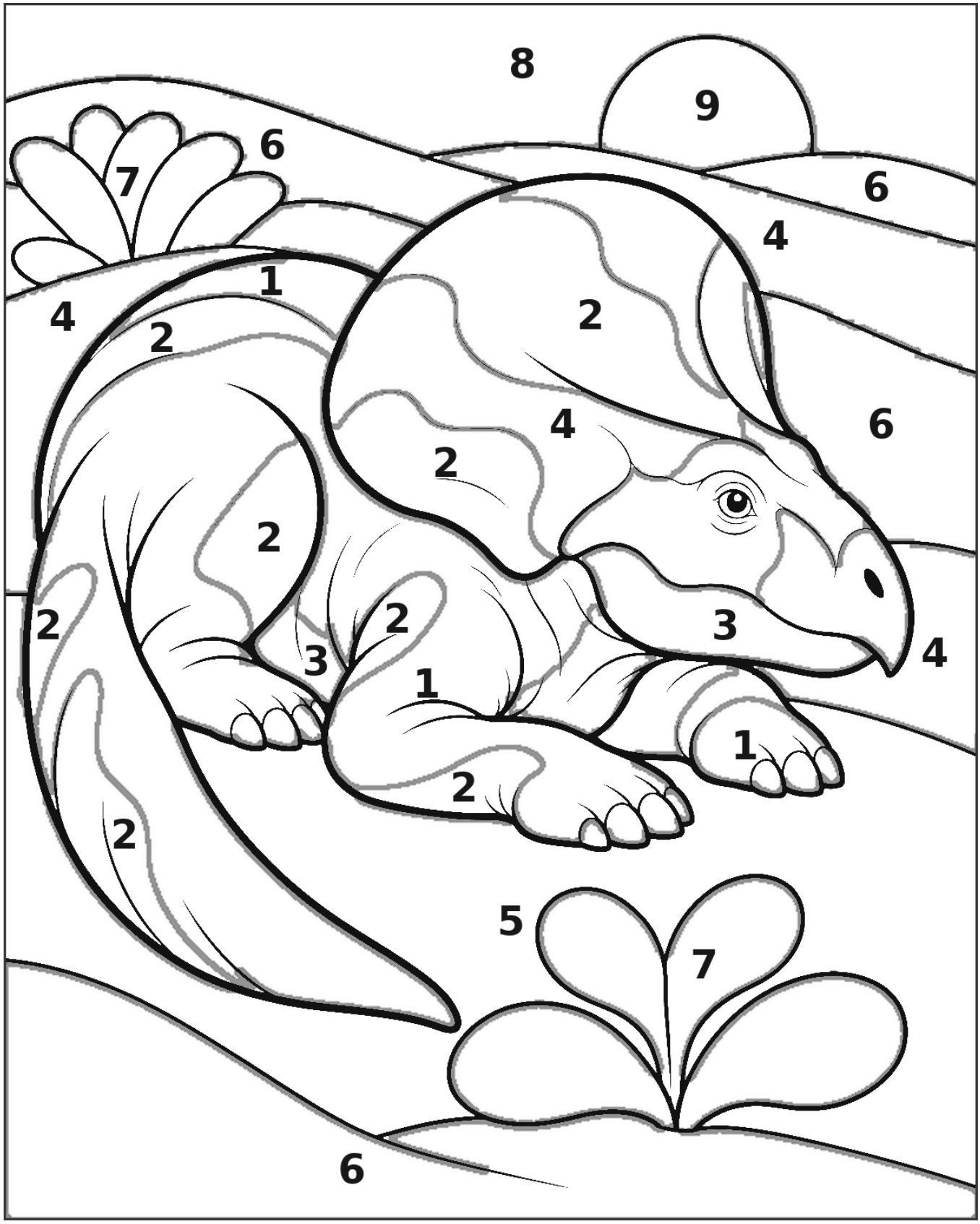
1 Slate violet	**2 Deep blue**	**3 Ivory**
4 Coral	**5 Berry**	**6 Fern green**
7 Ochre	**8 Sand**	**9 River blue**

Did you know? Look above the nose for one long horn. Then look behind the head for the bony frill with its ring of large spikes. This arrangement gives Styracosaurus a very different silhouette from Triceratops, which had two long horns above its eyes.

Protoceratops

Can you spot the beak and frill?





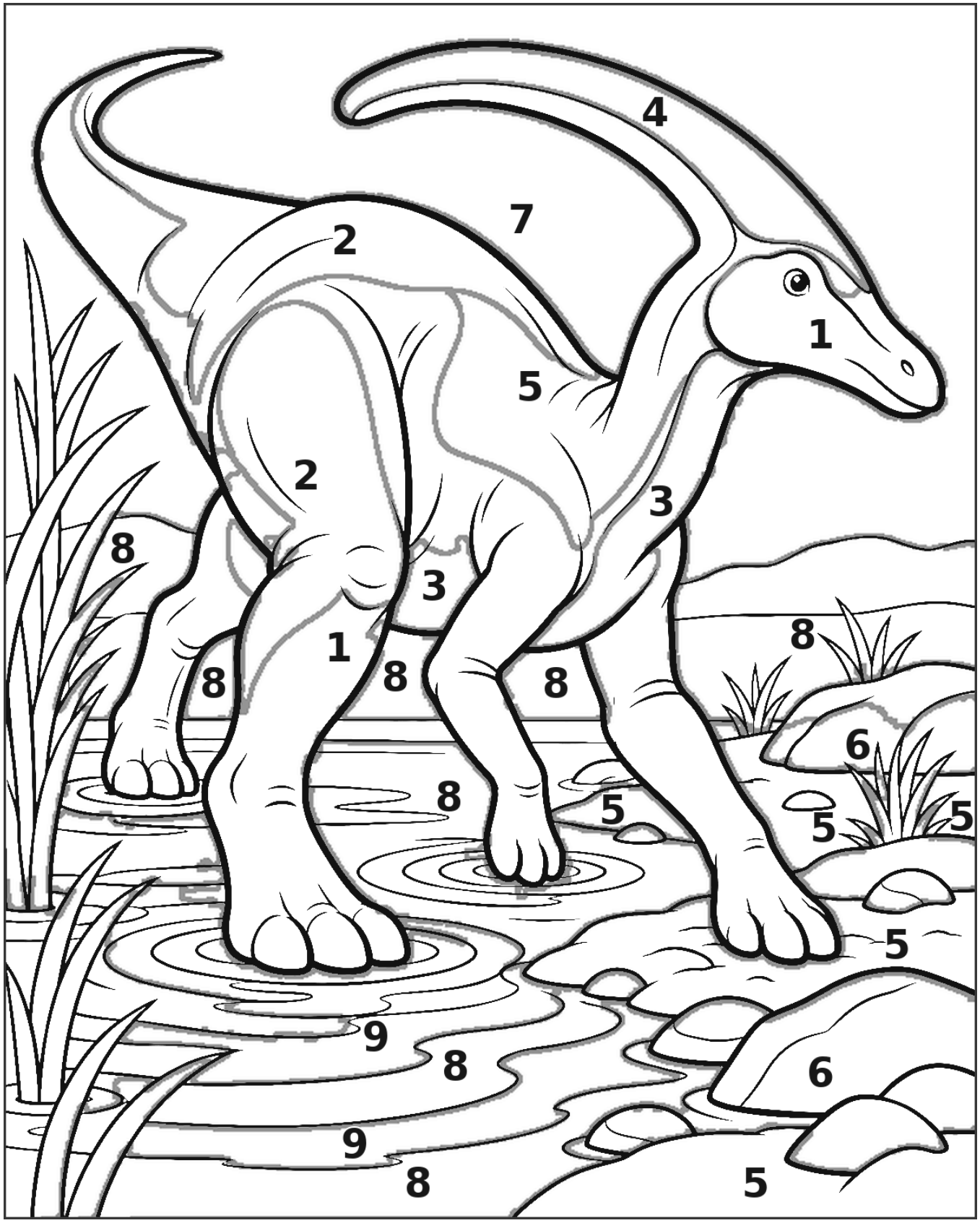
1 Apricot
2 Sienna
3 Cream
4 Amber
5 Mauve
6 Dusty rose
7 Sage green
8 Violet sky
9 Sun yellow

Did you know? Protoceratops had a hard beak for biting off food and a bony frill behind its head. This relative of the horned dinosaurs was much smaller than Triceratops. It lived in Late Cretaceous Asia, where it shared its habitat with Velociraptor.

Parasaurolophus

Was the long crest a built-in musical instrument?





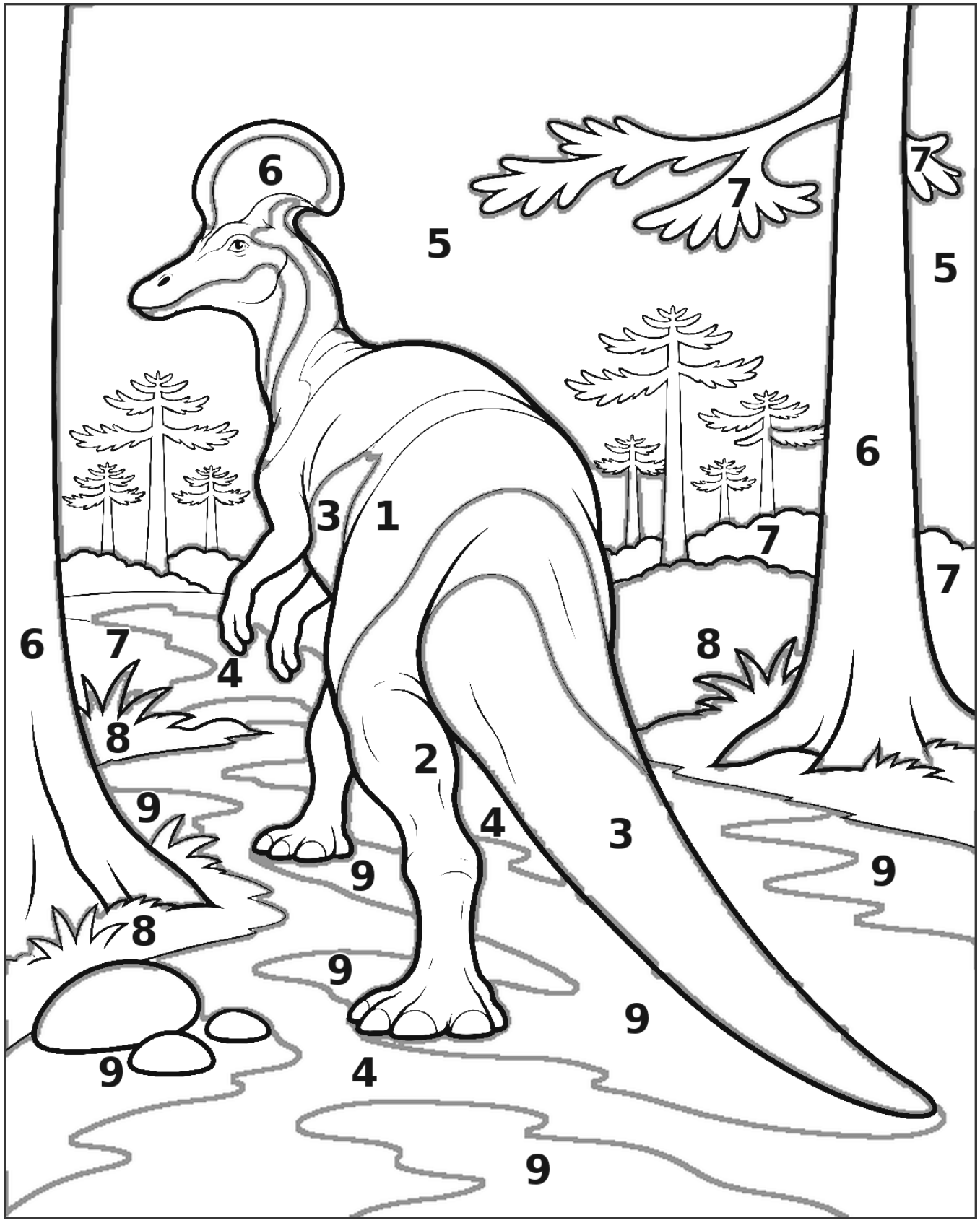
1 Emerald
2 Leaf green
3 Pistachio
4 Vermilion
5 Clay
6 Slate
7 Sky blue
8 River blue
9 Mint

Did you know? Air passages curled through the long crest. Scientists scanned a fossil skull and used a computer model to test what sound the tubes might make. The model produced a low tone, a clue to how Parasaurolophus may have called.

Corythosaurus

What was hidden inside the helmet-shaped crest?





1 Indigo plum
2 Violet
3 Lilac
4 Straw gold
5 Cream sky
6 Cinnamon
7 Pine green
8 Moss
9 Blue slate

Did you know? The rounded crest contained winding passages connected to the nose. Air could travel through those passages. The exterior gives Corythosaurus its helmet-like profile, while the hidden tubes give scientists a clue to what the crest might have done.

Pachycephalosaurus

Did dome-headed dinosaurs clash heads?





1 Midnight blue
2 Dusty teal
3 Wheat
4 Golden olive
5 Russet
6 Fern green
7 Peach
8 Lilac
9 Slate

Did you know? Pachycephalosaurus had a thick dome of bone on top of its head. Some fossil domes have damage that could be traces of combat. Scientists still debate how the injuries happened and whether the dome helped the animal fight, show off, or both.