### Line Wiel

## **DINO ABC**

- learn the alphabet with dinosaurs and other prehistoric animals

### $\mathbf{A}\mathbf{A}$

# Archeopteryx

[ar-ke-opp-te-riks]

**Archeopteryx** is one of the first birds we know of and is often called the "primitive bird".

Other dinosaurs beginning with A: Albertosaurus, Allosaurus, Ankylosaurus

#### Bb

#### **Brachiosaurus**

[brak-i-o-sau-russ]

**Brachiosaurus** must have had a really big heart. It would need a very large muscle to pump blood all the way up to the brain.

Other dinosaurs beginning with B: Baryonyx · Brachylophosaurus · Brontosaurus

#### Cc

## Coelophysis

[ser-lo-fy-sis]

Coelophysis lived in flocks. This little dinosaur ran around on two legs and caught its prey with its hands.

Other dinosaurs beginning with C: Carnotaurus, Ceratosaurus, Compsognathus, Corythosaurus, Cryolophosauru

#### Dd

# **Dilophosaurus**

[di-lo-fo-sau-russ]

**Dilophosaurus** was as heavy as a bear and just as dangerous.

Other dinosaurs beginning with D: Daspletosaurus, Dromeosaurus

#### Ee

#### Elasmosaurus

[e-las-mo-sau-russ]

**Elasmosaurus** was not a dinosaur, but a sea reptile. It is also called a swan lizard, but only because its long neck resembles a swan.

Other extinct animals beginning with E: Edmontonia, Eoraptor, Epidexipterythx, Euplocephalus

#### Ff

### **Fruitadens**

[fru-ta-dens]

Not all dinosaurs were big. **Fruitadens** was a tiny herbivore (plant eater). And was rarely bigger than your neighbour's cat.

Other dinosaurs beginning with F: Falcarius, Futalongcosaurus, Fukuiraptor

## Gg

#### Gastonia

[ga-ston-i-a]

**Gastonia** had armor and spikes all over its body that protected it against hungry carnivores (meat eaters). Other dinosaurs beginning with G: Gallimimus, Giganotosaurus, Giraffatitan

#### Hh

# Hatzegopteryx

[hatt-se-gopp-te-rykks]

**Hatzegopteryx** had no teeth and swallowed its prey whole! Other extinct animals beginning with H: Herrerasaurus, Hesperornis, Heterodontosaur

#### Ιi

## **Ichthyosaurus**

[ikk-tyo-sau-russ

**Ichthyosaurus** could swim really fast. But not always fast enough to escape a predator (hunter).

Other extinct animals beginning with I: Iguanodon, Ingentia, Irritator, Isfjordosaurus

## Ji

#### Juravenator

[ju-ra-ven-a-tor

**Juravenator** had big eyes. It could see in the dark and hunted at night. Other dinosaurs beginning with J: Jaxartosaurus, Jiangxisaurus, Jobaria, Juratyrant

#### Kk

## Kaprosuchus

[kap-ro-so-kus]

**Kaprosuchus** resembled a crocodile, but was a carnivorous reptile that lived at the same time as dinosaurs.

Other extinct animals beginning with K: Kentrosaurus, Kosmoceratops, Kronosaurus

### LI

#### Lambeosaurus

[lam-be-o-sau-russ]

**Lambeosaurus** had a comb on his head. The comb was part of the nose and gave it a good sense of smell.

Other dinosaurs beginning with L: Lesothosaurus, Loricatosaurus, Lourinhanosaurus

#### Mm

# Megalosaurus

[me-ga-lo-sau-russ]

**Megalosaurus** was the first dinosaur to be excavated by paleontologists (fossil scientists). Before that, scientists did not even know that dinosaurs existed! Other dinosaurs beginning with M: Maiasaura, Microraptor, Mussaurus, Muttaburrasaurus

### Nn

# Nigersauru

[ni-ger-sau-russ]

**Nigersaurus** is the dinosaur with the weirdest head shape for sure. Its mega-mouth was filled with more than 500 teeth.

Other dinosaurs beginning with N: Nedoceratops, Nodosauru

### Oo

# **Oviraptor**

[o-vi-rap-tor]

**Oviraptor** did not have teeth, but could tear its prey with its powerful beak. Other dinosaurs beginning with O: Olorotitan, Ornitholestes, Ornithomimus

### Pp

#### **Pliosaurus**

[pli-o-sau-russ

**Pliosaurus** was an extremely dangerous predator, and had absolutely no enemies. Other extinct animals beginning with P: Pachycephalosaurus, Pentaceratops, Plateosaurus, Psittacosaurus

### Oq

### **Quetzalcoatlus**

[kett-sall-ko-att-luss

**Quetzalcoatlus** is the largest flying lizard that has been discovered. It could cover an entire school bus if it spread its wings.

Other extinct animals beginning with Q: Qianzhousaurus, Qiaowanlong, Qinglongopterus

#### Rr

# Rajasaurus

[ra-ja-sau-russ]

**Rajasaurus** means royal lizard. No one really knows the colour of this dinosaur. Perhaps it had stripes and even a pink crown on its head? Other extinct animals beginning with R: Rhamphorhynchus, Rhoetosaurus, Riojasaurus

### Ss

## **Spinosaurus**

[spi-no-sau-russ]

**Spinosaurus** is the largest carnivore (meat-eater) we know anything about, but it also ate fish. Do you like to eat fish?

Other dinosaurs beginning with S: Sinosauropteryx, Stegosaurus, Stygimoloch, Suchomimus

## Tt

## Therizinosauru

[sø-lo-fy-sis]

**Therizinosaurus** had the longest claws of any other dinosaur around. Its claw could be as long as the tusks of a walrus. And it had three of these giant claws on each hand! Other dinosaurs beginning with T: Tarbosaurus, Triceratops, Troodon,

### Tt

## Tyrannosaurus rex

[tyr-ann-o-sau-russ reks]

We can not have a dinosaur alphabet without including the **Tyrannosaurus rex**. The king of all the tyrant lizards

Other dinosaurs beginning with T: Taurovenator, Therizinosaurus, Torvosaurus, Tyrannotitan

## Uu

### **Utahraptor**

[u-ta-rapp-tor]

**Utahraptor** was one of the largest and most dangerous hunters we know. Raptor means hunter

Other dinosaurs beginning with U: Ubirajara, Unaysaurus, Ultrasaurus

 $\mathbf{V}\mathbf{v}$ 

# Velociraptor

[vel-o-si-rap-tor]

**Velociraptor** was small, smart, super-fast and hunted in flocks. Dangerous with a capital D!

Other dinosaurs beginning with V: Valdosaur, Velafrons, Vulcanodon

#### $\mathbf{W}\mathbf{w}$

### Wuerhosaurus

[ver-o-sau-russ

We don't really know whether the dorsal plates of the **Wuerhosaurus** were flat on the top, or whether the fossil was damaged so that the plates just looked flat. Other dinosaurs beginning with W: Wakinosaurus, Wiehenvenator, Wulatelong, Wulong

#### $\mathbf{X}\mathbf{x}$

## **Xenoceratops**

[see-no-sera-tops]

If you were a carnivore, would you have dared to catch a **Xenoceratops**? Other dinosaurs beginning with X: Xiaotingia, Xiaosaurus, Xuanhuaceratops

# Yy

# Yutyrannus

[ ju-tyr-ann-us]

Paleontologists (fossil scientists) wonder why **Yutyrannus** had feathers on its body. It was too heavy to fly and did not have any wings. Other dinosaurs beginning with Y: Yangchuanosaurus, Yingshanosaurus, Yinlong

### $\mathbf{Z}\mathbf{z}$

### Zephyrosaurus

[se-fir-o-sau-russ]

**Zephyrosaurus** was a small herbivore (plant eater). Like the squirrel, it hid its food in tricky places to save for later. But did it always remembered where? Other dinosaurs beginning with Z: Zalambdalestes, Zephyrosaurus, Zupayasaurus

# Ææ Øø Åå

Today, there are no dinosaurs with names beginning with  $\mathcal{L}$ ,  $\mathcal{O}$  or  $\mathcal{A}$ . At least not yet. Maybe in the future you will find an undiscovered dinosaur? Then you know that the letters  $\mathcal{L}$ ,  $\mathcal{O}$  and  $\mathcal{A}$  are available.

#### **FACTS**

#### Aa

## Archeopteryx

When: Jurassic Period 150 million years ago

Where: Germany Weight: 500 grams Height: 30 centimeters Length: 50 centimeters

Ate: Meat

Archeopteryx confused paleontologists (fossil scientists) for years before they discovered that not all dinosaurs were covered in scales. Just like today's birds, the *Archeopteryx* had wings and feathers, but it also had a jaw with teeth and a long, bony tail like the dinosaurs. It was the size of a dove and was able to fly away to escape predatory dinosaurs.

#### Bb

### **Brachiosaurus**

When: Late Jurassic, 150 million years ago Where: Tanzania and the United States

Weight: 70-80 tons Length: 18-25 meters Height: Up to 13 meters

Ate: Plants

Imagine a house three stories high. *Brachiosaurus* was as tall as that, with nostrils at the top of its forehead. Its legs were as thick as tree trunks and it weighed as much as 16 elephants. Brachiosaurus lay eggs as big as footballs. The eggs have been found in a row and not in nests, so fossil scientists believe that *Brachiosaurus* laid eggs while walking.

Actually there were dinosaurs even bigger walking around at that time. *Argentinosaurus* is the largest dinosaur ever found. Maybe you will discover one that is even bigger?

### Cc

# Coelophysis

When: Late Triassic, 222-215 million years ago

Where: USA

Weight: 35-40 kilos Length: 3 meters long Height: Up to 1 meter

Ate: Reptiles, fish and other small animals

Coelophysis was one of the very first dinosaurs to walk the earth. It had a long, narrow snout and sharp teeth. That means it was carnivores. A carnivore is one who eats other animals. Paleontologists (fossil scientists) have found over one hundred Coelophysis skeletons in one place in New Mexico. This shows that Coelophysis lived in flocks or large families.

#### Dd

# **Dilophosaurus**

When: Jurassic, 193 million years ago Where: North America and Australia

Weight: 400 kilos Length: 7 meters

Ate: Fish, small freshwater animals and terrestrial animals

Several fossils of the *Dilophosaurus* have been found, and almost all the bones in the skeleton are now catalogued. This was a predatory dinosaur that walked on two legs, with powerful arms and two chambers on its snout. *Dilophosaurus* means two-combed lizard. Maybe the combs would help family members recognize one other?

#### Ee

### Elasmosaurus

When: Late Cretaceous, 70 million years ago

Where: North America Weight: 2750 kilos Length: 14 meters Ate: Fish and shellfish

*Elasmosaurus* had a very long neck. Sometimes the neck was longer than the rest of the body. It had four flippers that looked like paddles. Yet it did not swim very fast, and ate mostly fish and small shellfish.

Many people believe that sea reptiles were dinosaurs since they lived at the same time. But dinosaurs had four legs and walked on land. Sea reptiles, such as the *ichthyosaurs*, *mosasaurs* and *plesiosaurs*, had flippers and swam in the ocean.

### Ff

#### **Fruitadens**

When: Jurassic 150 million years ago

Where: United States

Weight: approx. 800 grams Length: 70 centimeters long

Ate: Plants and meat

Fruitadens had a very long, flexible tail that helped keep its balance when running on its hind legs. Such a small dinosaur had many enemies, and it was probably very good at hiding! Fruitadens belong to a dinosaur group called heterodontosaur. This means lizard with different types of teeth. It had both a beak and fangs. But also molars (grinding teeth) in the back of its jaw, just like you!

## Gg

### Gastonia

When: Early Cretaceous, 125 million years ago

Where: North America

Weight: 900 kilos Length: 4.5 meters Ate: Plants

The name means: Gaston's reptile

Gastonia were herbivores (plant eaters). It lived in flocks with its family in dry forests, and spent the day munching on twigs and leaves. Still, its life was not entirely peaceful. For in the forest also lived hungry carnivores. Gastonia was not very fast, but luckily it had a kind of armor and spikes on its tail with which to defend itself.

### Hh

# Hatzegopteryx

When: Cretaceous, 120 million years ago

Where: Europe and North America

Weight: approx. 60 kilos Height: approx. 2 meters

Length: 10–12 meters wingspan

Ate: Meat and fish

Hatzegopteryx was the sole ruler of the island of Hateg, today's Romania. It could fly very fast and swooped down to the island to grab something to eat. Hatzegopteryx walked around on its folded wings and long hind legs, and snatched up small and medium-sized animals - even young sauropods. The dinosaurs that lived on this island were never very large, and were an easy prey for a large and hungry flying lizard.

### Ii

# **Ichthyosaurus**

When: Jurassic, 200-190 million years ago

Where: Europe and North America

Weight: 90 kilos Length: 1.8 meters Ate: Fish and squid

This is not a dinosaur, but a sea reptile, also called a fish lizard.

*Ichthyosauruses* were designed to swim very fast. It looked like a dolphin, but swam differently. While a dolphin move its tail up and down, the fish lizard slap its tail from side to side, like a fish. The fish lizard has no living descendants. We could never have imagined what they looked like without their fossils. This is one of the prehistoric animals we know best. In some fossils one can see the skeleton of an embryo. It shows that the fish lizards gave birth to live young in the sea, exactly like today's dolphins.

# Jj

### Juravenator

When: Jurassic 152 million years ago

Where: Germany Weight: 500 grams Length: 75 cm long

Ate: Meat

Only one fossil of *Juravenator* has been found. This small predatory dinosaur lived 150 million years ago in what is Germany today. It had no feathers, like other members of the family, but scales. There are dinosaur fossils all over the world waiting to be discovered. Maybe you will find a relative of *Juravenator*?

### Kk

## Kaprosuchus

When: Cretaceous, 100–95 million years ago

Where: North Africa Weight: about 900 kilos

Length: 6 meters

Ate: meat

Only one skull of the *Kaprosuchus* has been discovered, and was found in the Sahara Desert. This skull has helped fossil scientists understand just how big *Kaprosuchus* was and how it lived. They found that it was slightly larger than a saltwater crocodile, but with longer legs and with tusks! When *Kaprosuchus* went hunting, it used the tusks to spear the prey and the powerful jaw to hold it. It hunted alone, and its long legs tell us that it could walk great distances on land.

#### $\mathbf{L}\mathbf{I}$

### Lambeosaurus

When: Cretaceous, 70 million years ago

Where: Canada Weight: 2–7 tons Length: 9–15 meters

Ate: Plants

The name means: Lamb's lizard

Lambeosaurus belongs to the hadrosaur family. In this family, everyone had different headdresses. Maybe it was to get attention or to separate one family from another. Lambeosaurus moved on all fours, but may have been able to run on its hind legs when fleeing predators. It lived in herds, and had no armor with which to defend itself. It had to rely on its sharp sense of smell and excellent vision to escape carnivores. Lambeosaurus had no front teeth but over 600 teeth in the back of the mouth. It ate ferns and plants it found on the ground.

### Mm

# Megalosaurus

When: Jurassic, 165 million years ago

Where: England Weight: 700 kilos

Length: 10-12 meters long

Ate: Meat

*Megalosaurus* was the first dinosaur to be discovered, over 300 years ago. At first, paleontologists did not understand what they had excavated. Was it a prehistoric horse? Or was it an elephant with a short body and tail? Today we know that a

*Megalosaurus* was a large, carnivorous dinosaur with sharp teeth and powerful claws. The name means mega-lizard.

#### Nn

## **Nigersaurus**

When: Cretaceous, 119-99 million years ago

Where: West Africa

Weight: 2 tons Length: 9 meters

Ate: Plants

*Nigersaurus* was related to *Diplodocus*, but it was much smaller and had a shorter neck. The jaw was wider than the head, and the teeth were located front of the mouth. Behind these teeth, it had rows of new teeth ready to replace those that were worn out. Paleontologists believe the *Nigersaurus* ate plants growing on the ground, such as leaves, ferns and flowers.

### $O_0$

# **Oviraptor**

When: Late Cretaceous, 75–65 million years ago

Where: Asia and North America

Weight: 25 kilos Length: 2.5 meters Height: 2 meters

Ate: Meat, eggs, seeds, insects and plants

*Oviraptor* was a dinosaur that lived in Asia at the end of the Cretaceous period. These dinosaurs resembled birds with feathers, with two legs and a long, slender neck. They could run as fast as an ostrich.

A long time ago, the skeleton of a bird-like dinosaur was found together with a nest of eggs. Paleontologists named the small dinosaur *Oviraptor*, which means egg thief. They thought the dinosaur was stealing eggs at the very moment it died. This turned out to be incorrect. Later, paleontologists understood that *Oviraptor* was not on a robbery raid when it died. It was the *Oviraptor's* own nest, and it hatched its eggs just like a bird. However, it may have occasionally felt like eating other creatures' eggs for breakfast.

# Pp

### **Pilosaurus**

When: Jurassic, 155–147 million years ago

Where: Svalbard Weight: 45 tons

Length: 13 meters long

Ate: Everything that swam in the sea

Say hello to the ultimate ocean predator! *Pliosaurus* lived 145 million years ago and ate *Ictyhosauruses* and *Elasmosauruses* for dinner. *Pliosaurus* had long a long, short neck, huge head and large teeth. With four powerful flippers, it shot through the water and gobbled up whatever it wanted to munch on. In 2006,

Norwegian paleontologists found two of the world's largest predators on Svalbard. They were given the species name *Pliosaurus funkei* but were called "Monster" and "Predator X". And you know what? They could bite down four times as hard as a *T.rex*.

## Qq

## **Quetzalcoatlus**

When: Cretaceous, 68-66 million years ago

Where: North America

Weight: 100 kg Height: 3 meters

Length: 12 meters wingspan

Ate: Fish

None of the dinosaurs could fly, but their relative, the *pterosaurs* could. These flying lizards had light skeletons with slender and hollow bones. Over 120 different species have been discovered. *Quetzalcoatlus* was the largest of them all. It could hover in the air for a long time while scouting for food. When the wings were folded, it could also walk on all fours and hunt for prey.

### Rr

# Rajasaurus

When: Cretaceous, 69-65 million years ago

Where: India Weight: 2 tons Height: 2.4 meters Length: 9 meters

Ate: Meat

The fossil of this dinosaur was found in India. *Rajasaurus* is related to carnivores that lived in Africa during the Cretaceous period. During this period there were no seas dividing the continents. *Rajasaurus* had a dangerous jaw with sharp, pointed teeth the length of this book. It could tear and yank the meat from its prey as easily as we tear a loaf of bread.

#### Ss

## **Spinosaurus**

When: Cretaceous, 112–95 million years ago

Where: North Africa Weight: 7-9 tons Length: 18 meters

Ate: Fish

The name means: Spiked lizard

Spinosaurus is the largest carnivorous dinosaur we know, in fact it is larger than Tyrannosaurus rex. It hunted both on water and on land, as crocodiles do today. Spinosaurus had flat feet that looked like paddles that it used to move through water. A sail protruded from the surface, like a shark fin.

### Tt

## **Therizinosaurus**

When: Late Cretaceous 70–65 million years ago

Where: Mongolia Weight: 5 tons Height: 4 meters Length: 12 meters

Ate: Plants

Therizinosaurus must be one of the strangest dinosaurs ever found. This one had a long neck, large belly and feathers, a bit like an overgrown turkey. But it also had record-breaking long claws. The claws were used to obtain leaves and branches and to defend itself. Therizinosaurus lived side by side with Tarbosaurus, and sometimes had to fight for its life. When paleontologists first found the fossil from a Therizinosaurus, they made a big mistake. They thought they had found a huge sea turtle with giant claws that were used to gather seagrass. But Therizinosaurus was obviously not a turtle, nor did it live in the ocean. Therizinosaurus means lawn mower lizard!

## Tt

## Tyrannosaurus rex

When: Cretaceous, 68-66 million years ago

Where: Canada and the United States

Weight: 7 tons Height: 4 meters Length: 12 meters

Ate: Meat

Just like lions and tigers, *T.rex* did not eat every day. When it killed a large herbivore, it gobbled down as much as it could manage, and was full for several days. *T.rex* was super strong and walked upright on two powerful legs. The head was huge, and it held its tail straight out back to keep its balance. *T.rex* lived in open forests and often snuck up on herbivores that stood and grazed peacefully, such as *Triceratops*. It crept in as close as it could, before pouncing on its prey. It had 50-60 razor-sharp teeth in its jaw. Some teeth were 23 cm long. Few dared to take up the fight with this predator. Many *T. rex*-fossils have been found, so scientists know a lot about this dinosaur.

### Uu

# Utahraptor

When: Cretaceous, 112-100 million years ago

Where: North America Weight: 700 kilos

Height: Up to 2 meters Length: 6.5 meters

Ate: Meat

Utahraptor had large eyes, long gripping arms and giant, curved claws on his hands and feet. It walked on just two of its toes and held the third one up from the ground. The claw on this toe remained sharp and could be used for hunting. And hunt it did indeed! The herbivore *Iguanodon* was particularly tempting. *Utahraptor* lived 25 million years before its famous relatives, *Deinonychus* and *Velociraptor*, and was much larger. The name means *Utah's robber*.

### $\mathbf{V}\mathbf{v}$

# Velociraptor

When: Late Cretaceous, 75 million years ago

Where: Mongolia and China

Weight: 15 kilos Length: 1.8 meters

Ate: Meat

Speed is important for small hunters. *Velociraptor* was as fast as a sports car. They sprinted together in flocks after their prey, grabbing it with their sharp claws. Notches have been found in the bones of a *Velociraptor* fossil that tell us that it had a shaggy plumage. *Velociraptor* was much smaller than *Utahraptor*, but just as dangerous. The name means fast hunter.

#### $\mathbf{W}\mathbf{w}$

### Wuerhosaurus

When: Cretaceous, 146-100 million years ago

Where: China and Mongolia

Weight: 1.2 tons Length: 5-7 meters

Ate: Plants

Wuerhosaurus had spikes on its tail, colorful dorsal plates down its spine and an incredibly small brain. Although it moved slowly and looked quite peaceful, it was definitely not harmless. It would take no more than a swipe of its tail to knock out an opponent. Wuerhosaurus lived 40 million years after the more famous Stegosarus. All the relatives in this family had dorsal plates in different shapes and sizes on the body. Paleontologist have several theories about why. Many believe they were used to regulate body temperature.

### Xx

# Xenoceratops

When: Cretaceous, 80 million years ago

Where: Canada Weight: 3 tons Length: 6 meters

Ate: Plants

Many dinosaurs had body armor: horns, spikes, dorsal plates and claws. *Xenoceratops* is a relative of *Triceratops*. They were similar to each other, but

*Xenoceratops* was a little smaller and it had several horns on its head and neck. If a *Xenoceratop* lost a horn, a new one grew out again.

## Yy

# Yutyrannus

When: Cretaceous, 130 million years ago

Where: China Weight: 1-2 tons

Length: 7.5 - 9 meters

Ate: Meat

Yutryannus is the largest known dinosaur with feathers on its body. Maybe it was so cold where it lived, that it developed feathers to keep warm. What do you think? Yutyrannus means feathered tyrant. The species name is huali which means beautiful in Mandarin.

### $\mathbf{Z}_{\mathbf{Z}}$

# Zephyrosaurus

When: Cretaceous, 120-110 million years ago

Where: USA Weight: 175 kilos Length: 1.8 meters

Ate: Plants

A complete skeleton of *Zephyrosaurus* has not as yet been found. Paleontologists know very little about this dinosaur. They believe it lived just about everywhere on earth and ate plants, roots and seeds. *Zephyrosaurus* moved with speed and agility and could easily escape the jaws of hungry carnivores.

## Æs Øø Åå

Dinosaurs are often named after the person who found the fossil, something special about the body or the place where it was found. For example: *Herrerasaurus* is named after Victorino Herrera, the shepherd who found the fossil. *Compsognathus* means beautiful jaw and *Deinonychus* means terrible claw. *Argentinosaurus* was found in Argentina in South America. Even Harry Potter has a dinosaur named after him: *Dracorex hogwartsia*, which means dragon king from Hogwarts.

The last dinosaur, which was not a bird, lived 66 million years ago. So take it easy. You will not encounter any giant, carnivorous dinosaurs while out walking in the forest. The closest we come to a dinosaur today are birds, and fortunately they are not as scary.