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Power of Dinosaurs™

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DINO RIDERS™

King of the Dinosaurs

It was the largest meat-eating animal to ever walk on the earth. Its length from its nose to the tip of its tail was 50 feet, almost as long as a school bus. It stood 25 feet tall, taller than four circus acrobats standing on each others shoulders. The mouth in its four foot long head contained dozens of seven-inch teeth that could tear off a ton of meat in a single bite. Weighing five tons (one ton is 2,000 pounds) it was the greatest of all meat-eating dinosaurs. To many, it is the first creature they think of when they hear the word dinosaur. You have probably already guessed. It's the king of the dinosaurs, the awesome Tyrannosaurus rex.



The last Tyrannosaurus rex lived on earth over 65 million years ago at the end of the great Age of Dinosaurs. That's a very long time ago, long before man appeared on earth. If you had a time machine that could travel back in time one year every second,

it would still take over two years to arrive at the end of that age.

The name Tyrannosaurus rex comes from the old Greek and Latin words that mean "King of the Tyrant Lizards." No doubt scientists named it that because it was so ferocious looking.

The Tyrannosaurus rex (T-rex for short) was the last in a long line of meat-eating dinosaurs. Meat-eating animals are called **predators**. A predator is an animal that hunts and eats other animals. An example of one in today's world would be a tiger.

No other predator was as powerful as the T-rex. The largest meat-eating animal in the world today is the mighty polar bear of the Arctic. It weighs over 1000 pounds and is 12 feet tall when it stands up. But this is rather small compared to the T-rex. In fact, a polar bear would probably have just made a snack for a hungry T-rex.

The T-rex walked on its rear two legs much like a human does. It was able to run incredibly fast. Scientists who have studied its large, powerful legs think it could run as fast as 45 miles per hour! That's faster than a horse at full gal-

lop. Pity the poor dinosaur who the T-rex goes after.

When the T-rex caught a victim, it would finish it off with its powerful jaws while holding on with its huge rear claws. Then it would tear off huge hunks of meat and hungrily gobble it down.

Would you believe the T-rex could eat a piece of meat as large as its head? You may have seen the picture of a snake eating some poor frog. The bones in head and jaw can spread wide as it swallows, allowing it to eat something quite large. The T-rex could do the same thing. In a single gulp it could swallow a piece of meat as large as a cow!

Just a quick look at the teeth of a T-rex will show you that they were used to eat meat. They were seven inches long and pointed like a dagger. But unlike your teeth, they were not built for chewing. They could only bite off big chunks.

The T-rex's teeth could actually grow again and again when they broke or fell out. (Too bad you couldn't do that. All you get are two sets.) When scientists dig up bones of a dinosaur who had been eaten, they usually find the teeth of a meat-eating dinosaur with it.

Scientists who study dinosaurs are called **paleontol-**

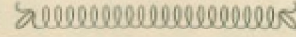
ogists. They are puzzled by the small arms on a T-rex. They were so short, it couldn't even scratch its own chin with them. In fact, the arms were not as strong as a grown man's. If it were possible, a man could win at arm wrestling with one! It could be that it was already so good at hunting with the rear feet it no longer needed the front ones.

The T-rex hunted the great horned dinosaur, the Tricer-

atops. One look at its skeleton shows it was no easy game for the T-rex. Armed with four foot long horns over its eyebrows, he must have been a dangerous enemy. Over 20 feet long and weighing 17,000 pounds, it made a rhinoceros look like a midget by comparison. It's easy to see why the T-rex had to be so powerful to capture such an awesome enemy.

The T-rex was the fiercest

hunter that ever lived. But they all died out at the end of the Age of Dinosaurs. All that remains of these giants is their skeletons and footprints. Perhaps you have had the chance to see one at a near-by museum. Just why they and all the other dinosaurs died out is still a mystery. Maybe you will be one of the people who will help solve this riddle. ▼



Questions and Answers

The following questions are from a second grade class from Wisconsin.

Q: How do you know dinosaurs are real? How do you know where dinosaur bones are in the ground?

Jenny

A: We know that dinosaurs lived because they left behind **fossils.** Fossils are bones and footprints preserved in stone. They are made when a dinosaur dies and is quickly covered by soil. If conditions are just right, minerals in the soil will replace those in the bone. This actually turns them to stone. This process is called **petrification.** This can take thousands of years to happen.

Other fossils are the footprints of dinosaurs or even the outline of their body that turned to stone. This can give scientists more information than bones alone could.

Discovering fossils is not easy work. It takes knowledge, patience and often just plain luck. A scientist has to look in places like canyons and hillsides where the grinding action of wind and water has worn away the rock, exposing the fossils.

It takes time and careful work to remove fossils. When

they are removed from the ground, they can be sent to a museum or college where they can be studied more easily. From them scientists can tell us something about what dinosaurs looked like, how they lived and the kind of world that was their home many millions of years ago.

Q: Does the Tyrannosaurus rex sleep standing up or lying down?

Evan

A: Believe it or not a T-rex is built like a big bird. That's because it had the same ancestor as today's birds. Birds sleep two ways. Some sleep standing up, like a flamingo. Others sleep squatting down, like a duck. The T-rex probably slept squatting down.

Birds that sleep squatting down rest their weight on a bone called a breastbone. The T-rex had a long bone sticking out from the middle of its body called a **sitz bone.** (See picture). It may have used this bone to



rest its weight on. Only the T-rex and other meat-eating dinosaurs have this bone. It could have also used this bone for support while crouching, quietly waiting to spring up and ambush its prey. ▼

News Flash!

Scientists announce the discovery of a new dinosaur. The T-rex, it appears, had a much smaller relative. Weighing only 1000 pounds and measuring 15 feet in length, this dinosaur looked almost just like a T-rex. The only skeleton of this still unnamed creature is in the Cleveland Museum in Ohio. It is only one of dozens of new dinosaur discoveries made each year. ▼

Dino Dictionary

Fossil (FA-sell): The remains of animals found in the ground that have turned to stone.

Paleontology (pale-ee-on-TOE-low-gee): The science that studies dinosaurs and ancient life.

Petrification (pet-tree-fic-KAY-shun): The process by which bones buried in the ground become stone.

Predator (PRED-ah-tor): An animal that hunts and eats other animals. ▼