

!DIGIT! DINOS

GIANT DINOSAUR T. REX SKELETON MODEL

THAMES & KOSMOS



© 2018 Franchh-Kosmos
Verlags-GmbH
& Co. KG
Pfizerstr. 5-7, 70184
Stuttgart, Germany
Tel. +49 (0)711 2191-343

This work, including all its parts, is copyright protected. Any use outside the specific limits of the copyright law without the consent of the publisher is prohibited and punishable by law. This applies specifically to reproductions, translations, microfilming, and storage and processing in electronic systems and networks. We do not guarantee that all material in this work is free from copyright or other protection.

Project Management: Dr. Mark Bachofer, Linnéa Bergsträsser
Design and Text: Linnéa Bergsträsser
Technical Product Development: Björn Stolpmann
Layout, packaging, instructions, and pre-cut sheet of model pieces, as well as all illustrations: Friedrich Werth, Horb

Photos: Skull of Tyrannosaurus rex (Wikipedia CC BY-SA 3.0 David Monniaux); Sue (Wikipedia CC BY-SA 2.5 Fritz Geller-Grimm); trace fossil (Wikipedia CC BY 2.5)

2nd English Edition © 2018, 2023 Thames & Kosmos, LLC, Providence, RI, USA
Thames & Kosmos® is a registered trademark of Thames & Kosmos, LLC.
Editing: Camille Duhamel and Ted McGuire; Additional Graphics: Dan Freitas

Distributed in North America by Thames & Kosmos, LLC. Providence, RI 02903; Phone: 800-587-2872; Web: www.thamesandkosmos.com

Distributed in United Kingdom by Thames & Kosmos UK LP. Cranbrook, Kent TN17 3HE; Phone: 01580 713000; Web: www.thamesandkosmos.co.uk

We reserve the right to make technical changes.

Printed in Thailand / Imprimé en Thaïland



Contents

20 *Tyrannosaurus rex* Skeleton Parts with Base

If any parts are missing or defective, please contact Thames & Kosmos customer service:

US: techsupport@thamesandkosmos.com
UK: techsupport@thamesandkosmos.co.uk

Dear Parents!

This kit offers your child a fun way to discover the world of **prehistoric animals**. By assembling the dinosaur skeleton independently and by working with the skeleton parts, your child will learn about the **anatomy** of the *Tyrannosaurus rex*. Your child can experience hands-on how the skeleton is constructed and will get fascinating insight into these prehistoric creatures.

Before assembling the skeleton, carefully read the instructions together with your child, and discuss the **safety information**. Help your child build the skeleton, and decide with him or her where to safely display the model.

We hope you and your child have fun putting together the giant dinosaur skeleton!

Safety Information

WARNING. Not suitable for children under 3 years. Choking hazard — small parts may be swallowed or inhaled.

Replica: Model is not suited to climb or sit on.

Please keep out of reach of small children.

Keep the packaging and instructions as they contain important information.

Dear Kids!

The ***Tyrannosaurus rex*** is one of the best known dinosaurs from prehistoric times. This giant carnivore was also one of the largest dinosaurs, and with its massive teeth it was a fearsome predator.

This kit is designed to give you fun insight into the **anatomy** of the *T. rex*. You'll learn about the various parts of the enormous skeleton and how these parts worked together. You'll also learn fun facts about dinosaurs and their life during the Cretaceous period.

The last section of the instructions explains how **fossils** are formed.

And now let's get started.
Begin building the **T. rex skeleton**!

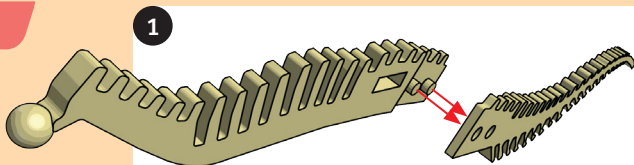


Assembly of the *T. rex* Skeleton

It takes a steady hand and careful work to build the dinosaur skeleton model. Please handle the parts with care so that they do not break.

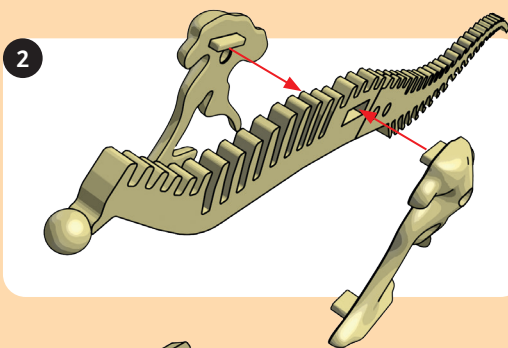
STEP 1

First, connect the two parts of the **spinal column** to each other. This will give you a sense of the entire length of your giant skeleton.



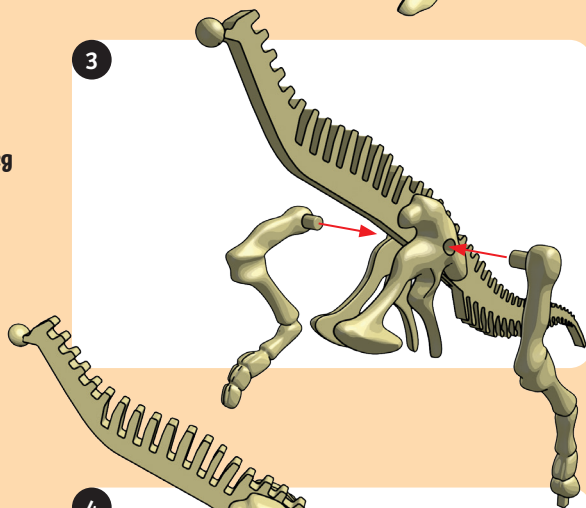
STEP 2

Connect the **right** and the **left hip joints** to the back of the spine. Put the pieces together, so that the insertion tab of the left hip bone is positioned above the right one.



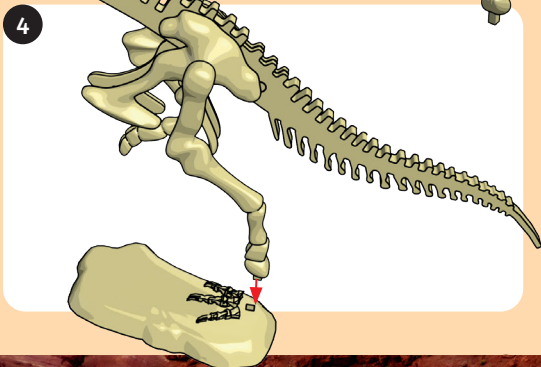
STEP 3

Connect the **right leg** to the right hip bone and the **left leg** to the left hip bone.



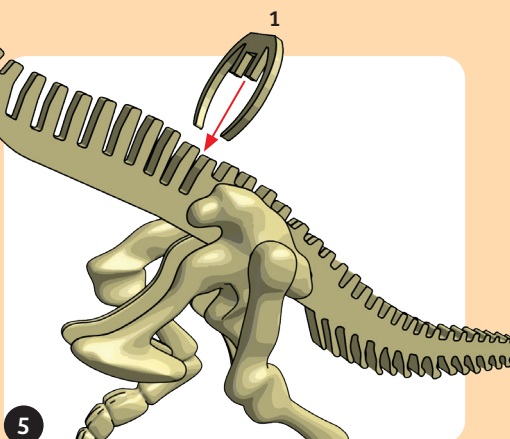
STEP 4

Now place the *T. rex* body carefully on the **base** by putting the left leg into the corresponding notch in the base plate. Make sure that you put the skeleton onto the base plate oriented in the correct direction.



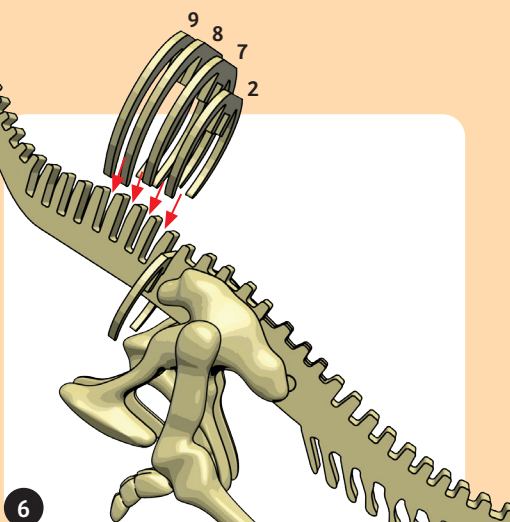
STEP 5

Now it gets a little complicated. When putting together the ribcage, it is important to assemble the **ribs** in the right order. In total, the *T. rex* has **9 rib bones**. The part numbers are molded into the plastic ribs so you can identify them. They each have to be placed in the corresponding slot in the spine. They are set up as follows: Start with the smallest rib (part 1), and insert it into the slot closest to the hip bone.



STEP 6

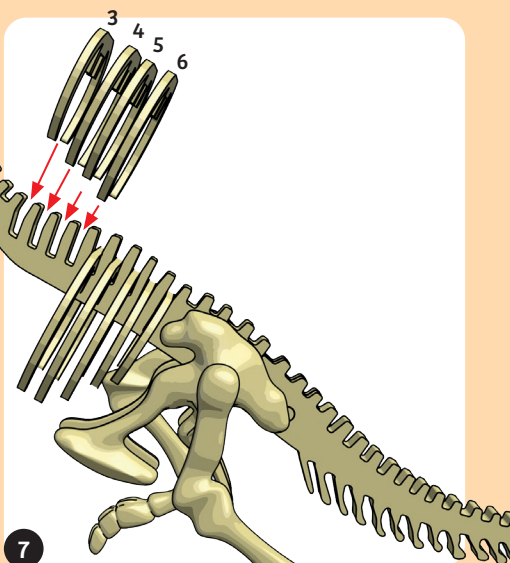
Then continue inserting more **rib bones**, parts 2, 7, 8, and 9, up the spine. Now the bottom half of the ribcage is complete.



STEP 7

Next, continue by inserting part 6, followed by parts 5, 4, and 3, completing the upper half of the ribcage.

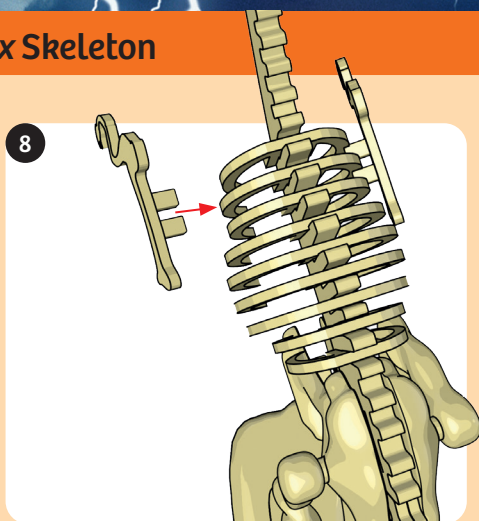
Check the picture to verify.



Assembly of the *T. rex* Skeleton

STEP 8

Now connect the **arms** to the ribs of your dinosaur skeleton by attaching them to the front of the second rib.



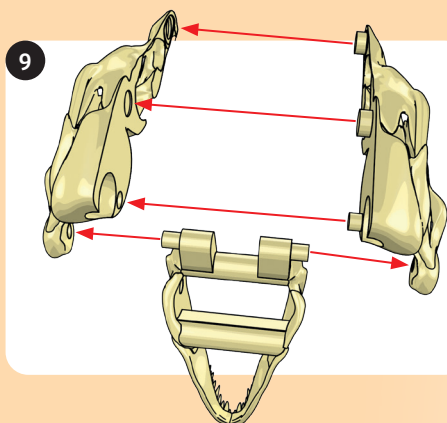
FUN FACT



In comparison to its body, the *T. rex* had very short arms. The reasons for this are debated by paleontologists. Some theories claim that the short arms with the two sharp claws at the end were used to capture and hold prey. A different theory says that they played a role in mating or in rivalry fights. Today, the short arms of the *T. rex* are the basis of countless dinosaur jokes.

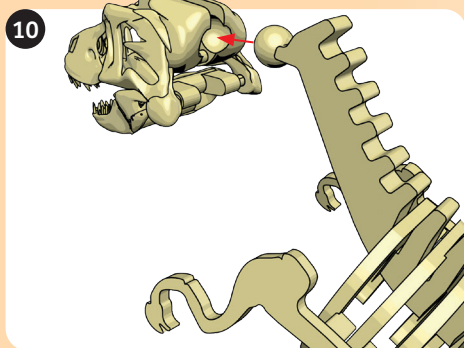
STEP 9

The **head** is assembled from three parts. Connect the two parts of the upper jaw with the lower jaw, but don't fully push the parts together yet.



STEP 10

Now put the head over the **ball joint** on the neck and then push the parts of the dinosaur head together firmly, securing it around the ball joint.



Digging Deeper



DINOSAURS

Ever since the first dinosaur bones were discovered, humans have been fascinated by the geologic periods of the past. In fact, giant bones, huge teeth, and strange skeletal forms continue to puzzle scientist to this day. Unfortunately, no human has ever seen a living dinosaur. These huge animals went **extinct 65 million years ago**. At that time, a large **meteorite** crashed into Earth and extinguished almost all living things.



Our planet looked different during the time in which the dinosaurs lived on Earth, compared to today. The climate was warmer everywhere and was very humid. The continents looked different from how we know them today, and together they formed one massive continent called **Pangea**.





TYRANNOSAURUS REX

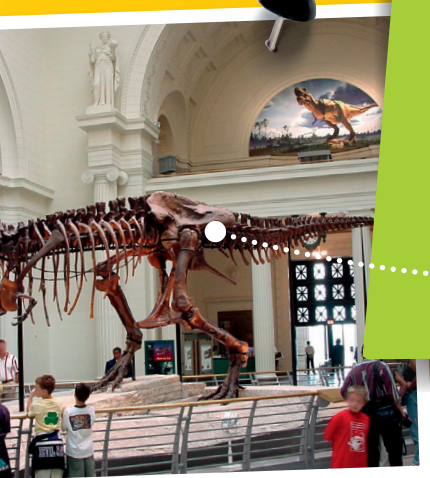
The name *Tyrannosaurus rex* means the **king of the tyrant lizards**. They lived during the Cretaceous period and were one of the largest carnivores that ever existed on Earth. They were roughly up to 20 feet tall and up to 42 feet long. With a weight of over 15,000 pounds, a *T. rex* was as heavy as a male elephant.



TYRANNOSAURUS REX

Another fascinating thing about *Tyrannosaurus rex* was their teeth. **With more than 60 teeth**, each with a length up to 8 inches, they could easily rip flesh from bones and even bite through the bone itself.

T. rex used its long tail to keep its balance while running. The home of the *Tyrannosaurus rex* was in today's North America. Currently, about 50 skeletons of this large dinosaur have been found. However, they are all only **partial skeletons**. So far, no fully preserved skeleton has been discovered. The most complete skeleton was found in South Dakota in 1990. It was named **Sue**.





FOSSILS

Everything we know about dinosaurs today we know through the discovery of fossils. It is rare that an animal turns into a fossil.

The animal has to die in a location where it is protected from scavengers, decay, and decomposition. Suitable locations for this are, for example, rivers or sea basins. Due to sediment deposit and environmental changes in the mud or sand, the body sinks deeper into the rock. The pressure on the body increases and water is squeezed out of it. The organic components are replaced by minerals from the rocks, resulting in a copy made of stone. This stone copy is the fossil.

After more time passes, weathering and erosion removes the layers of rock covering the fossil, bringing it to the surface, and allowing us to find it!



There are also fossils known as **trace fossils**. These show impressions from **animals and plants**, like foot prints or leaf prints. The oldest discovered trace fossils are from bacteria. They are estimated to be 3.4 billion years old!