



DINOSAUR DIG

TRICERATOPS, GIGANOTOSAURUS, AND VELOCIRAPTOR CLAW

KIT CONTENTS

1. Excavation block containing 13 plastic triceratops skeleton pieces, plastic velociraptor claw, and giganotosaurus figurine with base
2. Hammer tool
3. Chisel tool
4. String for necklace



YOU WILL ALSO NEED

Newspaper, water, a small bowl, paper towels or sponge, scissors, and a ruler

EXISTING THREAT KEY

**Do you have any questions?
Our tech support team will
be glad to help you!**

**USA: support@thamesandkosmos.com
or 1-800-587-2872**
**UK: support@thamesandkosmos.co.uk
or 01580 713000**



WWW.JURASSICWORLD.COM

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DEAR PARENTS AND ADULT SUPERVISORS

Please provide your child with assistance and support when excavating the dinosaur skeleton and other objects from the plaster block. Before starting the excavation, read through this manual together and be sure to follow it. This way, nothing will stand in the way of a successful dig. Please be careful not to let any parts of the kit get into the hands of small children, especially the plaster pieces that are left over after excavating. These can be disposed of in the household trash.

SAFETY INFORMATION

WARNING. Not suitable for children under 6 years. For use under adult supervision. Read the instructions before use, follow them and keep them for reference.

This kit contains functional sharp edges or points. Do not injure yourself!

WARNING. Not suitable for children under 3 years. Choking hazard — small parts may be swallowed or inhaled. Strangulation hazard — long cord may become wrapped around the neck.

Follow the instruction manual when performing the excavation. Keep small children and animals away from the experiment area. Do not eat or drink in the experiment area. Process the plaster block slowly and moisten it to prevent the formation of chips and dust. Do not place the plaster material in mouth or eyes. Clean all equipment and the work area after use. Wash your hands after the experiment. Keep the packaging and instructions as they contain important information.

CALLING ALL PALEONTOLOGISTS

This kit will teach you what it's like to be a scientist who studies prehistoric animals. This type of scientist is called a paleontologist (pronounced "pay-lee-un-TAH-luh-just"). You will be using the tools included in the kit to excavate the pieces of a model of a triceratops skeleton, a velociraptor claw replica, and a figurine of the gigantosaurus from Jurassic World. After digging it up, you can assemble the triceratops skeleton and then put these specimens on permanent display in your own dinosaur exhibit.

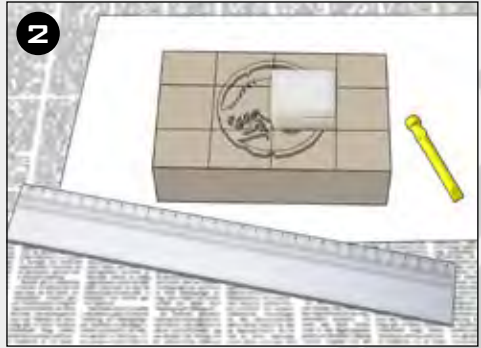
With its recognizable three-horned head, triceratops is one of the most well-loved dinosaurs of all time, appearing many times in the Jurassic World films. Gigantosaurus was one of the largest and most ferocious terrestrial carnivores. In the Jurassic World stories, InGen scientists recreated triceratops and gigantosaurus from fossilized remains found around the world. They also created the dinosaur 'Blue' from the remains of prehistoric velociraptors as well as modern-day birds and lizards. Everything we know about dinosaurs is based on the fossilized remains that paleontologists have dug up. In the Jurassic World stories, the dinosaur DNA used to clone the dinosaurs came from prehistoric mosquitoes trapped in amber. Have fun learning about these fascinating dinosaurs!

EXCAVATION INSTRUCTIONS

1. Start by looking for a suitable workplace, where it won't matter if a few bits of plaster fall here and there, and that won't be harmed by a little dust and water. If the weather is nice, you can also work outside. The ideal work surface is a level, sturdy table covered with a few layers of newspaper. Get the excavation block and tools ready, along with a small bowl of water and a sponge or some paper towels.



2. When excavating, proceed like a paleontologist. Divide your fossil site into a grid of four squares by three squares. Use the chisel and ruler to carve the grid pattern into the surface. Then cut the sponge to be approximately the size of one of the squares, or fold the paper towels into a square of approximately this size.



3. Start your excavation in any square that you like. First soak the sponge (or square of folded paper towels) with water in the bowl. Then place the sponge on a square and carefully squeeze out the water.

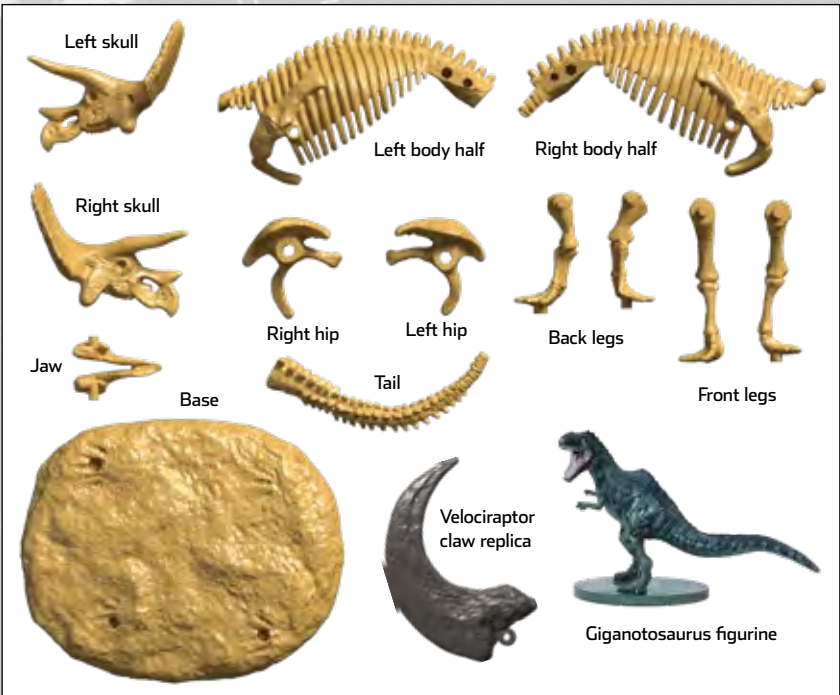


4. The water will turn the plaster in the square quite soft, so you can easily scrape off the surface with the chisel. When you come to harder spots, keep digging carefully with the hammer and chisel. Continue to wet the plaster to soften it. As soon as you come across an object, try digging gently all around it. You can also use the pointed end of the hammer handle for this. **Dig very carefully so as to not damage any of the specimen models! Paleontologists must dig very slowly and gently.**



EXCAVATION INSTRUCTIONS CONTINUED

5. Continue step by step in the same manner until you have excavated all of the squares of the grid and found all of the objects. The picture below shows you everything hidden inside the block. Use it to figure out which things you haven't found yet and what they look like.



6. Finally, clean any remaining plaster from the specimen pieces. It's easiest to do this under running water using the sponge or paper towels. Then, let all the pieces dry on a paper towel before assembling them.



ASSEMBLY INSTRUCTIONS

1



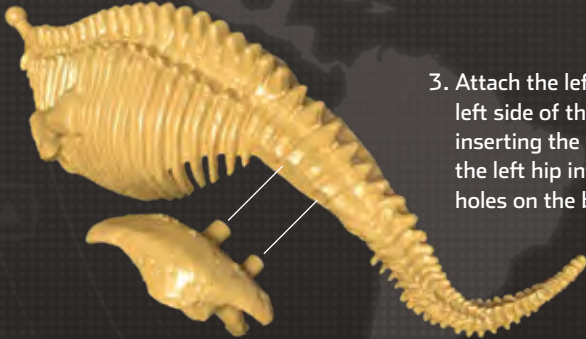
1. Attach the two body halves, pressing them together all the way.

2



2. Connect the tail to the body by inserting the two pegs at the back of the body into the two holes at the base of the tail.

3



3. Attach the left hip to the left side of the body by inserting the two pegs on the left hip into the two holes on the body.

4



4. Attach the right hip to the right side of the body by inserting the two pegs on the right hip into the two holes on the body.

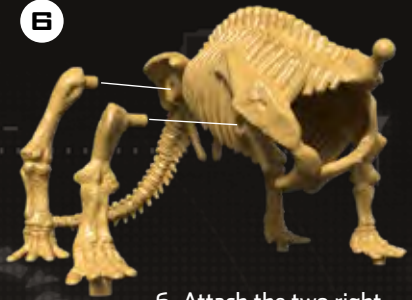
ASSEMBLY INSTRUCTIONS CONTINUED

5



5. Attach the two left legs to the left side of the body.

6



6. Attach the two right legs to the right side of the body.

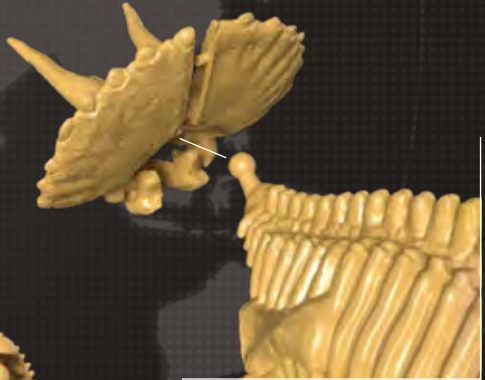
7



7. Assemble the head by attaching the two sides of the head together with the jaw in between them.

8

8. Attach the head to the neck. Before pressing the two skull pieces tightly together, insert the ball joint into the hole in the back of the head.



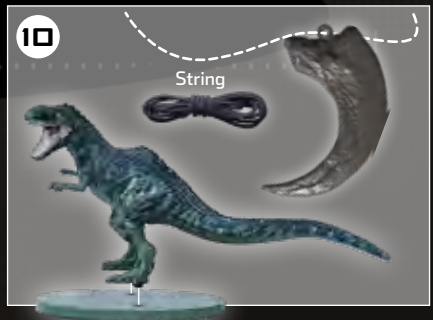
9




9. Insert the pegs on the legs into the holes in the base.

10

10. Also assemble the giganotosaurus figurine by inserting the two pegs on the feet into the holes in the base. The velociraptor claw can be worn on the string as a pendant.



HOW DO WE KNOW ABOUT DINOSAURS?



A long time ago, there were many animals and plants that no longer exist today. The dinosaurs became extinct millions of years ago. But some traces of their bodies, such as bones, skin impressions, and footprints, have been preserved in stone. These are called **fossils**. Researchers dig up these discoveries, study them, and compare them to others. In this way, scientists figured out about 200 years ago that some of these fossil remains came from enormous animals. Before then, people had thought they were the remains of human-like giants!

HOW FOSSILS FORM

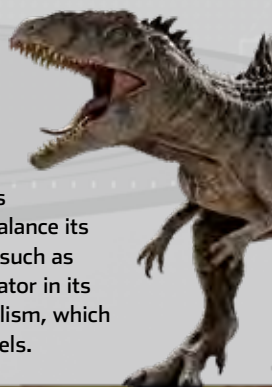


When animals die, scavengers eat their remains or they decay over time. Only in very rare cases are their bones or imprints preserved. This can happen, for example, when the remains become embedded in mud, which preserves them due to its low oxygen content. Over time, extra layers of sediment settle on top and further protect the remains. Although the flesh and organic matter itself will quickly decay, mineral-rich groundwater penetrates the empty spaces that are left behind. This causes the embedded bones to essentially be turned to stone: the bone material is replaced by mineral deposits, with the shape of the bone remaining intact. This process is called **fossilization**. In some areas, rain and wind then erode the surface layers over a long period of time, bringing the fossils closer to the surface where they can be discovered.

ABOUT GIGANOTOSAURUS

Giganotosaurus was one of the most fearsome predators to ever walk the Earth, with a size and strength that would have made it a formidable opponent for any dinosaur. It was a truly massive animal that lived during the Late Cretaceous period, and its remains continue to fascinate and inspire paleontologists and dinosaur enthusiasts today. It is known for being one of the largest carnivorous dinosaurs, with some estimates suggesting that it may have been slightly larger than T. rex. The skull of a giganotosaurus measured about 4.25 meters (13.9 ft) in length, and its total body length has been estimated to be around 12.5–13 meters (41–43 ft) long. Its weight is estimated to have been 8.5–14 metric tons. Fossils of the giganotosaurus have been found in Argentina; the name giganotosaurus means “giant southern lizard.”

Giganotosaurus had a large skull with sharp teeth and powerful jaws, as well as short but strong arms with two fingers each. It had a long and heavy tail, which would have helped to balance its large body. Giganotosaurus probably preyed on large dinosaurs such as sauropods and ornithopods, and it may have been an apex predator in its ecosystem. Despite its large size, it had a relatively high metabolism, which required it to eat large amounts of food to sustain its energy levels.



ABOUT TRICERATOPS

Triceratops was a large herbivorous dinosaur that lived during the Late Cretaceous period, around 68 to 66 million years ago. It is one of the most recognizable dinosaurs, known for its distinctive three horns and the large bony frill on its head. Triceratops has been found in North America, specifically in modern-day Montana, South Dakota, Colorado, and Wyoming.

The triceratops was a four-legged animal with a body length of around 6–9 meters (20–30 ft) and weighed around 6–12 metric tons. It had a large skull that measured up to 2.5 meters (8.2 ft) in length, and its three horns were made of keratin, the same material that makes up human hair and nails. The two horns above its eyes were longer, measuring up to 1 meter (3.3 ft) in length, while the one on its nose was shorter, measuring around 60 centimeters (2 ft) in length.

The bony frill on its head was also a notable feature, measuring up to 2 meters (6.6 ft) in width. It may have been used for display and/or as a defense mechanism against predators. Some scientists believe that the frill may have been brightly colored, possibly to attract mates or to intimidate rivals.

Triceratops had a strong beak and powerful jaw muscles, which it used to bite and chew tough plant material. It also had a large number of cheek teeth, which were constantly replaced as they wore down. It is believed to have been a herbivore, and it probably fed on ferns, cycads, and other low-lying plants.



ABOUT VELOCIRAPTORS AND THEIR CLAWS

Velociraptor, which means “speedy thief” in Latin, was a carnivore that used its intelligence, quickness, and sharp teeth to survive. Paleontologists believe velociraptors were roughly the size of turkeys. Velociraptors had large, sickle-shaped claws on their hind feet. These claws, which measured around 8 centimeters (3 inches) in length, were used for hunting and grasping prey. The claws were made of keratin, the same material as human nails, and were razor-sharp.

They were likely used to help a velociraptor tear flesh and to hold prey while the raptor killed the prey with its sharp teeth.

The sickle-shaped claws were also helpful for velociraptors to get a grip while running on the ground, helping them to make quick turns and to chase their prey.

‘Blue,’ a dinosaur in Jurassic World, is a type of velociraptor — or raptor for short. In the Jurassic World story, InGen scientists engineered ‘Blue’ by combining velociraptor DNA with that of a larger lizard, the African black-throated monitor lizard, which accounted for her distinctive color.

