EXPERIMENT MANUAL



DINOSAUR SKELETON DIG

WARNING — THIS SET CONTAINS CHEMICALS THAT MAY BE HARMFUL IF MISUSED. READ CAUTIONS ON INDIVIDUAL CONTAINERS AND IN MANUAL CAREFULLY. NOT TO BE USED BY CHILDREN EXCEPT UNDER ADULT SUPERVISION.

1ST EDITION 2014 © 2014 THAMES & KOSMOS, LLC, PROVIDENCE, RI, USA © THAMES & KOSMOS IS A REGISTERED TRADEMARK OF THAMES & KOSMOS, LLC. PROTECTED BY LAW, ALL RIGHTS RESERVED. WE RESERVE THE RIGHT TO MAKE TECHNICAL CHANGES THAMES & KOSMOS, 301 FRIENDSHIP ST., PROVIDENCE, RI, 02903, USA 1-800-597-2872. WWW.THAMESANDKOSMOS.COM FRANCKH-KOSMOS VERLAGS-GMBH & CO. KG, PFIZERSTR. 5-7, 70184 STUTTGART, GERMANY +49 (0) 711 2191-0. WWW.KOSMOS.DE PRINTED IN TAWAN / IMPRIME EN TAWAN

SAFETY

Safety Rules

Read these instructions before use, follow them and keep them for reference. Keep young children, animals and those not wearing eye protection away from the experimental area.

Always wear eye protection.

Store this experimental set out of reach of children under 7 years of age.

Clean all equipment after use.

Make sure that all containers are fully closed and properly stored after use. Ensure that all empty containers are disposed of properly.

Wash hands after carrying out experiments.

Do not use any equipment which has not been supplied with the set or recommended in the instructions for use. Do not eat or drink in the experimental area.

Do not allow chemicals to come into contact with the eyes or mouth. Do not replace foodstuffs in original container. Dispose of immediately.

First Aid

In case of eye contact: Wash out eye with plenty of water, holding eye open if necessary. Seek immediate medical advice. If swallowed: Wash out mouth with water, drink some fresh water. Do not induce vomiting. Seek immediate medical advice. In case of inhalation: Remove person to fresh air.

In case of skin contact and burns: Wash affected area with plenty of water for at least 10 minutes.

In case of doubt, seek medical advice without delay. Take the chemical and its container with you.

In case of injury always seek medical advice.

CAUTION!

For plaster (gypsum): May cause eye and skin irritation. Avoid breathing dust. Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling. Do not ingest. Use only as instructed.

WARNING!

Not suitable for children under 3 years. There is a risk of choking due to small parts that can be swallowed or inhaled. Keep the packaging and instructions, as they contain important information.

EXPERIMENT: MAKE A DINO FOSSIL

1. Mix one packet of plaster powder and one measuring spoonful of water in the mixing tray until the mixture is smooth.



2. Pour the mixture into the mold.

 Place the dinosaur model halfway into the plaster on its side.

4. Repeat step one with the second packet of plaster powder. Pour the plaster into the mold, covering most of the dinosaur. It's okay if a little of the dinosaur still shows. 5. Let the plaster harden until it is completely solid. This will take about a day.

> 6. After the plaster has hardened, push the plaster block out of the mold.

7. With the tools, carefully scrape some of the plaster away, revealing the top of the dinosaur. Be very careful not to damage the dinosaur skeleton. It is up to you how much plaster you want to remove. If you remove enough plaster to reveal the top half of the dinosaur, then you will have a nice fossil model that you can display on your desk or shelf.

HOW DINOSAUR FOSSILS FORMED

Millions of years ago, when a dinosaur died, its flesh quickly decayed. Even its enormous bones disappeared after a few years. However, in some cases the bones didn't disappear — for example, if they were embedded in mud or sand that prevented decay and preserved them.



In time, more layers were added on top of them. The bone gradually decayed, but subterranean water seeped into the resulting hollow spaces and left solid mineral deposits there. In that way, the embedded bones became **fossilized**.

Over the course of millions of years, rain and wind carried away the overlaid rock layers, and the bones were revealed once again. In order to study the bones and display them in museums, prehistoric researchers first have to scratch away the surrounding rock and **excavate** the bones. They do the exact same thing that vou are doing with this kit. The fossilized bones are usually recognizable by their somewhat different color or hardness. But because they



can't know ahead of time where in the rock the bones might lie, they have to work very carefully so that they do not damage anything — just as you have to work with care as well. Eventually, they will have a collection of bones that then have to be assembled into a skeleton.