



**GEEK
& CO.
CRAFTS!**

INSTRUCTIONAL MANUAL

PLaSTeR SCULPTURES



THAMES & KOSMOS

Franckh-Kosmos Verlags-GmbH & Co. KG, Pfizerstr. 5-7, 70184 Stuttgart, Germany | +49 (0) 711 2191-0 | www.kosmos.de
Thames & Kosmos, 301 Friendship St., Providence, RI, 02903, USA | 1-800-587-2872 | www.thamesandkosmos.com
Thames & Kosmos UK Ltd, Goudhurst, Kent, TN17 2QZ, United Kingdom | 01580 212000 | www.thamesandkosmos.co.uk





SAFETY INFORMATION

WARNING.

Not suitable for children under 3 years. Choking hazard — small parts may be swallowed or inhaled. Strangulation hazard — long wires may become wrapped around the neck. This kit contains functional sharp-pointed wires. Do not injure yourself!

WARNING:

CHOKING HAZARD—Children under 8 yrs. can choke or suffocate on uninflated or broken balloons. Adult supervision required. Keep uninflated balloons from children. Discard broken balloons at once. Use an air pump to inflate the balloons. Made of natural rubber latex, which can cause allergies.

Keep the packaging and instructions as they contain important information.

Safety rules for handling plaster bandages

- Keep younger children under the specified age limit and animals away from the activity area.
- Store hobby kit out of reach of young children.
- Wash hands after carrying out activities.
- Clean all equipment after use.
- Do not use any equipment which has not been supplied with the set or recommended in the instructions for use.
- Do not eat, drink or smoke in the activity area.
- Cut and use the plaster bandages carefully, in order to avoid creating dust. Do not inhale dust or powder (of plaster material).
- Do not place the material in the mouth.
- Carry out the activities with the plaster bandages speedily.
- Do not apply plaster bandages to the body.

First Aid Information

In case of eye contact with plaster dust: Wash out eye with plenty of water, holding eye open. 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 doubt seek medical advice without delay: Take the plaster bandage and/or product together with the packaging with you.

In case of injury always seek medical advice.

Dear Parents,

With this kit, your child will be able to make an awesomely creative plaster sculpture. Even though working with plaster bandages is not particularly dangerous, you should offer your child a hand and be ready to provide your support and advice. This hobby kit (especially the plaster bandages) is not suitable for children under 8 years of age, so it should be kept out of their reach.

Read and follow these instructions, the safety rules and the first aid information and keep them for reference.

This includes the warnings on the front cover, the safety rules on the inside front cover, and the first aid information at the top of this page.

The supervising adult should discuss the warnings, safety information and the possible hazards with the child or children before commencing the activities.

Incorrect use of chemicals (the plaster dust from the bandages, particularly swallowing or inhaling it) can cause injury and damage to health. Only carry out those activities which are listed in the instructions.

It is important to cut the plaster bandages carefully in order to avoid creating dust, because swallowing or inhaling plaster dust can lead to injury or other health problems.

Because children's abilities vary so much, even within age groups, supervising adults should exercise discretion as to which activities are suitable and safe for them. The instructions should enable supervisors to assess any activity to establish its suitability for a particular child.

The area surrounding the activity should be kept clear of any obstructions and away from the storage of food. It should be well lit and ventilated and close to a water supply. A solid table with a heat resistant top should be provided.

The working area should be cleaned immediately after carrying out the activity.

After working with the plaster bandages, plaster crumbs and

leftover plaster bandages should be placed in the household trash.

Containers and utensils that come into contact with plaster should not be used in the kitchen afterwards.

To make the plaster sculpture, it will be necessary to cut some wire, which will result in some sharp wire ends. Please handle this work step for your child or show your child the proper way to handle an appropriate tool. Also help your child bend the wires. Remember to replace the tool afterwards in a location out of the reach of small children.

We wish you and your child lots of fun with the plaster sculpture!



PART 1

OFF WE GO!

The sketch

Before you start work, you should think about how you want your personal plaster sculpture to look. We have written up a few questions to help you with this first step.

What would you like to make?

An animal? Should it be a real one or a make-believe one? Feel free to think up the craziest creature you can imagine! Your sculpture could have an elephant's head and a giraffe's neck, for example. Or it could even have two heads. And how about horns or antlers?

Or you can think of something completely different. For example, a **space plant**, a

goblin's den, or a **snowman!**

What color will your sculpture be? The kit contains four paint colors, but you can mix them to get as many colors as you like.

You might find some cool objects that you'll want to stick onto your sculpture later on. Feathers, shells, ribbons... think about what might look good on your creation.

To be sure to remember your ideas, try drawing a picture in the **frame** on the opposite page. If you have a whole lot of ideas, just get another piece of paper and keep drawing!

Let's go! Sketch your crazy
ideas in this frame!



PART 2

BECOME A SCULPTOR

Big, bigger, biggest

Your sketch is done — but it's still a little small. Your sculpture will be a lot bigger! So now you'll need a really big picture.

You will need:

Your sketch, old newspaper, ruler, pencil, felt-tip pen

Here's how:

Draw a square 30 cm by 30 cm in size in pencil on the newspaper. That's about how big your sculpture can be! Now draw your sketch large enough to fill the entire square. It doesn't make any difference if it strays slightly past the edges or is a little smaller. You can do the sketch first in pencil and then retrace all the lines with a felt-tip pen. The result will be an excellent model that you can refer to as you're working on the sculpture.



Try your hand at architecture

To be sure everything goes according to plan, you will first have to draw a blueprint — just like an architect designing a building. But don't worry, it won't be as complicated as building an entire house! Your blueprint will be helpful when it comes time to make the sculpture.

You will need:

Balloons, your newspaper sketch, a different-colored felt tip pen, balloon pump

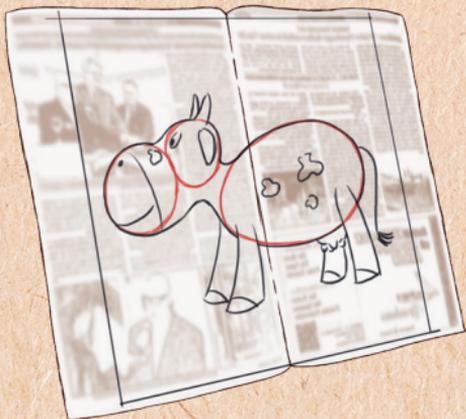
Here's how:

The inside of your sculpture will be filled with balloons. For example, they might form the head and the body of your creature, with the legs, arms, horns and so on attached to them.

Start by figuring out where in your newspaper sketch the three balloons should be placed. You may only need two balloons. Simply draw the outlines of the balloons on the sketch.

Keep in mind that you can make them different sizes by pumping them more or less full with the balloon pump. Try it. Just adjust the size to fit your blueprint.

But also keep in mind that you should not pump up the balloons all the way. That's because the plaster that you will be applying to the balloons will warm up as it hardens. That will warm up the air inside the balloons, which will expand to take up a little more room.



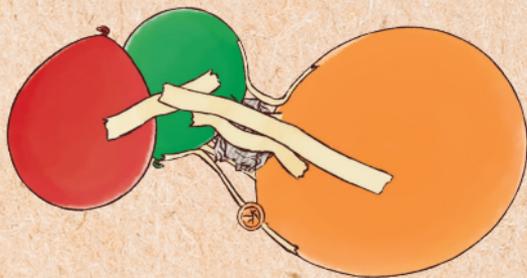
To the pump - get set - go!

You will need:

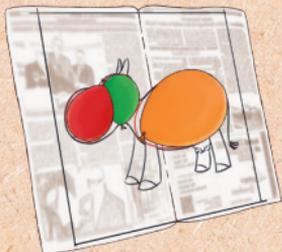
Balloons, your newspaper sketch, balloon pump, string, masking tape, newspaper

Here's how:

- 1 If you didn't tie the balloons closed when you inflated them in the previous step, do it now. Pump them up with your balloon pump and tie them closed with the string. Be sure to inflate them to the right size. As you pump, pause periodically and hold them up to your blueprint to check.
- 2 Arrange the balloons in front of you on the table the way they appear in the blueprint, and tape them carefully together with a few strips of masking tape. Now, can you already picture the finished sculpture?



1



TIP!

If your sculpture is going to have a long neck or tail, for example, you can add some balls of wadded-up newspaper between the balloons. Then tape them in place with a little masking tape.

Arms and legs

You will need:

Wire, your newspaper sketch, ruler, wire cutter or combination pliers, masking tape, old newspaper

Here's how:

- 1 Of course, your sculpture will still need arms and legs. Take a ruler and look at your blueprint to see how long one of the legs should be. Transfer that measurement to a wire and tape a piece of masking tape to the wire to mark the length.

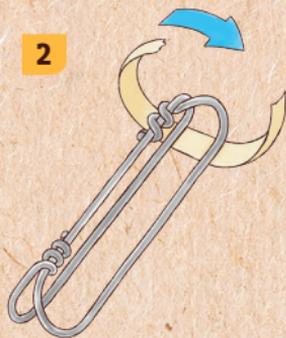
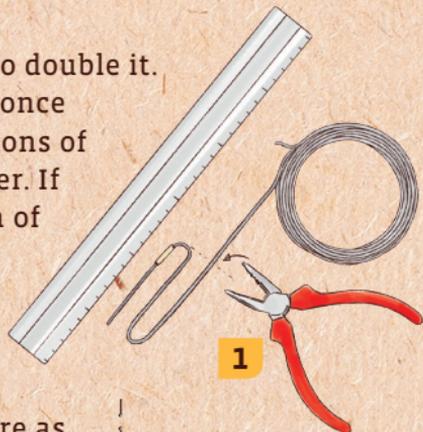
Bend the wire at that location to double it. Then bend the wire back again once more. Now you have three sections of wire lying alongside one another. If you are pleased with the length of the leg, carefully cut the wire with a pair of wire cutters.

Have an adult help you with this part!

- 2 Bend around the ends of the wire as shown in the drawing. This will make the legs nice and stable.

Finally, tape some masking tape over the ends of your leg so the balloon doesn't pop. Now make the other arms and legs in the same way.

So, how many legs will your sculpture have? Three? Four? Or maybe even ten? Do whatever you like — the crazier, the better!





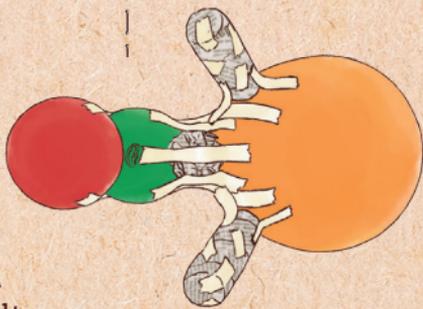
TIP!

If you are sculpting a space plant or a crazy-looking house, of course, you won't need any arms or legs. But how about tentacles or stilts? Build them in the exact same way as the legs described here!

- 3** If you want to turn your legs into real stompers, like an elephant's legs, you can wrap them with newspaper. Just grab an old newspaper that nobody wants to read anymore, tear it into strips, and tape the strips around the wire legs with masking tape.

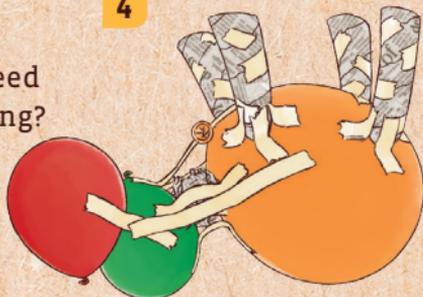


- 4** Next, you will have to tape the legs to the balloons with masking tape. Be sure to arrange the legs in such a way that the sculpture is stable. This part can be a little tricky. Just try out different positions. You might want to have an adult help you.



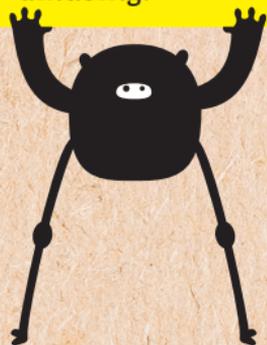
What will the sculpture still need to make it look like your drawing? Grab some wire and bend it to make horns, ears, antennas, a tail, or whatever else your creature is supposed to have. Don't forget to wrap masking tape around the sharp wire ends.

4



TIP!

You can also use some wadded-up newspaper to make eyebrows and tape them on with masking tape. Make sure to place all the body parts in their right locations. Don't get careless and let one horn end up on the nose and another on the back of the head. Of course, this could also look pretty amusing.



Why are balloons always round?

Why is it that balloons tend to be spherical when they are inflated? This is because as a balloon's rubber skin stretches, it requires more and more force to stretch out further. The air molecules inside the balloon are providing the force, or pressure, to push all sides of the balloon's rubber skin outward. The air pressure will exert force evenly across the entire inside surface of the balloon. If the rubber is the same thickness, it will all stretch the same amount before any one part wants to stretch more than another.

How do plaster casts work?

Casts protect broken bones, reduce swelling, and support muscles and other soft tissues — all to aid healing. Plaster-embedded fabric bandages and fiberglass are both used to make casts that start out flexible to mold perfectly around the body part they are intended to protect, but then harden into a very rigid and strong shell, just like on your plaster balloon sculpture. Your sculpture may not have any broken bones to heal, but it makes good use of the rigid plaster cast!

Paper skin

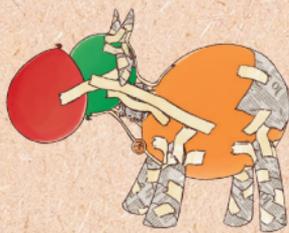
You will need:

Your half-finished sculpture, *masking tape, old newspaper*

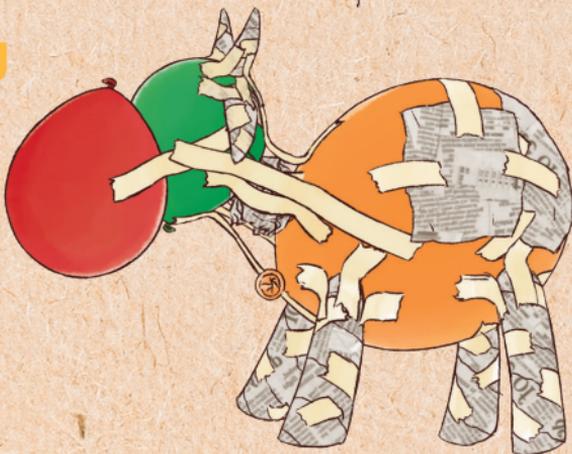
Here's how:

- 1 Since the plaster bandages will not stick very well to the smooth balloon surfaces, you should cover your creature with a layer of shredded newspaper. Just tear an old newspaper into pieces about as big as a postcard. Place the first piece onto the sculpture and tape it in place with little bits of masking tape.
- 2 Place the next piece on so it overlaps the first one a little — like roofing tiles or the scales of a fish. Continue until the balloons are completely covered.

1



2



Putting it in plaster

Now you have to apply plaster bandages to your sculpture, just like a doctor might apply a plaster cast to a broken arm.

You will need:

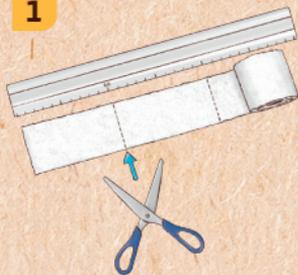
Your half-finished sculpture, plaster bandages, ruler, old plastic bowl, water, old scissors

Here's how:

- 1 Unroll the plaster bandage and cut it into pieces about 10 cm in length. **Be careful not to create too much dust, and avoid inhaling the dust.** With these little pieces, it will be easy to wrap your creature in plaster in no time at all.
- 2 Now it's time to go for a dip. Get a bowl of water and immerse a piece of plaster bandage in the water for about 3 seconds. Here's a trick you can use: Count one one-hundred, two one-hundred, three one-hundred — and pull the bandage out.



1



2



3 Briefly squeeze out the bandage so it isn't too wet, and lay it onto the sculpture. Then wet the next piece and apply it so it overlaps the first one a little. Continue like this until the sculpture is completely covered.

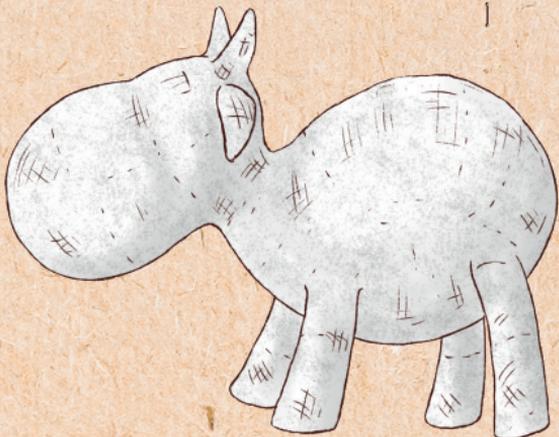
4 When everything is covered in plaster, smooth the entire surface with your wet hand. (Dip your hand in the bowl of water first.) Once your plaster sculpture is finished, wash your hands thoroughly, clean up the work area, and wipe off the table.

Now you'll just need a little patience, because the plaster bandage will have to dry for about two hours. Use the time to think about how you would like to paint your creature.

3



4



PART 3

PaINTiNG AND DECORATING

Getting all dressed up

Now it's time your sculpture got a nice outfit to wear. Does its body need zebra stripes or leopard spots? You could even paint on a superhero costume. Whatever you like can be turned into reality on your sculpture.

You will need:

Your dried sculpture, 4 watercolor paints, paint holder, brush, cup of water

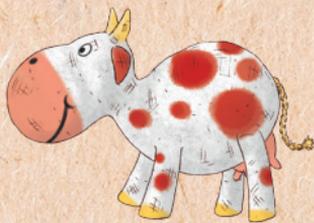
Here's how:

- 1 Start by placing the four watercolor tablets in the round depressions in the holder. It looks like a real artist's palette, don't you think? Pretty cool, isn't it?
- 2 Now just take the paintbrush in your hand, and off you go! However you paint your sculpture, you can be sure it will be one of a kind!

1



2



Cool extras

If you like, you can glue lots of other cool things to your sculpture. You may already have collected some materials when you were sketching your creature. If not, look around and find some!

What sort of thing could you use on your sculpture? How about feathers, seashells, an empty snail shell, bottle caps, pipe cleaners, or beads?

You will need:

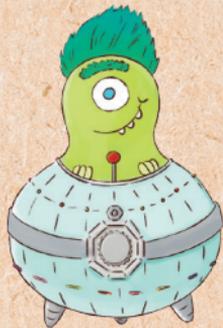
Your dried sculpture, all sorts of materials, liquid hobby glue

Here's how:

Spread out your collection of materials and try seeing what looks most interesting. Once you are happy with your selection, simply glue those items to your sculpture with a little hobby glue. We have put together a few suggestions for you on this page!

Find out more!

If you made an animal from the real world, ask an adult to help you research that animal. What does it eat? Where does it live? How does it move around? What special capabilities does it have?





Kosmos Quality and Safety

More than one hundred years of expertise in publishing science experiment kits stand behind every product that bears the Kosmos name. Kosmos experiment kits are designed by an experienced team of specialists and tested with the utmost care during development and production. With regard to product safety, these experiment kits follow European and US safety standards, as well as our own refined proprietary safety guidelines. By working closely with our manufacturing partners and safety testing labs, we are able to control all stages of production. While the majority of our products are made in Germany, all of our products, regardless of origin, follow the same rigid quality standards.

1st Edition 2014

© 2014 Franckh-Kosmos Verlags-GmbH & Co. KG

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, micro-filming, 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.

Idea and concept: Andrea Kern

Project management and editing: Kristin Albert

Text: Jessica Stuckstätte, Hamburg

Technical product development: Elena Ryvkin

Manual layout: Michaela Kienle, Fine Tuning, Dürmentingen

Manual illustrations and photos: artenot, p. 3 center right, 5 bottom center (creature with wings); Samuel Borges Photography, p. 6 center right; courtyardpix, p. 13 top right (all previous © shutterstock.com); milosluz, p. 5 (frame); code6d, p. 5 center right; SebastianKnight, p. 14 center right (all previous © istockphoto.com); artenot, front cover center left, bottom right, p. 2 bottom right, 8 center right, 10 top right, 11 bottom right, 12 bottom left, 14 bottom right (© shutterstock.com, edited by Michaela Kienle); Michael Flaig, Pro-Studios, Stuttgart, front cover center, p. 1 top center; Michaela Kienle, p. 5 bottom center (cow); Bianca Meier, Hamburg (all experiment illustrations)

Packaging design concept: Peter Schmidt Group GmbH, Hamburg

Packaging layout: Michaela Kienle, Fine Tuning, Dürmentingen

Packaging illustrations and photos: Gemenacom (Polaroid frame); Seregam (tape) (both © shutterstock.com); artenot (creature with paintbrush, © shutterstock.com, edited); artenot (all other creatures, © shutterstock.com, edited by Michaela Kienle); Michael Flaig, Pro-Studios, Stuttgart (title image, materials); Matthias Kaiser, Stuttgart (Polaroids)

The publisher has made every effort to locate the holders of image rights for all of the photos used. If in any individual cases any holders of image rights have not been acknowledged, they are asked to provide evidence to the publisher of their image rights so that they may be paid an image fee in line with the industry standard.

1st English Edition © 2014 Thames & Kosmos, LLC, Providence, RI, USA

Thames & Kosmos® is a registered trademark of Thames & Kosmos, LLC.

Editing: Ted McGuire; Additional Graphics and Layout: Dan Freitas, Ashley Greenleaf

Distributed in North America by Thames & Kosmos, LLC. Providence, RI 02903

Phone: 800-587-2872; Email: support@thamesandkosmos.com

We reserve the right to make technical changes.

Printed in Germany / Imprimé en Allemagne