

What does it do?

Is this the eco-friendly transport of the future? Use the elasticity of the space hopper to amplify your muscle power.

How does it work?

The Space Hopper works like a spherical trampoline. The air inside cannot be compressed by your weight, but the rubber skin can bend and flex. The impact of your weight compresses the Hopper. The tension in the rubber skin snaps it back into shape, which you feel as a rebound against you. If you hold on tight to the Hopper, you can carry it with you ready for the next bounce.

Technical notes

The scientific principle at work here is Newton's third law of motion, which states that for every action there is an equal reaction in the opposite direction. In this particularly amusing example (for spectators) the action is your impact on the Space Hopper, with the reaction being the deformation of the hopper. The second collision is when the Hopper springs back into shape.

Try it Out

With practice you can steer the Space Hopper by leaning as you bounce. It will take quite a bit of practice...

Fact files

The Space Hopper was invented in the 1960s, being patented by Aquilino Cosani of the Ledragomma rubber ball company in Italy in 1968. The toys were a craze in the 1970s in the UK, and reappeared in the 1990s on a wave of nostalgia. A similar toy was popular in the US, known as the Hoppity Hop.

National Curriculum coverage

This product is suitable for exploring science at KS2 and KS3 of the National Curriculum. Use it to discover more about Forces and Motion (physical processes).

In the Science Museum

The key to making the Space Hopper work is the stretchiness of the rubber it is made of. You can find out why this is by visiting the Challenge of Materials gallery at the Science Museum, or online at www.sciencemuseum.org.uk

Instructions for use

The product should be inflated with the pump & nozzle provided. Once inflated, remove the pump nozzle from the valve and plug the valve closed with the stopper. Please ensure the product is fully inflated & the stopper is firmly pushed into the inflation valve before use.

Should you wish to deflate the product for storage, remove the stopper, connect the nozzle to the 'deflate' valve on the pump, and use the pump to deflate the product.

If the product requires cleaning, it may be washed with warm soapy water. Do not use abrasives or solvents for cleaning.

NOT SUITABLE FOR CHILDREN UNDER 3 YEARS DUE TO SMALL PARTS WHICH MAY REPRESENT A CHOKING HAZARD

MAXIMUM WEIGHT RECOMMENDED FOR SAFE USE IS 110 KG (17 stone)

DO NOT USE ON SURFACES LIKELY TO PUNCTURE THE PRODUCT. IF USING THE PRODUCT ON HARD SURFACES THE USE OF PROTECTIVE EQUIPMENT, SUCH AS A SAFETY HELMET, IS RECOMMENDED. THIS PRODUCT IS RECOMMENDED FOR OUTDOOR USE ONLY. PLEASE RETAIN THIS PACKAGING FOR FUTURE REFERENCE

GIANT RETRO SPACE HOPPER

*instructions