

Human Exploration and Development of Space

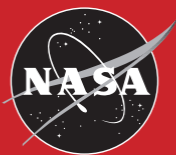


Suited for Spacewalking

A space suit must have the proper pressure for astronaut survival. However, an inflated space suit can be difficult to bend and move arms, legs, and fingers. The space suit is like an inflated balloon with an astronaut inside. The more pressure in the balloon, the more difficult the balloon is to bend.

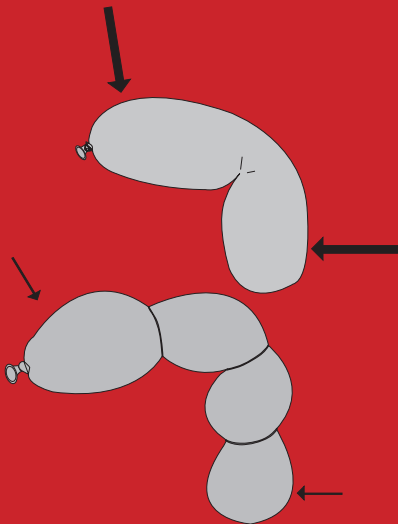
NASA engineers had to overcome the problem of a stiff, unbendable space suit so astronauts could work in space. Engineers built in joints, like ribs on vacuum cleaner hoses, to make suits more flexible.

Additional information is available over the worldwide web at <http://www.spaceflight.nasa.gov>.



National
Aeronautics and
Space
Administration

Bending Under Pressure



Be an engineer and devise ways to make joints in some long, inflated balloons.

Materials:

2 long balloons

3 thick rubber bands

Procedure:

- 1. Inflate one balloon fully and tie it.**
- 2. Inflate the second balloon. While it is inflating, slide the rubber bands over the balloon so that the balloon looks like sausage links. Doubling the rubber bands at each "link" will yield the best results.**
- 3. Compare the "bendability" of the two balloons. Can you find other ways to make the inflated balloons more bendable?**

Where would engineers place joints to help astronauts work in space?