

Air Takes Up Space, and can be Compressed

Air has weight and takes up space. The weight of all the air in the Earth's atmosphere pushes on everything with a force called air pressure.

Air presses in on every square centimetre² of your body. The weight is almost 3 kg / cm . You are not crushed by all that weight because the air and liquids inside the body push back with the same force.

The force of gravity prevents Earth's atmosphere from escaping into space. Since air occupies space, it is difficult, in nature, to create a vacuum.

Air can be squeezed into a small space, or compressed. All gases are less dense than liquids and solids. No matter what the volume, molecules in gases are less closely packed together than those in liquids or solids, and because of this they have room to be squeezed closer together.

Compressed air is used to pump up tires and balls and to lift extremely heavy objects such as cars in some service stations.