

# OUR SPACE

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DIGITAL ADVENTURES IN SPACE

## Body and Health

Gravity helps our body to work and the ISS is an ideal location to explore this. Richard did a number of scientific research projects while in space. Often space travelers complain of lower back pain while weightless. On Earth our lower back bends to support us and that's what our muscles expect. On Earth our bones get squashed, making bones stronger and healthier by building bone mass. In microgravity bones aren't squashed, so osteoporosis occurs and we lose bone mass. Understanding how this happens may give us clues as to how osteoporosis occurs on Earth. It's not just bones that suffer, our inner ears have a device for detecting our movement. This contains tiny masses (made of chalk) that shift as we move. Gravity affects these masses, and this helps our brain know how we are moving. With no gravity our brains can get confused and cause motion sickness even if we are stationary.