

In my job I get to...

SOAR INTO SPACE



Two years after his mission to the International Space Station, European Space Agency astronaut **Tim Peake** tells us what it's really like travelling through space!



Q What did taking off in a rocket feel like?

A It's actually quite smooth – a lot smoother than the re-entry. You build up acceleration in stages. It's a slow acceleration at first, and then it gets faster and faster. Once you've left the atmosphere, the nose fairing disappears and you just see the blackness of space out of the window. The overwhelming emotion is one of excitement and anticipation, and once the rocket launches, it's just a huge adrenaline rush. It's fantastic fun!

Q What is it like to be weightless?

A It's a huge amount of fun! It feels very liberating. Every muscle is relaxed. There's no stress or strain on your body at all. You're just floating. Your body adopts the most natural shape that it wants to – kind of like a half-sitting position. Here on Earth, we're so used to our shoulders being pulled down by gravity that we think that's the normal position, but when you're in space, your shoulders are hunched up. It takes a little while to get used to, and

sometimes it can be a bit painful in the first two weeks because you end up using different muscles.

Q How does Earth look from space?

A The planet looks absolutely stunning from space. It puts everything into perspective. It makes you realise how tiny we are, how beautiful the Earth is, and how much water there is. When you look at the curvature of the planet, you see the thin strip of the atmosphere and you suddenly realise that tiny strip of gas is what allows us to live and breathe down here. It does make you think about how fragile we are. I think it's impossible for anybody to go into space, look back on Earth and not see things in a different way.



Tim took this photo of the continents of Europe and Africa, separated by just nine miles

Q What was your scariest moment in space?

A The docking was probably the most nerve-racking moment of the whole mission. The Sun was very low, so the whole space station was reflecting like a massive mirror into the periscope. So, Yuri, the commander who was flying the spacecraft, couldn't see anything. Nothing was going right. Thankfully, Yuri was on his sixth mission – he's one of the most experienced Russian cosmonauts, and so he was able to sort it out and bring us back in for a textbook manual docking.

Q What was it like coming back to Earth?

A It feels really weird – the gravity is surprising. In the first three or four hours, everything felt heavy. Somebody passed me an iPad, and I couldn't believe how heavy it was – it felt like a brick! But more than that, it's your balance. All the fluid in your ear has been floating for six months, and suddenly it has to get used to gravity again. It makes you feel a bit sick. Your eyes are telling you one thing, your ears are telling you another thing and your brain is all a bit messed up, so it affects your balance and it makes you feel very dizzy.



Tim after landing back on Earth

Interview with a SCIENCE HERO!

TIM ENJOYING SOME FREE TIME ON BOARD THE INTERNATIONAL SPACE STATION



HERO QUOTE

"Follow your dreams and be passionate about what you do."

Q Why did your spacecraft look so black and battered?

A It's hard getting back from space! The spacecraft is going ten times the speed of a bullet, and then it starts hitting the top of the Earth's atmosphere – that's going to generate some heat. It gets up to about 1,700 °C outside the capsule. Many metals simply don't withstand those temperatures, so it has to be built of very tough material. Halfway through the re-entry, our windows scorched over and we could no longer see anything outside. The air makes a brilliant brake. It's a great way of getting a spacecraft back to Earth, but it does generate an awful lot of heat.

Q What advice do you have for budding space scientists?

A Just continue to find out as much as you can about the things that you're interested in. Follow your dreams and be passionate about what you do. That tends to be what you're going to be most successful at. If you enjoy it, then it will never seem like work.

The scorched Soyuz capsule that carried Tim home



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