



## So You Think You're Sitting Still?



Chances are that you are sitting down right now. It might feel like you are sitting still, but right this very second, you are zooming through space at speeds that make the fastest rocket look like its moving at a snail's pace!

Think about the Earth—it rotates fully once every 24 hours. This means that it's spinning at speeds of over 1,500 kilometres per hour while you sit here unaware! The Earth is also moving along its orbit around the Sun, and the Solar System itself is orbiting around the core of our galaxy, the Milky Way. All this motion, and a glass of water sitting on a table doesn't even quiver!

That's not all. Every galaxy is spinning. The Milky Way revolves once every 250 million years or so. For many years, astronomers have suspected that this rotation is propelled by gas being pulled onto the galaxy from a surrounding envelope of material. Now, we've finally seen a galaxy greedily snacking from this reservoir of material. In this picture, an artist has tried to illustrate what this looks like; you can see the galaxy in the middle of the image with long streams of gas flowing into it.

This particular galaxy has a ravenous appetite and, like you, the more it eats, the bigger it will grow. Galaxies start off with a lot of gas, but over time, this gas is used up because new stars are created from it. The fresh stream of gas falling onto the galaxy replenishes its fuel for creating new stars, making the galaxy bigger and brighter!

### COOL FACT



We can see this impressive event because the extremely bright centre of a galaxy far, far away is lined-up perfectly, in our line of sight, behind the feeding galaxy. The light has to pass through all of the cosmic dust surrounding the greedy galaxy before it reaches our telescopes, putting a literal spotlight on it and giving us a detailed view!

