



**WHERE'S
THE
HIGGS
PARTICLE?**

Can you find the one hidden here?

We don't know yet where the real Higgs particle is (or even if it exists at all), but we're trying very hard to find out...

Why is it important?

The Higgs particle is the missing piece of the particle physics puzzle. Its role is to interact with other fundamental particles and give them mass.

How will you look for it?

Using the biggest machine in the world - the Large Hadron Collider (LHC) at CERN, near Geneva in Switzerland. Protons are accelerated to almost the speed of light (6.7 billion mph) in a 17 mile long tunnel, and then smashed together. New particles are created in these collisions and scientists will search through them to find the Higgs particle. It's not going to be an easy job though - only 1 Higgs will be produced for every 10 million other particles produced!

How does that affect me?

From your television set to cancer treatments to the machines used to dry the paint on soft drinks cans; the technology developed for Particle Physics experiments is all around us. Even the world wide web was invented at CERN, to distribute data from Particle Physics experiments.