

# Black Holes

**Black holes** are areas in the universe where gravity pulls in everything, even light. Nothing can get out and all objects are squeezed into a tiny space. Because there is no light in black holes we cannot see them. But scientists can detect the immense gravity and radiation around them. They are the most mysterious objects in astronomy. Scientists think that the first black holes were formed when the universe began about 13 billion of years ago.

Albert Einstein was the first scientist to predict that black holes existed. But it was in 1971 that the first black hole was actually discovered.

Black holes can have various sizes, some may be even as small as an atom. But they all have one thing in common – a very large mass.

## Kinds of black holes:

**A stellar** occurs when very large stars burn away the rest of the fuel that they have and collapse. It is so massive that several of our suns could fit in it. Our sun, however, could never become a stellar because it is too small.

**Supermassives** are the largest and most dominating black holes in our universe. They have masses of a million or more suns put together. Every galaxy has a supermassive in its centre. As they become larger and larger they pull in more material. The black hole at the centre of our Milky Way is four million times as massive as our sun and surrounded by very hot gas.

**Intermediate-mass** black holes have not been found yet, but scientists think they probably exist. They have the mass of between a hundred and a thousand suns.

## A black hole consists of three parts:

**The outer event horizon** is the farthest away from the centre. Gravity here is not so strong and you would be able to escape from it.

**The inner event horizon** is the middle part of a black hole. In this area, an object would be slowly pulled to the centre.

**The singularity** is the centre of a black hole, where gravity is strongest.