How does a laser work ?

A laser produces an extremely thin beam of very shiny light, in a pulse or conitnuous way. Laser are the intials for : Light Amplification By Stimulated Emission of Radiations.
Unlike normal light, the light coming out of a laser is monochromatic, which means all de rays are on the same wavelength and coherent. So the rays vibrate together to produce a very powerful beam.
I'll first explain how the atoms are stimulated, then I'll talk about the creation of laser beams, and I'll finish with the emission process.

1/ The stimulation of atoms.

In a laser, the energy is stored in an liquid solid or gaz environment. In order to get a large collection of atoms in the excited state for the laser to work efficiently, we need an external source of energy. Usually, in a gaz laser, this energy comes from the electrons of an electric current. When the number of excited atoms becomes larger than the number of relaxed atoms, the excited ones will tend to release energy and therefore release a photon (a particle of light).

2/ The creation of laser beams.

When the ray of light created by the photon hits another atom already stimulated, it makes him release another photon. These photons, reflected by the mirors located on each side of the tube, are going to hit again other stimulated atoms, and this process goes on and on.

3/ The emission process.

When an atom is hit by a photon and emits a ray of light, this new ray will vibrate in phase with the one which has just hit the atom. All the rays are in phase and on the same wavelength in the tube. Therefore the light beam becomes powerful enough to shine through the semi-transparent miror and escapes from the tube. That's where the laser beam emission starts.

Lasers are used in many different fields, from telecommunications to medecine, and from compact discs to holography.