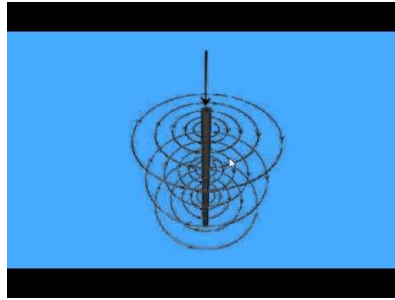


Name: Magnetic Field around a Straight Conductor, Loop, and Solenoid

Description: This animation explains the directions and magnetic field line trajectories around a current carrying straight conductor, a circular loop and a solenoid.



<https://www.youtube.com/watch?v=CJQETgc99eI>

The animations shown in this video describes the magnetic field around a current carrying conductor. The magnetic field around a conductor is represented with lines here and there. However the magnetic field exists all around the conductor. It is therefore more realistic to represent the magnetic field with a cloud. This cloud may be shown denser where the field is stronger and fainter where the field is weaker. But then how to represent the direction of magnetic field?

Conventionally, the magnetic field at any point around a current carrying conductor is shown to follow the right hand thumb rule (also called right hand curl rule.) Here in this video we consider grabbing the conductor (wire) with our right hand with our thumb in the direction of the grey arrow on the conductor (which is the direction of current passing through it). Our fingers curl in the direction of the magnetic field. These effects combine when the conductor is looped or coiled, leading to an overall field that is very strong through the centre of the loop or coil.