CiE iGCSE Physics Checklist

Section 33: Electromagnetic Effects 2

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| **CORE** |  |  |  |
| Describe the pattern of the magnetic field (including direction) due to currents in straight wires and in solenoids  |  |  |  |
| Describe applications of the magnetic effect of current, including the action of a relay |  |  |  |
| Describe an experiment to show that a force acts on a current-carrying conductor in a magnetic field, including the effect of reversing: – the current – the direction of the field |  |  |  |
| State that a current-carrying coil in a magnetic field experiences a turning effect and that the effect is increased by: – increasing the number of turns on the coil – increasing the current – increasing the strength of the magnetic field  |  |  |  |
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| **SUPPLEMENT** |  |  |  |
| State the qualitative variation of the strength of the magnetic field over salient parts of the pattern  |  |  |  |
| State that the direction of a magnetic field line at a point is the direction of the force on the N pole of a magnet at that point |  |  |  |
| Describe the effect on the magnetic field of changing the magnitude and direction of the current |  |  |  |
| State and use the relative directions of force, field and current  |  |  |  |
| Describe an experiment to show the corresponding force on beams of charged particles |  |  |  |
| Relate this turning effect to the action of an electric motor including the action of a split-ring commutator  |  |  |  |