Unit 3 Physics – Section 3.8 – the electric generator

What is another name for the generator effect?	Electromagnetic induction
What is electromagnetic induction?	If an electrical conductor 'cuts' through magnetic field lines, an electrical potential difference is induced across the ends of the conductor.
What happens if an electrical conductor 'cuts' through magnetic field lines?	An electrical potential difference is induced across the ends of the conductor.
What happens if a magnet is moved into a coil of wire?	An electrical potential difference is induced across the ends of the coil so that the pole produced at the end of the coil is opposite as the end of the magnet being pushed in.
What happens when you move a magnet out of a coil?	An electrical potential difference is induced across the ends of the coil so that the pole produced at the end of the coil is the same as the end of the magnet being pulled out.
How can you reverse the direction of the p.d. induced across a coil?	If the direction of motion, or the polarity of the magnet, is reversed, the direction of the induced potential difference and the induced current is reversed.
What happens when you move a coil relative to a magnet?	An electrical potential difference is induced across the ends of the coil so that the pole produced at the end of the coil is the same as the end of the magnet being pulled out.
How can you increase the size of the induced potential difference (and therefore current)?	The size of the induced potential difference increases when: - the speed of the movement increases - the strength of the magnetic field increases - the number of turns on the coil increases - the area of the coil is greater.