NMR of Aromatic Compounds

Electrons Shield

Electron Withdrawing groups de-shield by removing electron density

Electron density can be added or removed through the p or s systems

Ring currents usually deshield

Toluene: An alkyl group does not shift the signal very much. It is neither electron donating nor electron withdrawing.
Effects through the p system can be explained through resonance structures.
Electron withdrawing group: A lack of electrons will de-shield.

Electron donating group: Electrons will shield.

Di-substituted Aromatics
Para substitution gives a distinct splitting pattern.