SOUND

Sound = air pressure changes (waves) that are transmitted through the air (and being able to be heard by human ear);

regular oscillations create a sound that has a pitch (sustained amount of vibrations per second)

irregular oscillations do not sustain the amount of vibrations long enough to be perceived as having a certain pitch; ex: drum beats

Sound (regular oscillations) has 4 characteristics:

- **Pitch** – measured in Hertz. (ex.: tuning concert A is 440Hz)
- **Intensity** – measured in decibel (ex.: very calm room = 20-30 dB; TV (set at home level) at 1 m = 60dB; Jet engine at 30 yards = 150 dB)
- **Duration** – length of a sound
- **Timbre** – the characteristics of a sound in terms of overtones

By extending the 4 characteristics of sound, we can cover the whole music theory:

- Pitch → Melody, Harmony, Intervals, Scales, Tonalities, etc
- Intensity → Dynamics
- Duration → Note values, Rhythm, Tempo
- Timbre → Orchestration