Pitch & Rhythm Correction and Manipulation - Knowledge Organiser

GLOSSARY	
Cent	1/100th of a semitone (100 cents = 1 semitone)
Response Time	How quickly a plug-in affects its input
Formant	The harmonic frequencies that occur in the human voice and determine timbre
Transient	The high-amplitude, short-duration sound at the beginning of a waveform

PITCH CORRECTION

- Used to automatically re-tune the pitch of a recording
    - Used both correctively and creatively
- Modern DAWs allow the user to change specific notes using the **piano roll editor**
- Notes can be shifted by either **semitones** or **cents**
- Smaller errors can also be corrected by **cutting** and **pasting** material from elsewhere in the track
- The response time of a pitch correction plug-in determines how fast the affected notes are adjusted
    - Faster response time = More robotic sounding vocals

Examples of Pitch Correction Plug-Ins

- Logic Pro – **Flex Pitch**
- Cubase – **VariAudio**
- External – **Melodyne, Auto-Tune**

RHYTHM CORRECTION

- Audio quantise can be used to correct rhythmic mistakes in an **audio** recording
- The transients of the waveform are analysed and time-stretched to snap to a grid
- These transients can be adjusted manually
- Smaller errors can be fixed using the scissor tool and by manually adjusting out of time notes

GROOVE TEMPLATES

- Groove templates can be used to recreate the **inconsistencies in tempo** found in **live performances**
- They allowed completely sequenced performances to possess a more ‘human’ feel
- Templates would be extracted from samples using an app/plug-in and then they would be applied to a MIDI track