



MUSIC
TECHNOLOGY
(SOUND
ENGINEERING)
SUMMER
INDEPENDENT
LEARNING

Y11 into Y12

TASK 1- THE PHYSICS



List 3 properties of a sound wave



Give definitions of these properties



Which sounds are more easily absorbed – high pitch sounds or low pitch sounds?



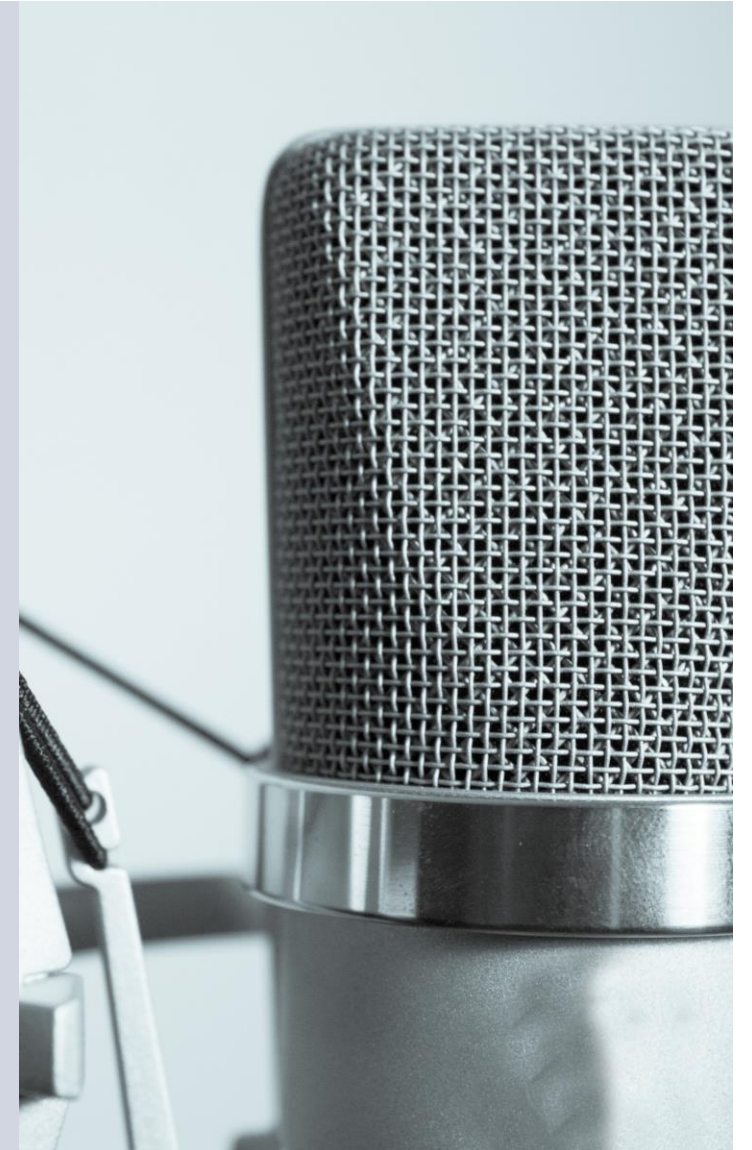
Why is this?



Discuss – If a tree falls in the woods and nobody is around to hear it – does it make a sound?

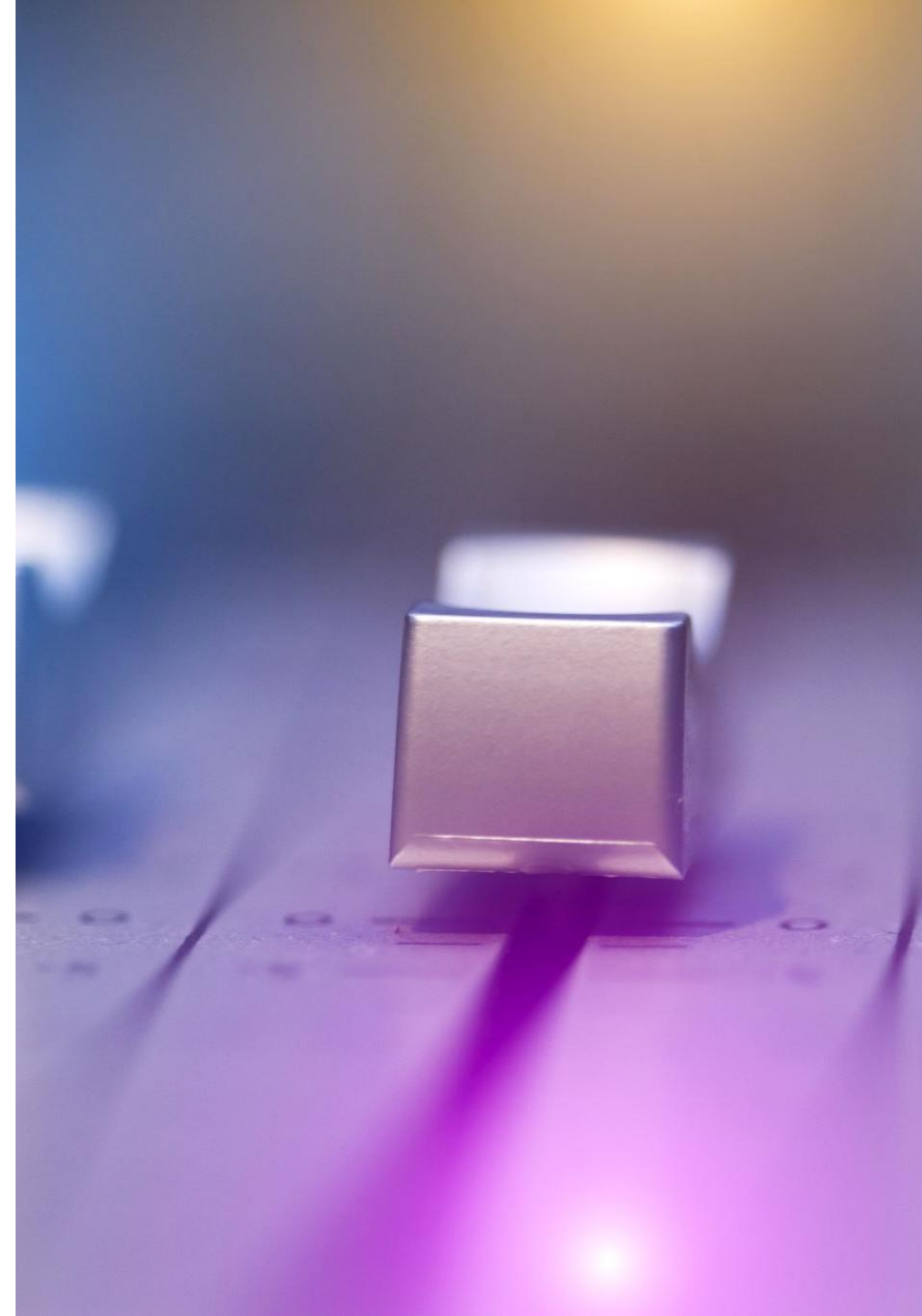
TASK 2 - EXPLORING MICROPHONES

- What is a microphone?
- What is a dynamic microphone?
- What is a condenser microphone?
- What is a Ribbon Microphone?
- Which type of microphone would be best for recording a kick drum? Why?
- Which type of microphone would be best for recording a harp? Why?
- Which type of microphone would be best for recording a 1950's style singer? Why?
- What is a polar pattern?
- Draw 3 different polar patterns
- Which polar pattern microphone would be best for capturing a string quartet?



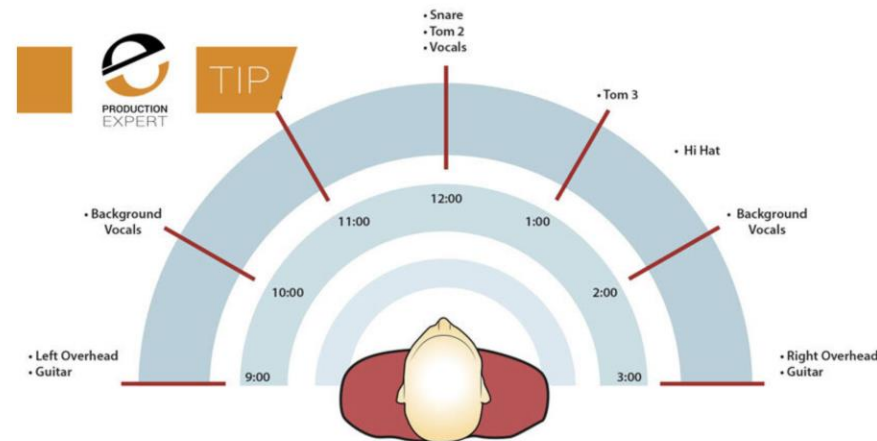
TASK 3 - MIXING TECHNIQUES

- If you were to 'mix' a track, what does this mean?
- Research the following techniques and explain what they do and why we use them when mixing;
 1. Controlling the dynamics (Compression, noise gate)
 2. Adjusting the levels
 3. Panning
 4. Use of effects (Reverb, delay etc)
 5. EQ



TASK 4 - LISTENING

- Choose 3 songs. For those 3 songs do the following.
- Identify all instruments you can hear in the song
- Tell me why you like these songs
- Order the instruments by volume (loudest to quietest)
- Position the instruments in the 'stereo field'. The diagram below should help you understand what this means.



TASK 5 - THE STUDIO

- Draw a diagram of a recording session 'live' room for a four piece rock band. This is the room that the musicians play in for a recording. The diagram needs to include: a drumkit, guitar amplifier, bass amplifier and vocal microphone.
- Draw microphones/add notes to your diagram that shows where you would place microphones in order to capture all of the listed instruments.
- What problems do you think you might encounter if all the musicians are in the room playing at the same time when you are trying to do a recording?
- How could you avoid these problems?
- Pick a band of your choice playing your favourite song. Describe how you might plan to record this band playing that song.

ADDITIONAL RECOMMENDED CONTENT

- Watch the video linked in this slide and make notes to revise some of the functions and processes within Logic Pro X.



ADDITIONAL RECOMMENDED CONTENT

- When producing a record in the music industry, certain roles are required to make the process successful. Some of these roles are; producer, audio engineer, arranger, studio manager.
- Can you create a presentation that shows the responsibilities of each of these roles and what they might do day to day?

ADDITIONAL RECOMMENDED CONTENT



Ensure you are familiar with the following terminology and understand the meaning behind it;



'DB'



'DAW'



'Phase'



'Bass'



'Treble'



'Frequencies'



'Gain'