

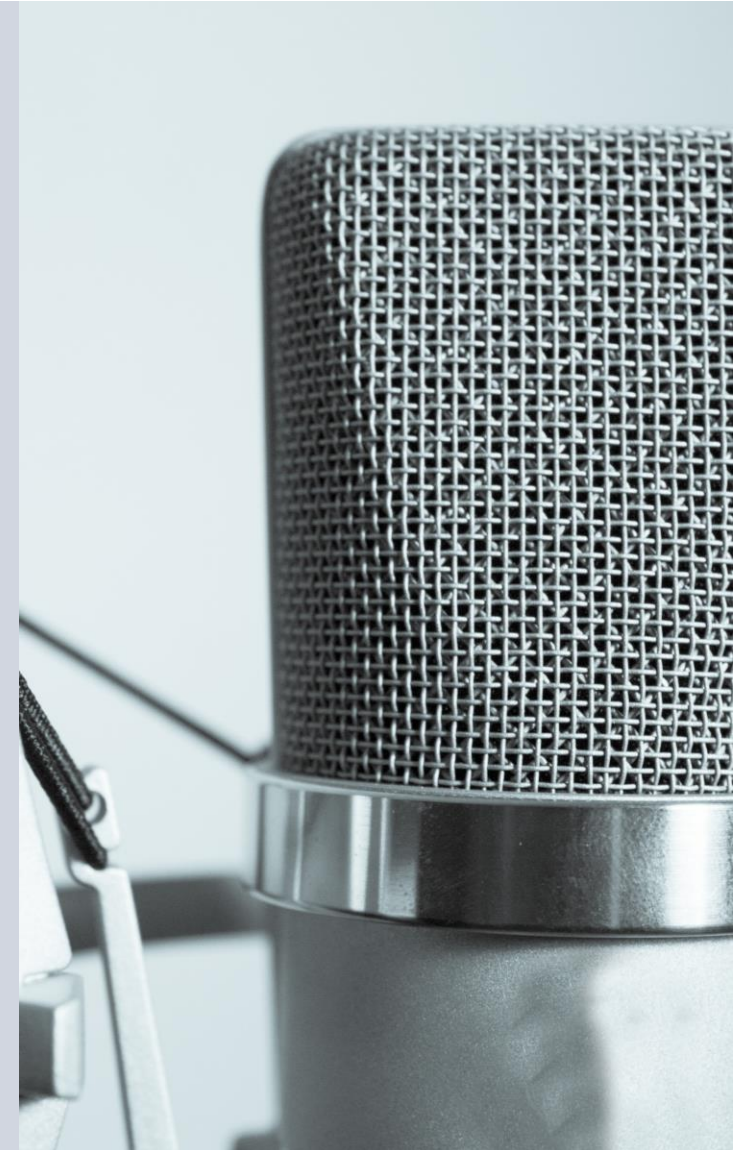
SOUND  
ENGINEERING  
SUMMER  
INDEPENDENT  
LEARNING

*Y11 into Y12*



# TASK 1 - 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 2 - 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?



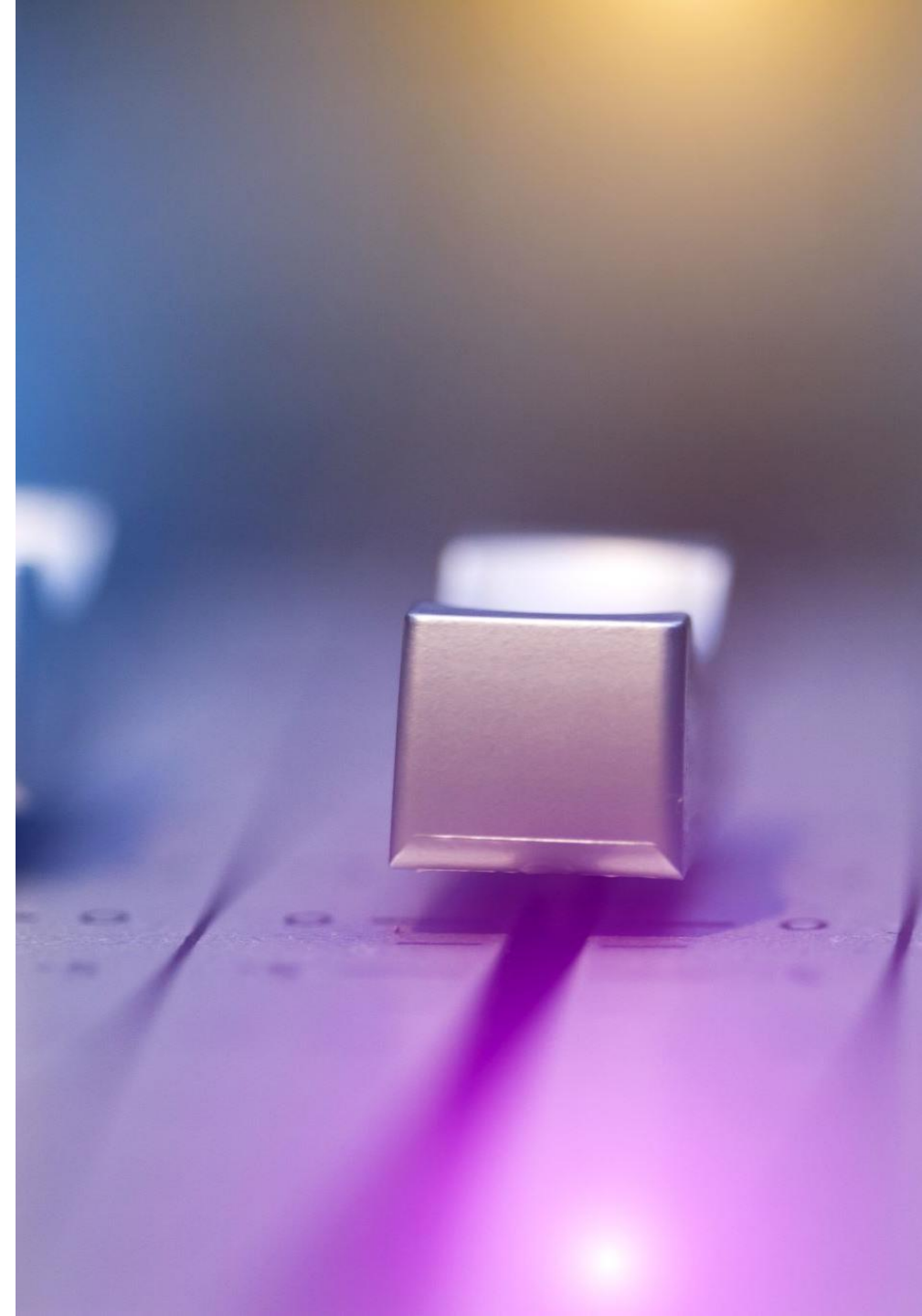
Why is this?



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

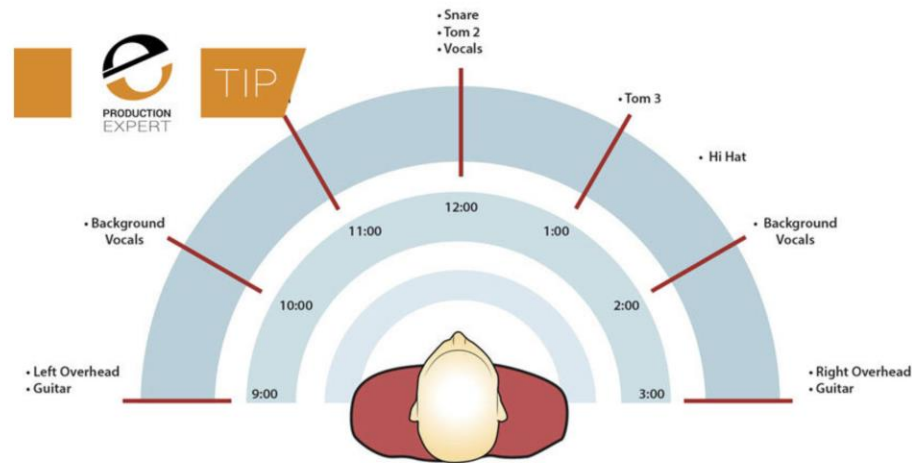
# TASK 3 - MIXING TECHNIQUES

- 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 and the equipment needed.



## TASK 6 – TERMS



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



'DB'



'DAW'



'Phase'



'Bass'



'Treble'



'Frequencies'



'Gain'

# 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.
- <https://www.youtube.com/watch?v=nZ8UtZNOrfY>





# 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?