

Year 11-12 Music Technology

Summer Independent Learning

Introduction to Music Technology

Do your best to research and then answer the following questions in detail. Include diagrams to help your explanations where appropriate:

The Physics

1. List 3 properties of a sound wave
2. Give definitions of these properties
3. Which sounds are more easily absorbed – high pitch sounds or low pitch sounds?
4. Why is this?
5. Discuss – If a tree falls in the woods and nobody is around to hear it – does it make a sound?

The Equipment

1. What is a microphone?
2. What is a dynamic microphone?
3. What is a condenser microphone?
4. What is a Ribbon Microphone?
5. Which type of microphone would be best for recording a kick drum? Why?
6. Which type of microphone would be best for recording a harp? Why?
7. Which type of microphone would be best for recording a 1950's style singer? Why?
8. What is a polar pattern?
9. Draw 3 different polar patterns.
10. Which polar pattern microphone would be best for capturing a string quartet?

The Studio

1. 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.

2. Draw microphones/add notes to your diagram that shows where you would place microphones in order to capture all of the listed instruments.
3. 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?
4. How could you avoid these problems?
5. Pick a band of your choice playing your favourite song. Describe how you might plan to record this band playing that song.

History

Create a timeline that shows the history of recording sound. Include short explanations of how each piece of equipment works and make sure to include the following on that timeline:

- The first recorded sound
- The invention of the electric guitar
- The invention of the synthesiser
- The invention of digital recording
- The invention of the MP3

Listen

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.

