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## GUIDED NOTES

### INTRODUCTION TO AUDIO & VIDEO TECHNOLOGY

**Directions:** Complete these notes as you watch the MyCareerTech "Introduction to Audio & Video Technology" video.

#### Introduction

1. Audio technology and video technology are two distinct fields that involve the capture, processing, and \_\_\_\_\_ of sound and visual images.
2. Audio technology is a field of technology that helps people collect, process, and reproduce \_\_\_\_\_.
3. Video technology is a field of technology that focuses on the capture, collection, processing, editing, and reproduction of \_\_\_\_\_.
4. True / False: Audio and video production have differences and unique applications; they are not often used together to create content that combines sound and visual elements.

#### Sound and Light Waves

5. In audio technology, \_\_\_\_\_ measures the number of waves that pass through a point in a given amount of time and is measured in Hertz.
6. True / False: The higher the frequency of a sound wave, the higher the pitch of the sound will be.
7. In video technology, frequency is related to the \_\_\_\_\_ of the video that is recorded.
8. Frame rate is the number of still images, or frames, that are displayed per second to create the illusion of \_\_\_\_\_.
9. Amplitude is a measure of the height of a wave from its resting position. What is it related to in audio technology?

What is it related to in video technology?

10. Amplitude is measured in \_\_\_\_\_ for audio and \_\_\_\_\_ in video.
11. \_\_\_\_\_ is the distance between two consecutive points on a wave that are in phase, or at the same point in their cycle.
12. True / False: Shorter wavelengths produce higher pitches, while longer wavelengths are responsible for lower pitches.
13. Light waves with shorter wavelengths produce colors towards the \_\_\_\_\_ end of the visible spectrum, while those with longer wavelengths produce colors towards the \_\_\_\_\_ end.

#### Tools and Equipment

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14. Match the audio equipment to its description.

Equipment	Description
A. Microphones	_____ - Capture delicate sounds, voiceovers, and acoustic
B. Dynamic microphones	_____ - Capture sound waves
C. Condenser microphones	_____ - Record guitars and brass instruments
D. Ribbon microphones	_____ - Control and manipulate audio signals
E. Mixer	_____ - Record vocals and live performances

15. Sound \_\_\_\_\_ is the technique of combining all the sounds that have been recorded and adjusting volume and equalization to create a harmonious final product.

16. Digital Audio Workstations (DAWs) are software \_\_\_\_\_ used for recording, editing, mixing, and mastering audio.

17. \_\_\_\_\_ is where an audio engineer listens to the entire project and makes final tweaks to the overall sound creating an audio master, or the final version.

18. Match the video equipment to its description.

Equipment	Description
A. Cameras	_____ - Capture visual images
B. DSLR camera	_____ - Designed for video, have built-in features
C. Mirrorless camera	_____ - Versatile with high-quality images
D. Video camera	_____ - Small and lightweight
E. Lights	_____ - Stabilize cameras
F. Tripod	_____ - Illuminate a subject during filming

### Recording and Editing

19. When recording audio, choose the appropriate type of \_\_\_\_\_, connect the microphone to a mixer or DAW, and adjust the levels.

20. When editing audio, \_\_\_\_\_ audio files into an audio editing software, trim and arrange the audio tracks, apply any effects, mix for a balanced sound, and make any final tweaks.

21. When recording video, choose the best \_\_\_\_\_ for the subject, set up lighting and framing, and connect any audio equipment to the camera or audio interface. Then record, either directly on the camera or using a memory card.

22. Match the lighting equipment to its description.

Equipment	Description
A. Key Light	_____ - Circular light source placed in front of subject
B. Fill Light	_____ - Illuminate subject from behind
C. Backlight	_____ - Additional light sources, eliminate shadows
D. Ring Light	_____ - Main light source

23. \_\_\_\_\_ refers to the way you place or position the subject you're recording. This is essentially what the camera sees.

24. Begin editing video by importing the recorded video files into video editing software, trim and \_\_\_\_\_ video clips, add transitions or effects, and master any audio.

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### Reflection

25. How can the combination of sound and visual elements enhance the storytelling experience?

26. What careers in this industry might you be interested in? How can you apply your skills and knowledge in these roles?