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| **TEXAS CTE LESSON PLAN**[www.txcte.org](http://www.txcte.org) |
| **Lesson Identification and TEKS Addressed** |
| **Career Cluster** | Information Technology |
| **Course Name** | Digital and Interactive Media |
| **Lesson/Unit Title** | Introduction to Audio Recording  |
| **TEKS Student Expectations** | **130.307. (c) Knowledge and Skills**(1) The student demonstrates professional standards/employability skills as required by business and industry. (A) The student is expected to identify and demonstrate work behaviors and qualities that enhance employability and job advancement such as regular attendance, attention to proper attire, maintenance of a clean and safe work environment, pride in work, flexibility, and initiative(B) The student is expected to employ effective verbal and nonverbal communication skills(C) The student is expected to employ effective reading and writing skills(9) The student demonstrates appropriate use of audio equipment and techniques. (B) The student is expected to demonstrate proper use of terminology and concepts in relation to audio technology(E) The student is expected to demonstrate proper use of audio editing software such as adding effects, fading, volume control, and manipulation of waveforms using appropriate digital manipulation software(F) The student is expected to export audio files to be used in digital formats in various delivery systems such as podcasts, downloadable files, social media, and streaming video |
| **Basic Direct Teach Lesson**(Includes Special Education Modifications/Accommodations and one English Language Proficiency Standards (ELPS) Strategy) |
| **Instructional Objectives** | **Performance Objective:**With the use of a sound recording program, the student will be able to produce an appropriate .wav file to the satisfaction of the instructor.**Specific Objectives:*** Configure hardware for recording
* Initiate the recording process
* Adjust and verify settings in the audio recording software
* Write a PSA intended for radio broadcast
* Create an audio recording of your PSA message
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| **Rationale** | Students will implement personal and interpersonal skills to prepare for a rapidly evolving workplace environment. The knowledge and skills acquired and practiced will enable students to successfully perform and interact in a technology-driven society. |
| **Duration of Lesson** | 3 hours |
| **Word Wall/Key Vocabulary***(ELPS c1a,c,f; c2b; c3a,b,d; c4c; c5b) PDAS II(5)* | * Audio
* Frequency
* .wav
* sound card
* microphone
* sound wave
* pitch, volume
* sound bite
* sound clip
* PSA.
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| **Materials/Specialized Equipment Needed** | **Instructional Aids:*** + Audio Recording Assignment
	+ Audio Recording Rubric
	+ Vocabulary for Audio Recording Presentation
	+ Vocabulary for Audio Recording Organizer
	+ Sample Audio Script

**Equipment Needed:*** Computer equipped with sound recording software
* Microphone
* Word processing software (script)
* Sound recorder program
* Projector for presentation
* Computer speakers
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| **Anticipatory Set**(May include pre-assessment for prior knowledge) | Play a teacher-made sound recording that is personalized to the class.Examples:* Message from Administrator
* Message from Teacher
* Message from Celebrity

Follow by saying something like, “Class, this is my attempt to use technology in our class. What else could I have recorded that you would enjoy or benefit from?”Lead the class in brainstorming ideas as students respond.Review the Vocabulary using the Vocabulary for Audio Recording Presentation. |
| **Direct Instruction \*** | Instructors can use the presentation, slides, handouts, and note pages to support and reinforce the following outline. a. Show students the microphone input on the sound card and demonstrate plugging in a microphone with a mini-plug (1/8”).b. Demonstrate opening the Recorder program following the path given.c. Demonstrate selecting the input Line.1. Configure hardware for recording
	1. Connect the microphone
	2. Open the Sound Recorder program
	3. Select input line (**ASK,** “What would happen if I selected the wrong input?”)
	4. Set the record settings
		1. Volume – adjust record volume level during a practice recording check
			1. Demonstrate setting the volume (ASK, “Why is it important to speak into the microphone the same way you are going to do the final recording?”)
		2. Quality - CD quality requires approximately 2 megabytes of file space per 10 seconds
			1. ASK, “What do the changes in the size of the signal in the box indicate?”
			2. Explain that there is a trade-off between the quality of the recording and the amount of file space required. The higher the quality, the more file space is required. Radio and telephone quality are lower than CD.
			3. “CD Quality” is the highest quality setting, but it creates the largest file size.
			4. Demonstrate that a person can be more selective in the quality settings by selecting “Untitled” under “Name” and selecting an appropriate setting from the drop-down box for “Attributes.” This gives the highest quality possible for the file size required.
			5. ASK, “When might a person be interested in a lower quality recording?”
		3. Add Echo if desired
			1. Open a sound file and click “Add Echo.” Then, play the file to demonstrate the effect.
			2. ASK, “When might the echo effect be used effectively for voice?” (Example: High intensity ads, to emphasize a phrase, etc.)

You must then save the file to keep the echo effect on the file. Echo gives a “reverb” effect and is usually more suitable for music than for voice.1. Initiate the recording process (demonstrate)
	1. Click Record
	2. Start Input
2. Stop and save recording (demonstrate)
	1. Click stop
	2. Click file
	3. Click save as
	4. Select save location
	5. Name file
	6. Click same
3. Playback: click “play” (demonstrate)
4. Summary

ASK the following questions:1. What is the first step in setting up your computer to record?
2. Where is the Sound Recorder program found if you are opening it from the “Start” menu?
3. What must be accomplished in the Volume Control program?
4. How do you start the recording process?
5. Describe the signal strength as displayed by the green line in the Sound Recorder when the record volume is properly set.
6. What are three ways to change the characteristics or quality of a recording?

After presenting the outline, ask the summary questions. After the summary questions, walk a student through the recording process.Let the students practice recording their voice by recording a short sentence or two of their choice of text. Move through the class to monitor the students’ understanding. Students may use the Sample Audio Script as a text.After the students show understanding of the recording process, have the students complete the Audio Recording Assignment.Pass out a copy of both the assignment sheet and the Audio Recording Rubric. Go over the rubric with the students before they begin the assignment. |
| **Guided Practice \*** | Demonstrate the recording process on the teacher’s computer projected onto a screen so that all can see. The teacher shows the students the recording process while students follow along at their computer stations. |
| **Independent Practice/Laboratory Experience/Differentiated Activities \*** | Students will complete the Audio Recording Assignment. |
| **Lesson Closure** | Say, “Based on what you have learned in this lesson, list some ways to improve the quality of your recording.”Lead the class in listing major points of the lesson on a white board, flipchart, projected screen, etc. |
| **Summative/End of Lesson Assessment \***  | **Informal Assessment*** Teacher will observe students during guided practice to assess student understanding of concepts and techniques. Revision/reteach will occur as needed before moving to the Independent Practice portion of the lesson.
* Teacher will circulate through lab as students work on recording independently to redirect/reteach as necessary.

**Formal Assessment*** Use the Audio Recording Rubric to evaluate the finished recordings.
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| **References/Resources/****Teacher Preparation** |  |
| **Additional Required Components** |
| **English Language Proficiency Standards (ELPS) Strategies** |  |
| **College and Career Readiness Connection[[1]](#footnote-1)** |  |
| **Recommended Strategies** |
| **Reading Strategies** |  |
| **Quotes** |  |
| **Multimedia/Visual Strategy****Presentation Slides + One Additional Technology Connection** |  |
| **Graphic Organizers/Handout** |  |
| **Writing Strategies****Journal Entries + 1 Additional Writing Strategy** |  |
| **Communication****90 Second Speech Topics** |  |
| **Other Essential Lesson Components** |
| **Enrichment Activity**(e.g., homework assignment) | Students will apply recording techniques in future projects.Students will compete in the recording portion of the TSA regional and state competition. |
| **Family/Community Connection** |  |
| **CTSO connection(s)** | SkillsUSA, TSA |
| **Service Learning Projects** |  |
| **Lesson Notes** |  |

1. Visit the Texas College and Career Readiness Standards at <http://www.thecb.state.tx.us/collegereadiness/CRS.pdf>, Texas Higher Education Coordinating Board (THECB), 2009. [↑](#footnote-ref-1)