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| **TEXAS CTE LESSON PLAN**[www.txcte.org](http://www.txcte.org) |
| **Lesson Identification and TEKS Addressed** |
| **Career Cluster** | Law, Public Safety, Corrections & Security |
| **Course Name** | Law Enforcement 2 |
| **Lesson/Unit Title** | Telecommunications |
| **TEKS Student Expectations** | **130.337. (c) Knowledge and Skills**(3) The student uses telecommunications equipment. (B) The student is expected to formulate simulated radio communications using phonetic alphabet and common terminology(C) The student is expected to conduct simulated radio and data communications using mobile data computer and handheld radios |
| **Basic Direct Teach Lesson**(Includes Special Education Modifications/Accommodations and one English Language Proficiency Standards (ELPS) Strategy) |
| **Instructional Objectives** | The student will be able to* Identify the five components of the communication cycle.
* Define diction, enunciation, and pronunciation.
* Conduct telecommunications using mobile and hand-held radio systems.
* Conduct simulated radio communications.
* Identify policies and procedures for proper mobile data terminal usage.
* Transmit and retrieve information over the mobile data terminal.
* Disseminate data to multiple mobilized units using the mobile data terminal.
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| **Rationale** | Law enforcement officers are required to communicate. Most agencies use radios and mobile data terminals to communicate with officers in the field. It is important for students to learn these required forms of communication. |
| **Duration of Lesson** | 2 hours |
| **Word Wall/Key Vocabulary***(ELPS c1a,c,f; c2b; c3a,b,d; c4c; c5b) PDAS II(5)* | **Message** – the text or information of the communication; can be verbal or nonverbal, even in a non-visual environment**Sender** – transmits a message by selecting the words or actions to convey meaning to the receiver, and solicits feedback from the receiver to make sure the message was understood correctly**Medium** – how the message is conveyed; represents the actions or text (words, written or spoken) of the message. Noise, figurative or literal, can sometimes hinder the message from being transferred in a medium**Receiver** – translates the sender’s message by giving meaning to its actions or text; should provide feedback to the sender by stating his or her understanding of the message or asking a clarifying question**Feedback** – the receiver’s understanding of the message or lack of understanding is transmitted back to the sender; the most important part of the communication cycle because it performs the verification function |
| **Materials/Specialized Equipment Needed** | **Materials*** Phonetic Alphabet Handout
* Phonetic Alphabet Activity Handout
* Phonetic Alphabet Rubric
* Discussion Rubric
* Individual Work Rubric
* Role Play Rubric

**Equipment*** Computer
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| **Anticipatory Set**(May include pre-assessment for prior knowledge) | Discuss the following quote and the importance of radio communication to law enforcement officers. Use the Discussion Rubric for assessment.“Communication is everything for a police officer. His gun may be his most powerful weapon, but his radio is his best friend. It’s his lifeline to dispatchers.” – King 5 News, Pearson, WA |
| **Direct Instruction \*** | 1. Communication Cycle
	1. Message – the text or information of the communication; can be verbal or nonverbal, even in a non-visual environment
	2. Sender – transmits a message by selecting the words or actions to convey meaning to the receiver, and solicits feedback from the receiver to make sure the message was understood correctly
	3. Medium – how the message is conveyed; represents the actions or text (words, written or spoken) of the message. Noise, figurative or literal, can sometimes hinder the message from being transferred in a medium
	4. Receiver – translates the sender’s message by giving meaning to its actions or text; should provide feedback to the sender by stating his or her understanding of the message or asking a clarifying question
	5. Feedback – the receiver’s understanding of the message or lack of understanding is transmitted back to the sender; the most important part of the communication cycle because it performs the verification function
2. Mobile and Handheld Radio Communications
	1. Effective Radio Communications
		1. Diction – an individual speaker’s accent, inflection, intonation, and speech sound quality, which is usually judged in terms of prevailing standards of acceptability.
			1. Enunciation – forming clear and distinct sounds into words
			2. Pronunciation – properly saying the sounds of a word while stressing the correct syllable(s)
		2. Appropriate rate of speech
			1. Most people speak at a rate of over 100 words per minute
			2. Most people write at rate of only 20–30 words per minute
		3. Appropriate message length
			1. Messages should usually take no more than 30 seconds of air time
			2. Divide longer messages into segments with a 5–10 second break in between segments to allow another user to speak for emergency traffic if necessary
			3. Strive to provide the greatest amount of information in the shortest period of time
		4. Professional – avoid inappropriate language
		5. Timely – immediately upon need
		6. Easily understood by both the communication center and the field units
		7. Use the Phonetic Alphabet to clearly broadcast names, vehicles, identification numbers, and addresses
			1. Adam
			2. Boy
			3. Charles
			4. David
			5. Edward
			6. Frank
			7. George
			8. Henry
			9. Ida
			10. John
			11. King
			12. Lincoln
			13. Mary
			14. Nora
			15. Ocean
			16. Paul
			17. Queen
			18. Robert
			19. Sam
			20. Tom
			21. Union
			22. Victor
			23. William
			24. X-Ray
			25. Young
			26. Zebra
		8. Concise
			1. Clear speech policy – requires standardized words or phrases with specific meanings; speak in plain language
	2. Communication Challenges
		1. Weather – conditions such as heavy clouds, and ice and snow buildup on antennas can interfere with radio transmissions and reception
		2. Terrain – mountains, large bodies of salt water, and mineral deposits can affect radio signal propagation
		3. Buildings – those constructed out of metal and concrete attenuate radio signals, particularly when using portable radios inside such structures; apartment complexes also pose transmission problems
		4. Low batteries – reduce the level of radio signal output when transmitting
	3. Radio procedures
		1. Know what you want to say before you key the microphone on the radio
		2. Press the key-up button located on the side of the radio or on the handset. Hold it down for 5–10 seconds before beginning to speak.
		3. Hold the handset or radio 2–3 inches from your mouth so that the transmission is not garbled
		4. If the transmission is lengthy, break in the middle to let any emergency radio traffic proceed; transmissions should not be longer than 30 seconds at a time
		5. Wait 5 seconds after ending the transmission before letting go of the key button to ensure that the whole message transmits
3. Mobile Data Terminal (MDT) Policies and Procedures
	1. Access
		1. No officer may access the Texas Law Enforcement Telecommunications System (TLETS) or the National Law Enforcement Telecommunications System (NLETS) without having a current Texas Department of Public Safety “less than full access” or equivalent certification
		2. No officer shall allow another person who does not have the less than full access certification to access TLETS or NLETS
		3. As soon as the desired TLETS/NLETS information has been obtained from the MDT screen, the MDT screen shall be cleared of the information
		4. The MDT screen shall be positioned in a manner to prevent unauthorized access to the information screen
	2. Operations
		1. Officers shall exercise care and caution when utilizing the MDT while operating the vehicle to insure driver and public safety and shall not take unnecessary or unreasonable risks to operate the MDT
		2. The MDT shall be adjusted to a position that makes the screen easily readable and the keyboard easily accessible
		3. Officers shall log-off from the MDT
			1. When away from the vehicle for prolonged periods for non-police activity (i.e., meal breaks)
			2. When transferring the MDT to another user
			3. At the end of the shift
	3. Confirmation of all query hits
	4. Recorded Data
		1. All data transmitted over the MDT system is recorded in a storage disk in the MDT server
		2. The contents of the storage disk are reviewed periodically for quality control purposes and/or to insure compliance with directives
4. MDT Usage
	1. Codes for use and operation of MDTs vary by manufacturer. Get assistance from your school resources officer or local law enforcement agencies for demonstrations. Unless your school has purchased radios/dispatch equipment or a MDT, you will need outside assistance
	2. MDTs allow officers to receive call information, communicate with one another, and run queries on vehicles, persons, and places

*Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*None |
| **Guided Practice \*** | *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*None |
| **Independent Practice/Laboratory Experience/Differentiated Activities \*** | * **Phonetic Alphabet Quiz**. Give each student a copy of the Phonetic Alphabet Handout during the class session prior to this one. Have the students study the alphabet. Quiz the students during this class session by having them list the phonetic alphabet on a blank piece of paper. Give a quiz the next class. Use the Phonetic Alphabet handout to grade quizzes.
* **Phonetic Alphabet Activity.** Give each student a copy of the Phonetic Alphabet Activity and the Phonetic Alphabet handouts. Have the students broadcast (over a radio if available) the names and license plates on the Phonetic Alphabet Activity Handout. They may reference the Phonetic Alphabet handout as needed (Note: you may add other license plates and names to the list, including using a student roster from your class). Use the Phonetic Alphabet Rubric for assessment.

*Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*None |
| **Lesson Closure** |  |
| **Summative/End of Lesson Assessment \***  | Telecommunications Exam and KeyPhonetic Alphabet Quiz (see Activity 1)*Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*Accommodations for Learning Differences For reinforcement, students will practice the phonetic alphabet. Allow the students to find audio recordings of police radio traffic and compare the differences they hear, such as noise in the transmission, keying up without talking, rapid speech, etc. Use the Individual Work Rubric for assessment. |
| **References/Resources/****Teacher Preparation** | National Academy of Emergency Dispatch (NAED) Instructor Certification courseArlington Police AcademyMansfield Police Department General Orders <http://sheriff.co.wise.tx.us/index.php/welcome/communications/> Do an Internet search for the following: dictionary |
| **Additional Required Components** |
| **English Language Proficiency Standards (ELPS) Strategies** |  |
| **Recommended Strategies** |
| **College and Career Readiness Connection[[1]](#footnote-1)** | **Social Studies Standards**V. Effective CommunicationA. Clear and coherent oral and written communication* Use appropriate oral communication techniques depending on the context or nature of the interaction
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| **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) | For reinforcement, students will practice the phonetic alphabet. Allow the students to find audio recordings of police radio traffic and compare the differences they hear, such as noise in the transmission, keying up without talking, rapid speech, etc. Use the Individual Work Rubric for assessment.For enrichment, allow the students to write scenarios involving police action. Students will then take turns role playing the scenarios, with one to two students acting as officers. The officers will conduct any simulated radio traffic necessary for the successful resolution of the scenario. Use the Role Play Rubric for assessment. |
| **Family/Community Connection** |  |
| **CTSO connection(s)** | SkillsUSA |
| **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)