CRM LESSON PLAN REPORT

THE IMPROVISED EXPLOSIVE DEVICE (IED)
071-FREBB002 / 02.0 ©

Analysis
21 May 2013

Effective Date: N/A

SCOPE:

None

SECTION I. ADMINISTRATIVE DATA

All Course Masters/POIs Including This Lesson

Courses

Course Number	Version	Title	Phase	Status
9E-F59/950-F38	02.0	Dismounted Counter-IED Tactics Master Trainer	N/A	Analysis

POIs

POI Number	Version	Title	Phase	Status
9E-F59/950-F38	02.0 ©	Dismounted Counter-IED Tactics Master Trainer	0	Analysis

Task(s) Taught(*) or Supported

Task Number	Task Title	Status
Individual		
052-COM-3261	React to an Improvised Explosive Device (IED) Attack (UNCLASSIFIED / FOR OFFICIAL USE ONLY) (U//FOUO)	Superseded
052-703-9107	Plan for an Improvised Explosive Device (IED) Threat in a COIN Environment (UNCLASSIFIED / FOR OFFICIAL USE ONLY) (U//FOUO)	Approved
052-192-3262	Prepare for an Improvised Explosive Device (IED) Threat Prior to Movement (UNCLASSIFIED/FOR OFFICIAL USE ONLY) (U//FOUO)	Approved
052-COM-1270 (*)	React to a Possible Improvised Explosive Device (IED) (UNCLASSIFIED//FOR OFFICIAL USE ONLY) (U//FOUO)	Superseded
052-703-9113	Plan for the Integration of Counter-Improvised Explosive Device (C-IED) Assets (UNCLASSIFIED//FOR OFFICIAL USE ONLY) (U//FOUO)	Approved

Reinforced Task(s)

Task Number	Task Title	Status
191-330-4053	Conduct a Risk Assessment	Approved

Knowledge

Knowledge Id	Title	Taught	Required
052-K-00001	Knowledge of Mine Awareness	Yes	Yes
052-K-00093	Understands Contemporary Operational Environment	Yes	Yes
052-K-00121	Military Explosives and Demolitions	Yes	Yes
052-K-00123	Explosive Hazards Indicators	Yes	Yes
052-K-00002	Knowledge of Mine/UXO Marking Requirements	Yes	Yes
171-K0608	Develop a response to an IED attack	Yes	Yes
052-K-00126	Minimum Safe Distance for Explosives	Yes	Yes

Skill

Skill Id	Title	Taught	Required
171-S0045	Ability to Predict IED hot spots in a deliberate attack	Yes	Yes
052-S-00007	Ability to Recognize Battlefield Hazard Indicators	Yes	Yes
S0805	Ability to Determine Grid Coordinates	No	Yes
052-S-00008	Ability to Extract Battlefield Hazards Awareness Information	Yes	Yes
052-S-00010	Ability to Understand Verbal Instructions	Yes	Yes
052-S-00011	Ability to Understand Written Instructions	Yes	Yes
052-S-00013	Ability to use FM's	No	Yes
052-S-00018	Ability to Identify Military Aspects of Terrain	No	Yes

Administrative/ Academic Hours

The administrative/academic (50 min) hours required to teach this lesson are as follows:

Academic	Resident Hours / Methods		
Yes	2 hrs	0 mins	Discussion (small or large group)
Total Hours(50 min):	2 hrs	0 mins	

Instructor Action Hours

The instructor action (60 min) hours required to teach this lesson are as follows:

	Hours/Actions		
	0 hrs	20 mins	Classroom Breakdown
	0 hrs	15 mins	Classroom Setup
Total Hours (60 min):	0 hrs	35 mins	

Test Lesson(s)

Hours	Lesson Number Version	Lesson Title
None		

Prerequisite Lesson(s)

Hours	Lesson Number Version	Lesson Title
None		

Training Material Classification

Security Level: This course/lesson will present information that has a Security Classification of: FOUO – For Official Use Only.

Foreign Disclosure Restrictions

FD3. This training product has been reviewed by the developers in coordination with the Fort Benning, GA foreign disclosure officer. This training product cannot be used to instruct international military students.

References

Number	Title	Date
ATP 3-90.37	COUNTERING IMPROVISED EXPLOSIVE DEVICES	29 Jul 2014
ATP 5-19 (Change 001 09/08/2014 78 Pages)	RISK MANAGEMENT http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp5_19.pdf	14 Apr 2014
DD FORM 2977	DELIBERATE RISK ASSESSMENT WORKSHEET	01 Jan 2014
FM 3-34.210	Explosive Hazards Operations	27 Mar 2007
FM 3-34.5	Environmental Considerations	16 Feb 2010
FM 3-36	Electronic Warfare in Operations	09 Nov 2012

Student Study Assignment

Study for the next day's assignment.

Instructor Requirements

Instructor must be certified in the following courses: Army Basic Instructor Course (ABIC) or DOD equivalent, Dismounted Counter-IED Tactics Master Trainer (DCT-MT) Course, Combat Life Saver (CLS), Small Group Instructor Course (SGIC), and Hand Held Device (HHD).

Support Personnel Requirements

Medical personnel or Combat Lifesaver (CLS).

Additional Support Personnel Requirements

Name	Student Ratio	Qty	Man Hours
NCOIC		1	8.0
Combat Lifesaver		1	2.0

Equipment Required for Instruction

ID - Name	Student Ratio	Instructor Ratio	Spt	Qty	Exp
4110-01-485-3548 - Chest, Ice Storage, White, 162 Quart Capacity	1:5	0:0	No	1	No
5820-00-NSN - SCREEN, PROJECTION	0:0	0:0	No	1	No
5820-00-T93-6432 - PROJECTOR, VIDEO, LCD EPSON ELP33 WITH REMOTE	1:30	0:0	No	0	No
5860-01-363-8730 - Laser Pointer	1:30	0:0	No	1	No
5895-01-540-4543 - Computer, Laptop	1:10	1:3	No	0	No
6530-01-290-9964 - Litter, Folding, Rigid Pole	1:15	0:0	No	0	No
6545-01-532-3674 - Medical Equipment Set, Combat Lifesaver, Version 2005, UA 245A	1:5	0:0	Yes	2	No
6665-01-381-3023 - Wet Bulb-Globe Temperature Kit	1:30	0:0	No	1	No
6665-01-C10-2210 - Detecting Set, Mine: Vallon (Not in AESIP)	1:5	0:0	No	0	No
6685-01-590-1047 - Monitor, Heat Stress: Questemp 44	1:30	0:0	No	0	No
6695-01-I00-0773 - Detector, Body Worn, Strider	1:5	0:0	No	0	No
6695-99-494-7952 - Detecting and Tracing Set, Metal	1:10	1:5	No	0	No
6760-00-985-6749 - Tripod, Photographic	1:30	0:0	No	1	No
7021-01-C17-2297 - PC Tablet, Data Entry: Galaxy Tab 2 WIFI 16GB Samsung	1:1	0:0	No	0	No
7110-00-T81-1805 - BOARD, DRY ERASE	1:30	0:0	No	0	No
7110-01-208-6438 - Board, Marker, Melamine Writing Surface, 2 X 2 Foot	1:30	0:0	No	0	No
7240-00-098-3827 - Can, Military	1:30	0:0	No	1	No
7520-00-281-5918 - Clipboard File, 9 X 12-1/2 Inch, Composition Board Back	0:0	1:1	No	0	No
7520-01-365-6126 - Marker Assortment, Tube Type, Dry Erase, 12 Pens, Eraser, Cleaner, Case	0:0	1:4	No	0	No

(Note: Asterisk before ID indicates a TADSS.)

Materials Required

Instructor Materials:

1. Lesson plan with Appendix A, C, and D as applicable
2. All references linked to this lesson plan
3. Visitor Book
4. Risk Assessment

Student Materials:

1. Student CD
2. All references linked to this lesson
3. Pen/Pencil and note taking material

Classroom, Training Area, and Range Requirements

ID - Name	Quantity	Student Ratio	Setup Mins	Cleanup Mins
72114-0-0 Enlisted Barracks, Transient Training, 0 Square Foot, 0 Starting Point , Service Points, or Persons Supported		1:30	0	0
74046-0-0 Consolidated Open Dining Facility, 0 Square Foot, 0 Seats		1:30	0	0
44224-0-0 Organizational Storage Building, 0 Square Foot, 0 Cubic Foot		1:30	0	0
17120-M-1200-30 Classroom, Multipurpose, 1200 Square Feet, 30 Students	1		15	15

Ammunition Requirements

DODIC - Name	Exp	Student Ratio	Instruct Ratio	Spt Qty
None				

Instructional Guidance/ Conduct of Lesson

NOTE: Before presenting this lesson, instructors must thoroughly prepare by studying this lesson and identified reference material.

1. Have on hand identified reference materials linked to the lesson plan.
2. Review presentation and develop a list of questions to use during class.
3. Review and prepare conference/discussion material presented.
4. Ensure all equipment listed for this Lesson Plan (LP) is present, operable, and set up for use before class.
5. You may develop simple PEs to enhance the conduct of this class.
6. PowerPoint users: Ensure the Instructor's file has been called up using Microsoft PowerPoint Viewer and Instructor/slide 1 is displayed on the screen before class.
7. Whenever noted, slides are available to assist in explanation of task steps. Use slides as needed during class or practical exercise to reinforce training. The Instructor may choose to use/not use the LP SLIs as developed, modify the existing SLIs content/order or insert new material as is necessary based on audience analysis to assist in Soldier learning. Changes must be annotated as a pen/ink change on the vault file master LP, VIP LP, and Instructor LP.
8. Whenever necessary, ask leading questions of Soldiers in order to prompt Soldier discussion.
9. Most materials associated with this LP are provided to Soldiers in digital format loaded on their school issued CD and student handout unless stated within instructional notes. Instructor will have to issue all necessary materials to Soldiers in hard copy unless they have individual Soldier laptop/digital capability.
10. Encourage Soldiers to relate their own experiences during the activities.
11. Facilitate this lesson using ALM and ASLTE methodologies taught in ABIC/FIFC.
12. Control group activities using Instructor/Facilitator's techniques taught in ABIC/FIFC.

OTHER

1. DURING INSTRUCTION

   a. Follow the lesson plan, show and discuss slides as appropriate, and facilitate group discussion.

   b. Ensure students stay attentive and pay proper military respect to senior officers, dignitaries, and/or guest speakers.

   c. Ensure students take notes and actively participate in group discussions and stay focused on the lesson training objectives.

2. AFTER INSTRUCTION

   a. Ensure proper police of classroom and other areas used by the students.

   b. Ensure that no classified/sensitive material is left in the classroom.

   c. Check classroom for security, cleanliness, and energy conservation before departing area.

   d. Annotate FB Form 1087a, Instructor/Evaluator Comment Record as appropriate.

3. BEFORE USING EQUIPMENT

   a. Ensure students are given a specific safety briefing, if necessary.

   b. Perform proper power up/down procedures for computer equipment.

Note: The above examples in no way limit the safety precautions that the individual instructor/facilitator may stress. There may be specific instances during conduct of lesson that the instructor/facilitator may caution students about.

Proponent Lesson Plan Approvals

Name	Rank	Position	Date
None			NO DATA

SECTION II. INTRODUCTION

Method of Instruction: Discussion (small or large group)
Mode of Delivery: Resident Instruction
Instr Type (I:S Ratio): Military - ICH, ABIC/FIFC Qual (1:5)
Time of Instruction: 5 mins

Motivator

Slide 1: Introduction and Motivator

One of the biggest issues to the dismounted Soldier is freedom of movement across their Area of Operation (AO). This is easily restricted by the use of numerous resources readily available to today's diverse enemy. They are smart, they watch and learn our Tactics, Techniques, and Procedures (TTPs), and employ their own tactics to counter our every move. The only thing we are lacking is the skills and knowledge on how to effectively employ this equipment in a tactical environment.

Note: Use this statement or develop your own as long as it relates to the material being taught.

Note to the Instructor/Facilitator (I/F)

1. Cover the **MOTIVATOR** statement above after introducing yourself. Only needed for the first time delivering instruction to the students.

a. Brief description about your experience while in the military to include: (Infantry, EOD, Combat Engineer. Search background, Locations of operating areas, Types searches completed, size of searches completed, items found while conducting a search.)

b. How you stay relevant. Example: Input from JCOE, Deploy as a civilian instructor, read storyboards, infusion of intelligence from our forward deployed civilian cells in Iraq.

c. Let the students know that the two points listed under the standards will become the Learning Step Activities (LSAs) for this Lesson Plan

3. Make sure that you cover the TLO, Action: conditions and standards. This class will focus on the following LSAs:

a. Identify an IED and its components

b. Recognize the blast effects of an IED detonation

Slide 2:

Terminal Learning Objective

NOTE. Inform the students of the following Terminal Learning Objective requirements.

At the completion of this lesson, you [the student] will:

Action:	Identify an Improvised Explosive Device (IED)
Conditions:	In a classroom setting and or field environment, given a PowerPoint presentation, student resources, and instructional materials, doctrinal references, and equipment.
Standards:	Identify IEDs IAW Chapter 1, ATP 3-90.37 and must achieve a score of 80% or greater on end of course examination and in the assessment rubrics that used during mission 1, 2, and 3 planning and execution during the week 2 of the course. The identification includes: 1. Identify an IED and its components 2. Recognize the blast effects of an IED detonation

	Learning Domain: Cognitive **Learning Level:** Knowledge
Learning Domain - Level:	None assigned
No JPME Learning Areas Supported:	None

Safety Requirements

Safety Requirements in a Classroom Setting:

Safety is of the utmost importance in any training environment. During the training process, commanders will utilize the 5-Step Risk Management process to determine the safest and most complete method to train. Every precaution will be taken during the conduct of training. Safety is everyone's responsibility to recognize, mitigate, and report hazardous conditions.
Instructor note: The instructor will brief the students on the unit/facility SOP for classroom contingencies (i.e. what doors will be used to exit the classroom, rally points, severe weather, WBGT/Kestrel set up, etc).

Safety Requirements other than Classroom Settings:

Safety must be paramount in the complex outdoor environment. During the training process, commanders will utilize the 5-Step Risk Management process to determine the safest and most complete method to train. Every precaution will be taken while replicating realistic battlefield conditions. Safety is everyone's responsibility to recognize, mitigate, and report hazardous conditions.

Instructor Note: The instructor will brief the unit/site SOP and Risk Management Worksheet for all potential contingencies encountered during that training period/event (i.e., WBGT/Kestrel set up, trail vehicles, for PT/foot marches, severe weather, fire, evacuation routes, muzzle awareness, range safety briefs, required medical FLA with driver and medics with emergency equipment, student injury procedures, rally points , etc.).

Risk Assessment Level

Low - All Army Instructors will conduct a Risk Assessment Worksheet (FB Form 385-1-E, Daily Risk Management Assessment Matrix, OCT 2013) prior to training and brief Soldiers on identified hazards.

Assessment: The Principal Instructor will prepare a risk assessment using the before, during, and after checklist and the risk assessment matrixes contained in Risk Management FM 5-19.

Controls: See Attached FB Form 385-1-E.
Leader Actions: See Attached FB Form 385-1-E.

Environmental Considerations

NOTE: Instructor should conduct a Risk Assessment to include Environmental Considerations IAW FM 3-34.5, Environmental Considerations {MCRP 4-11B}, and ensure students are briefed on hazards and control measures.

It is the responsibility of all Soldiers and DA civilians to protect the environmental from damage. There are no environment concerns during this block of training.

Instructional Lead-in

IED can be used by an adversary against you. Understanding the IED will enable you to make an accurate threat assessment to employ current dismounted equipment to counter the IED threat.

Note: Use this statement or develop one of your own relating to the material.

Note to the Instructor/Facilitator (I/F):

1. This course is the only one of its kind and is especially designed around the current hand held detect equipment procured for our troops today.
2. You will notice the course is designed to be as generic as possible as it focuses around the threat, not the location.
3. To that end, once you have completed this training you will be in a position to employ these tactics in any environment.
4. The equipment will change for the better and will give you more advanced technology, but don't forget the basic fundamentals of patrolling and employ the equipment in a way that the enemy cant target you.

SECTION III. PRESENTATION

TLO - LSA 1. Learning Step / Activity TLO - LSA 1. Identify an Improvised Explosive Device (IED) and its Components.

Method of Instruction:	Discussion (small or large group)
Mode of Delivery:	Resident Instruction
Instr Type (I:S Ratio):	Military - ICH, ABIC/FIFC Qual and CIED SME (1:5)
Time of Instruction:	1 hr 5 mins
Media Type:	Conference/Demonstration / Equipment Based Instruction / Handout / PowerPoint Presentation / Slides
Other Media:	Unassigned
Security Classification:	This course/lesson will present information that has a Security Classification of: FOUO – For Official Use Only.

Slide 3: Identify IED Components. How would you define Improvised Explosive Device (IED)?

"An Improvised Explosive Device (IED) is a weapon that is fabricated or emplaced in an unconventional manner incorporating destructive, lethal, noxious, pyrotechnic, or incendiary chemicals designed to kill, destroy, incapacitate, harass, deny mobility, or distract." Reference: JP 3-15.1 Counter-Improvised Explosive Device Operations

Note to the Instructor/Facilitator (I/F)

1. We will be covering LSA 1 for the next several minutes.
2. Ask the students what an IED is and how it relates to the Soldier.
3. Have the students share their reaction of the definition.
4. Ask who can share an experience related to IED.

Slide 4: Why the enemy uses IEDs?

Because:

1. They are highly effective
2. They are difficult to detect and counter
3. They play on our sympathy and our will to fight
4. They are cheap to build
5. They do not require direct engagement with CF/HNSF
6. They are easy to conceal
7. The components are easy to obtain

Note to the Instructor/Facilitator (I/F)

An Improvised Explosive Device (IED) is a crude but nonetheless highly effective 'homemade' bomb that is typically utilized by guerrilla, militant and other insurgent forces who lack the resources to field a conventional Military capability.

Slide 5: What are the five major components of an IED?

1. Switch
2. Initiator
3. Main Charge
4. Power Source
5. Container

Note to the Instructor/Facilitator (I/F)

1. An IED has five components: a switch (activator), an initiator (fuse), container

(body), charge (explosive), and a power source (battery).

a. A power supply, often provided by car batteries or alkaline flashlight batteries.

b. A trigger, switch or some other direct or indirect means of setting the device off, such as a radio signal, trip wire, timer or firing button that someone presses.

c. A common form of remote trigger is a cell phone, cordless phone, radio or garage door opener activated by someone who is watching [source: GlobalSecurity.org].

2. Detonator is a small explosive charge that sets off the main charge.

- Detonators are usually electrical, like those used for explosions in construction.

3. Main charge, the primary explosive that's the big guns behind the blast. Unexploded Landmines fit the bill.

4. Container to hold everything together. The container may be designed to force the blast in a specific direction.

Slide 6: Switch

Definition

1. A device for making, breaking, or charging a connection.
2. It also controls the flow of power.

Note to the Instructor/Facilitator (I/F)

1. A switch is any component used to establish, break or charge a connection to either arm, disarm or fire an IED.

2. Left picture - Passive infrared sensor (PIR), such technique is the use of the (PIR) sensor from common home and office security systems.

- These sensors respond to changes in the infrared/heat signal that arrives at the active portion of the sensor.

3. Center picture - Carbon rod pressure plate.

a. The enemy knows that our metal detectors will miss the conductive carbon rod, and so they pull these out.

b. Batteries that have been ripped apart is bad sign.

4. Right picture - ICOM (Radio Controlled, RC).

a. A favorite type of IED used in U.S. coalition theaters of operation today is the RF or radio-controlled (RC) command link.

b. These IEDs are inexpensive, easy to build or acquire, and difficult to trace and can be triggered from long distances, keeping the operator safe from any detonation or exposure to U.S. Military forces. An RCIED is simply explosive material that is integrated with a handheld wireless radio or device that will trigger upon receipt of a signal from second wireless handheld device.

Slide 7: Switch (cont.)

- Purpose

1. It provides a connection between the power supply and initiator.
2. It provides
   a. Safe separation
   b. Arming
   c. Firing
3. May have more than one switch.

Note to the Instructor/Facilitator (I/F)

1. There are three primary types of switches used to initiate an IED. Each method is normally used as the sole means of initiation, but the use of one in conjunction with another has also been seen.

2. There are advantages and disadvantages to each method. One might be more predominantly used based on factors such as reliability, available resources, emplacement environment, intended target, effectiveness against coalition forces countermeasures and the allowance for greater standoff.

Slide 8: Switch (cont.)

Three Categories of switches

1. Victim
2. Command
3. Time

Note to the Instructor/Facilitator (I/F)

1. As with all aspects of IED design, initiation methods are constantly evolving and are limited only by the bomb maker's ingenuity.

2. While current IEDs have fairly rudimentary detonation capability, in future wars the detonation technologies, together with the other technologies used on these devices will become increasingly sophisticated and therefore more difficult to counter.

Slide 9: Switch (cont.)

- Victim operated (VOIED)

1. Functions by the direct action of the victim

- Uses victim's developed pattern to target

2. Advantage:
   a. Victim will be in close proximity to the device
   b. It can be disguised as almost any item
   c. Typically simple to operate
   d. Emplace and forget
3. Disadvantage:
   a. Indiscriminant-animal, children, etc.
   b. Concealment increases emplacement time

Note to the Instructor/Facilitator (I/F)

1. Victim activated devices, as the name implies, are triggered by the intended victim.

2. These IEDs include a wide variety of initiation devices including pressure and pressure release switches, trip or pull wire, and movement detection technology.

3. The victim activated pressure plate IED is the most common device in operation in Afghanistan today, followed by command wire and remote controlled activation.

Slide 10: Switch (cont.)

- Victim operated

1. Pressure
   a. Leaf Spring
   b. Saw Blade
   c. Low Metal Content

2. Pull
   a. Pull Wire
   b. Trip Wire
3. Anti-Tamper
   a. Anti-lift
   b. Tilt
4. Electronic
   a. Passive Infrared (PIR)
   b. Photo Cell

Note to the Instructor/Facilitator (I/F)

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Slide 11: Switch (cont.)

- Command

1. Advantages:
   a. Triggerman can accurately fire the device when target is present.
   b. Provides stand-off for the triggerman.
   c. Can be used to arm multiple devices.
   d. Radio Control (RCIED) capabilities.
2. Disadvantages:
   a. Can be defeated by Radio-Controlled Improvised Explosive Device (CREW) systems.
   b. Triggerman must have some form of observation
   c. Line of Sight
   d. Observer
   e. Marker

Note to the Instructor/Facilitator (I/F)

1. Electronic-countermeasure equipment is defeated by using long command wires from a distant vantage point with a good view of the device location.

2. Recently, however, as command-wire detection procedures have become more successful, simple victim-activated devices have been used in significant numbers.

3. These IEDs are manufactured using predominately nonmetallic and nonmagnetic materials, making them difficult to locate with conventional detection equipment.

Slide 12: Switch (cont.)

- Command

1. Command Wire
   a. Lamp Cord
   b. Copper/ Alternator Wire
   c. Communication Wire
2. Radio Control

a. Cell Phone

b. LRCT

c. Land Mobile Radios

d. PMR

e. DTMF (Spider Devices)

3. Suicide

a. Grenade Fuse

b. Push Button

c. Micro Switch

d. Remote Control

Note to the Instructor/Facilitator (I/F)

1. An example of a command wire initiated IED, the setup is basic but very effective.

2. The main charge is physically connected to an initiating device or power source at the firing point through a command wire.

3. The current average length of command wire being retrieved is 600 meters.

a. They have been traced to firing points approximately 2000 meters away from the device.

b. Some have terminated at 50 meters.

4. These long distances necessitate longer emplacement times increasing the risk of captivity.

5. To help reduce their time on scene and emplacement efforts, terrorists have chosen locations that allow for the natural terrain features such as canals or wadis to provide concealment of both the device and themselves.

6. Note: If a suicide bomber has been identified and disabled, the device should still be considered a threat.

- Set a cordon as if it were a placed IED, and call EOD.

7. These switches consist of a transmitter and receiver linked by a radio frequency.

8. When the receiver device gets a signal from the transmitter, instead of performing its designed function, an electrical pulse is sent to an electric initiator which then detonates the main charge explosive.

9. This function can be accomplished via the internal electronics of the receiving device, or very easily from simple external circuitry that will change the power source to one that will more reliably fire the electric initiator.

a. An example would be employing an electronic switch that receives a small pulse from the receiver then allows power from an external source to flow to the blasting cap.

b. Similarly to a command wire device, there is a link between the bomber and his device, but instead of a physical link, radio waves are used instead.

Slide 13: Switch (cont.).

1. Time. Electric and Mechanical:

a. Designed to fire at a pre-set time or

b. Used primarily as a safe separation timer.

2. If a timer reads zero, that does not mean the device is unarmed or failed to function.

Note to the Instructor/Facilitator (I/F)

1. Time initiated is the method by which an IED self-initiates after a predetermined delay.

2. This is achieved through the use of mechanical, electronic and nonelectric timers.

3. The effectiveness of a time initiated IED relies heavily on accurate predictions by the terrorist of the intended target's time of presence at the emplacement location.

4. Current coalition forces efforts to vary times and movement routes greatly affect the terrorist's ability to effectively employ this method.

5. Similar to a victim operated set up, time initiated IEDs allow the terrorist to leave the area after emplacement as the device functions upon the expiration of time.

Slide 14: Switch (cont.)

- Time/Non-IED

1. Launch rockets Indirect Fire (IDF)

2. Used to counter our TTPs.

Note to the Instructor/Facilitator (I/F)

1. One PowerPoint picture shows IEDs with the following labels: Matches and propellant, incense, time delay initiation using incense sticks, matches, and RPG propellant. The other picture shows 107 mm Type 63-2 Rocket, improved initiation system.

2. As of April, 2010, the use of timers to initiate IEDs is uncommon.

3. Timers are currently used primarily to initiate indirect fire (IDF) attacks and provide a safe separation for the terrorist during an IED emplacement.

Slide 15: What is the initiator used for?

- Definition:

1. Any component that may be used to start a detonation or explosion.

2. A small tube containing sensitive explosives.

3. Extremely sensitive to heat, shock, and friction.

4. Two types:

   a. Electric

   b. Non Electric

5. Military, commercial or improvised device

Note to the Instructor/Facilitator (I/F)

1. A term used to describe any component that may be used to start a detonation or explosive train.

2. Initiators can be electric, nonelectric or mechanical.

3. They are commercial, Military or improvised.

4. Unlike the insensitive main charge explosive, initiators are made with sensitive explosives.

5. The less sensitive nature of the main charge requires them to be initiated by a sufficient explosive energy source. This energy is provided by a lesser amount of more sensitive primary explosives in the initiator.

6. These explosives are extremely sensitive to Heat, Shock and Friction.

7. Components of electric initiators render them susceptible to Electromagnetic Radiation (EMR).

8. Transmission of radios and other wave sources in the vicinity of these types of initiators should be kept at a safe distance.

9. The homemade peroxidebased alternatives found suitable for this application are some of the most sensitive explosives known (HMTD and TATP).

10. Handling should only be done by qualified personnel.

Slide 16: What would be the purpose of a main charge?

1. Purpose. Provide the destructive, lethal, noxious, pyrotechnic, or incendiary effect to destroy, incapacitate, harass, or distract.

2. Definition. The bulk explosive component of an IED capable of providing an explosion by its own energy when initiated.

Note to the Instructor/Facilitator (I/F)

1. A signal is sent to the initiator which activates the main charge (e.g. artillery, grenades, mines, homemade explosives, or combinations of several explosives and/or fuel) the whole system is powered by a power source (e.g. car batteries.)

2. Main detonates, and propagates an explosive shock wave when initiated. Low charge explosives are generalized into two categories: High Explosives and Low Explosives. High explosives burn with intense heat and violence, but are capable of detonating under confinement during initiation.

3. Both forms have been commonly utilized. Examples: High Explosive (155mm HE Projectile) and Low Explosive (propellant charges used in suicide vests and other various IEDs).

4. Understand that these categories can be further detailed down to a specific explosive by source of manufacturing and designed application.

Slide 17: Main Charge (cont.)

- Categories

1. Military
2. Commercial
3. HME (Homemade Explosives)

Note to the Instructor/Facilitator (I/F)

1. Bottom Left- Commercial grade dynamite.
2. Top Right- Military anti-tank landmine.
3. Bottom right- Bag of unknown type of HME.

Slide 18: Main Charge (cont.)

- Military Munitions Categories

Note to the Instructor/Facilitator (I/F)

1. Military explosives are explosives manufactured for Military use.

2. These are the most commonly used main charge explosive but HME is starting to become more frequent.

3. Insurgents prefer commercial and military grade explosives because they are professionally manufactured for specific purposes.

4. There is an abundance of Military munitions available to the terrorist from various Ammunition Supply Points throughout the country or via smuggling operations.

a. Bottom Left- 122 mm Russian projectile.

b. Bottom Right- anti-personnel landmine.

Slide 19: Main Charge (cont.)

- Commercial Explosive
  - Stolen or smuggled across borders from commercial demolition operations.

Note to the Instructor/Facilitator (I/F)

1. Commercial explosives are explosives available for purchase on the open market for commercial use.
2. These are commonly used for quarrying, strip mining and construction purposes.
3. Commercial explosives remain a viable resource for the terrorist, Government controls and restrictions on sales have made acquisition complicated and cost ineffective.
4. Logically, terrorist opt for munitions stockpile in caches or smuggled across the border and homemade alternatives manufactured from readily available material.
5. HME will be discussed in the following lesson.

Slide 20: IED Components

- Homemade Explosives

1. Combination of commercially available ingredients used to create explosives
2. Types
   a. Ammonium Nitrate Aluminum (ANAL)
   b. Ammonium Nitrate Fuel Oil (ANFO)
   c. Urea Nitrate (Illegal in Afghanistan)
   d. Potassium Chlorate mixture

Note to the Instructor/Facilitator (I/F)

1. HME is commonly used in large scale attacks such as VBIEDS and culvert attacks, but has also been used as the main charge for small devices.
2. The two main types of HME are some form of ammonium nitrate based explosive such as ammonium nitrate fuel oil (ANFO), ammonium nitrate and aluminum (ANAL) and urea nitrate.
3. The bulk ingredients are urea and ammonium nitrate.
   - These are commonly used in the farming industry as fertilizer.
4. TATP is used in homemade initiators.
5. The stability of the final product encountered in the field is unknown. All HME encountered should be considered sensitive to Heat, Shock and Friction.
6. Smells:
   a. Fruity/chemical - TATP
   b. Vinegar - TATP (Aged)
   c. Nail polish remover Acetone
   d. Fuel - gas - diesel
   e. Ammonia (urine)
   f. Sweet, cinnamon, cocoa

Slide 21: Power Source

- Stores and/or release electrical or mechanical energy.

1. Batteries
2. Capacitors

Note to the Instructor/Facilitator (I/F)

1. The source of power that either stores or releases electrical or mechanical energy for the initiation of an IED or improvised weapon.

2. The key elements of information about a power source are its type/source, its voltage, and how the power source is connected.

3. Batteries are predominantly used as the power source for IEDs.

4. There can be more than one battery incorporated into an IED to serve either the same or separate functions.

5. Uninterruptible Power Supplies (UPS) and capacitors from camera flashes have been used by the terrorists primarily at the firing end of a command wire IED (CWIED).

6. The UPS provides power from an internal battery incorporated by manufacture design.

7. Capacitors in camera flashes are used for their discharging efficiency.

8. Command wires have been traced out to approximately 2 kilometers, but the average is 600 meters.

9. A capacitor is used to ensure the required output is transmitted along the entire length of these long command wires as it would discharge all of its energy instantaneously unlike the trickling property of a battery.

Slide 22: Power Source (cont.)

- Purpose

1. Provide power for initiator and/or switch

2. May have more than one power source

3. Local batteries are poor quality; usually see a large quantity wired in series or in parallel

4. Camera flashes increasing in popularity

Note to the Instructor/Facilitator (I/F)

1. Every IED needs a power supply, often using commercial batteries to trigger the initiator, known as the detonator.

2. In most day-to-day electronic devices that use batteries, several batteries are used together.

3. Similarly, a terrorist may also need several batteries to sufficiently power an IED, and may tape a cluster of batteries together which can sometimes be of different types.

4. The battery in an IED can, however, take many shapes and forms.

5. Batteries are generally full of carbon, with a metal casing.

6. The carbon in batteries is organic, but because batteries are so dense and encased by metal, they will generally appear as blue or green on the X-ray screen, rather than the usual color for organic material, which is orange.

Slide 23: Containers

- An item or vessel that houses the whole or parts of the IED.

Note to the Instructor/Facilitator (I/F)

1. An item or vessel that commonly houses the whole IED or principle components of an IED.

2. The list of container materials is extensive, but a few examples include a pipe, box, jug, briefcase, vehicle, can, carcass, furniture item, or structure, among many other things.

3. A container is not always used as an IED can be functional without one. When utilized, it can provide concealment, a means of transporting the IED or fragmentation.

4. The container can be open or closed and a premanufactured item such as a burlap sack.

5. An IED that is totally enclosed within its container makes for extremely difficult detection.

Slide 24: Practical Exercise (THIS IS A HIDDEN SLIDE)

1. Hands on PE for learning the IED components.

2. Class discussion of the 5 components of the IED. (Ensure the students understand the components prior to the start of the hands on PE)

a. Break the Class into groups. (Plan this ahead of time).

b. Assign each group a TYPE of IED based on the switch type. (Command, Command RC, VO, Timer)

c. Give the groups 10 minutes to get the components for their IED, build it, and to develop a list of the Pro's and the Con's of their assigned IED.

d. Give each group an opportunity to explain their IED to the class and discuss the Pro's and Con's with the rest of the class.

3. Ensure each groups' discussion covers the basic advantages and disadvantages outlined in the course material.

4. Ensure the students are able to identify each of their components of the IED they have constructed.

5. The focus of this PE is to allow the students a Hands On opportunity to reinforce the understanding of the components.

Note to the Instructor/Facilitator (I/F)

This is a hidden slide and is meant for I/F preparation.

Check on Learning:

Slides 25 and 26

1. _____is a weapon that is fabricated or emplace in an unconventional manner.

a. Improvised Explosive Device
b. M4
c. Nitrate
d. None of the above

Answer:

a. Improvised Explosive Device

2. State three reasons why IEDs are used.

Answer:

These are all reasons why IEDs are used:

a. Highly Effective
b. Difficult to detect and counter
c. Plays to our Sympathy and will to fight
d. Cheap to build

e. Does not require direct engagement with CF
f. Easy to hide
g. Components are easy / cheap to obtain

3. What are the five components of an IED?

Answer:
a. Switch
b. Initiator
c. Main Charge
d. Power Source
e. Container

4. Any device that may be used to start a detonation or explosion is called an _____.
a. Timer
b. Main Charge
c. Initiator
d. None of the above

Answer:
c. Initiator

5. What are the three categories of Main Charges?

Answer:
a. Military
b. Commercial
c. HME

Review Summary:

In this LSA we discussed how to identify an IED and its components including:
1. Definition of IED
2. Components of IED
a. Switch
b. Initiator
c. Main Charge
d. Power Source
c. Container

TLO - LSA 2. Learning Step / Activity TLO - LSA 2. Recognize the blast effects of an IED Detonation.

Method of Instruction: Discussion (small or large group)
Mode of Delivery: Resident Instruction
Instr Type (I:S Ratio): Military - ICH, ABIC/FIFC Qual and CIED SME (1:5)

Time of Instruction: 35 mins

Media Type: Conference/Demonstration / Handout / PowerPoint Presentation / Slides

Other Media: Unassigned

Security Classification: This course/lesson will present information that has a Security Classification of: FOUO – For Official Use Only.

Slide 27: Recognize the blast effects of an IED detonation.

- Explosive Effects

1. Thermal Injuries
2. Blast Injuries
3. Fragment Injuries
4. Damage Radi

Note for the Instructor/Facilitator (I/F)

1. Now we will cover LSA 2- Recognize the blast effects of an IED detonation.
2. Explain the slide. The closer you are to the detonation point, the Higher the Threat.
3. Start explaining from bottom to top slide. The closer you are to the detonation point, the Higher the Threat.

Slide 28: Explosive Effects (cont.)

- IED Blast Effects

Note for the Instructor/Facilitator (I/F)

1. Show **video (1 min 20 sec)** and discuss the outcomes of the video.
2. Ask critical thinking questions. I.e. What are your thoughts about what you just saw in the video?

Slide 29: Explosive Effects (cont.)

- last Effects:

1. Blast pressure is the most powerful and destructive of the explosive efforts.
2. It rapidly converts from a solid to a gas form.
3. Pressure phases:
   a. Positive
   b. Negative
4. It has a reflective pressure effect.
5. Conversion of solid to gas
6. It is affected by environment:
   a. Terrain, structures, and weather.
   b. Channelizes the pressure.
7. Conversion of a solid to a gas.

Note for the Instructor/Facilitator (I/F)

1. Show the positive pressure effects **video (40 sec)** and ask critical thinking questions. I.e. what are your thoughts about what you just saw in the video? Blast effects of IEDs.
2. An explosion results in an intense release of energy.
3. This energy is described as blast.
   a. Blast creates a blast wave that causes an intense pressure disturbance.

b. The blast wave travels radially outward from the point of detonation at speeds greater than the speed of sound.

c. This is followed by blast winds that travel at superhurricane speeds.

d. The pressure from the blast wave as well as the blast winds are capable of producing damage.

e. Personnel often feel the associated acoustic wave at safe distances as the blast wave diminishes.

4. The effects of blast are rated in psi overpressure. This allows a given distance to be determined based on a quantity of explosives resulting in expected damage to personnel, vehicles and buildings.

5. Variations in ambient temperature and pressure can affect the blast waves so that the waves would be noticeably different from detonations on a high mountain or mesa than from detonations at sea level, or from explosions occurring on a hot summer day versus a cold winter day.

6. Blast waves are also affected by shape, as a cylindrical explosive charge behaves differently than that of a spherical explosive charge. The generic representation of a blast wave described may vary; nevertheless, its effects are, in general reliable

7. Conversion of a solid to a gas.

Slide 30: Explosive Effects (cont.)

- Blast effects. Positive pressure phase

1. Pressure compresses the atmosphere
   - It is known as the shock front
2. Shattering, hammering blow
3. Shock front is followed by positive pressure
4. It moves outward from blast site

Note for the Instructor/Facilitator (I/F)

1. May show the positive pressure effects **video (40 sec)**
2. Positive pressure phase compresses the surrounding air and forces it outward.

Slide 31: Explosive Effects (cont.)

- Blast effects. Negative pressure phase.

1. Positive pressure creates a vacuum
2. Vacuum causes atmosphere to fill the void
3. Less powerful but 3X as long as positive phase

Note for the Instructor/Facilitator (I/F)

1. Show negative pressure **video (6 sec).** When the positive pressure phase compresses the surrounding air and forces it outward, what remains is a vacuum at the blast site. That void needs to be filled.

2. The negative pressure phase starts when the surrounding air starts to move back toward the blast site, filling that void.

3. The force of the negative phase in considerably less, but because it lasts 3 times as long, can still have a damaging effect.

Slide 32: Explosive Effects (cont.)

- Reflective pressure effect

1. Pressure reflects off solid surface

2. Reflected intensity can be 2-8 times original pressure

Note for the Instructor/Facilitator (I/F)

- Show the reflective pressure effects **video (20 sec)**

Slide 33: Explosive Effects (cont.)

- Blast effects. Personnel:

1. Bruising of internal organs

2. Damage of inner ears from rupturing

3. Lung damage

Note for the Instructor/Facilitator (I/F)

1. Blast effects on the human body can vary.

2. One effect is blunt force trauma normally seen from other types of incidents such as motor vehicle accidents.

3. These injuries often include damage of internal organs such as lungs, heart, kidneys, and especially the bowel.

4. Another effect is from the overpressure.

a. When the body is exposed to high ambient pressures, it will affect the bodys' gas-filled spaces.

b. Overpressure injuries include ruptured eardrums, damaged sinuses, and lung damage.

Slide 34: Explosive Effects (cont.)

- Traumatic Brain Injury (TBI)

1. Result of impact from blast event:

- Positive and negative blast phase.

2. Rapid acceleration

3. Abrupt deceleration

4. Can have cumulative effect

Note for the Instructor/Facilitator (I/F)

1. Show Traumatic Brain Injury **video (16 sec)**

2. The 2 components of the “Impact” threat. Impact consists of two components:

a. Acceleration (when the body is propelled away from the blast event).

b. Deceleration (when the body is stopped by a rigid surface or stationary object).

3. Key injury is Traumatic Brain Injury.

a. Acceleration caused by collision of blast wave with body.

b. Typical impact injuries from blast are in the head and neck regions.

4. Deceleration if or when a blast victim impacts with a rigid structure following initial acceleration, such as a parked motor vehicle, ground area, a wall, post.

- Impact injuries can be fatal, but personal protective equipment can drastically reduce or eliminate the effects

Slide 35: Explosive Effects (cont.)

- Fragmentation

1. Primary. Caused by the rupture of the casing surrounding the explosive:

a. Grenades

b. Munitions

c. HME containers

2. Secondary. Energized by blast but not part of device casing:

a. Debris from surrounding area

b. Generally of lower energy but still a threat

Note for the Instructor/Facilitator (I/F)

1. Primary fragmentation is most commonly associated with the rupture of the munitions' case, producing small fragments.

2. Evidence collected for WTI. HME containers (glass and coffee cans).

3. Secondary fragments may result when surrounding materials (rocks, debris, or glass) are thrown outward.

4. Majority of fragmentation injuries are from secondary fragmentation.

Slide 36:

1. Directionally Focused Fragmentation Charge (DFFC)

2. Directional Fragmentation Charge (DFC)

3. Designed to focus fragmentation in an aimed direction

4. Specifically found in Afghanistan

Note for the Instructor/Facilitator (I/F)

1. DFFC's in Afghan are specifically designed to focus frag in the charge towards the target.

2. Primarily used against dismounted troops, it focuses fragmentation toward the target in a similar manner as a claymore mine or a shotgun shell. The fragmentation, travelling at extremely high velocities, can penetrate IBA.

Slide 37: Explosive Effects (cont.)

- Fragmentation effect. Personnel:
  - Devastating damage to the human body
  - Penetrating wounds

Note for the Instructor/Facilitator (I/F)

1. Fragmentation traveling at high velocity can cause devastating damage to the human body. Therefore protection from fragmentation is a primary concern.

2. This is best achieved by providing barriers between the IED and the individual, if you can see it, it can see you.

3. The barrier must be able to contain all fragmentations, both primary and secondary. Overhead protection must be also considered.

4. Vehicle damage from fragmentation can vary depending on vehicle body construction ranging from lightweight materials to factory installed armor. Vehicle hardening greatly enhances the survivability rate of vehicles and occupants from fragmentation hazards.

5. Armor penetration is generally accomplished by shaped charges or kinetic energy penetrators like Explosive Formed Projectile (EFPs). This will be covered later in the lesson.

6. Structure secondary fragmentation is a primary concern from structures.

7. Glass breakage and structure damage can increase casualties.

8. Depending on the construction material and distance from detonation, some protection from fragmentation can be expected.

Check on Learning:

Slide 38:

1. What are the pressure phases that relate to blast effects?

Answer: Positive & Negative

2. Distance from detonation and frontal and overhead protection are the best defense from blast and fragmentation. True or False?

Answer: True

3.Which of the following is considered a secondary fragmentation from an explosion?

a. HME Container
b. Grenade
c. Body Parts
d. Rocks or glass

Answer: d. Rocks or glass

Review Summary:

In this LSA we discussed how to recognize the blast effects of an IED including:

Detonation.
- Blast effects
- Blast pressure
- Pressure phases -
- Reflective pressure effect
- Affected by environment
- Conversion of solid to gas

SECTION IV. SUMMARY

Method of Instruction:	Discussion (small or large group)
Mode of Delivery:	Resident Instruction
Instr Type(I:S Ratio):	Military - ICH, ABIC/FIFC Qual - CIED SME (1:5)
Time of Instruction:	5 mins

Check on Learning

This is you last chance to ensure that students learned the material. Make sure students are able to:

1. Identify an IED and its components
2. Recognize the blast effects of an IED detonation

Ask the students questions and clarify any misunderstandings.

Review/ Summary

Slide 40: Summary

1. Lesson: The Improvised Explosive Device
2. We have covered in detail the following Learning Step Activities:
   a. **Identify IEDs and its components.**
      1) Covered the definition of IED
      2) Components
         a) Switch
         b) Initiator
         c) Main Charge
         d) Power Source
         e) Container
   b. **Recognize the blast effects of an IED detonation**
      1) Blast effects
      2) Blast pressure
      3) Pressure phases
      4) Reflective pressure effect
      5) Affected by environment
      6) Conversion of solid to gas

Note for the Instructor/Facilitator (I/F)

1. Action: Identify IEDs components.
2. Having a clear understanding of the different ways that an IED can target you, allows you to understand the threats posed to dismounts, so TTP's can be employed to counter or detect the threat.

Slide 41: Questions?

Note for the Instructor/Facilitator (I/F)

Make sure that student show that they have met the objective. Confirm that they met the TLO action statement and the standards. Provide additional reinforcement if necessary.

SECTION V. STUDENT EVALUATION

Testing Requirements	This material will be tested on Course Examination 1. You must receive a passing score of 80% on the written examination to complete this course.
Feedback Requirements	**Note:** Feedback is essential to effective learning. Schedule and provide feedback on the evaluation and any information to help answer students and questions about the test. Provide remedial training as needed.

Appendix A - Viewgraph Masters

The Improvised Explosive Device (IED)
071-FREBB002 / Version 02.0 ©

Sequence	Media Name	Media Type
0	The Improvised Explosive Device (IED)	PPTX

Appendix B - Assessment Statement and Assessment Plan

Assessment Statement: None.

Assessment Plan: None.

PRACTICAL EXERCISE(S)/SOLUTION(S) FOR LESSON 071-FREBB002 Version 02.0 ©

Appendix D - Student Handouts

The Improvised Explosive Device (IED)
071-FREBB002 / Version 02.0 ©

Sequence	Media Name	Media Type
None		

The Improvised Explosive Device (IED)

071-FREBB002 / Version 02.0 ©

DRAFT

1. The importance of this lesson: (Why)

Identify an Improvised Explosive Device (IED)

2. What we want our Soldiers to Achieve: (Outcomes/Standard)

Identify IEDs IAW Chapter 1, ATP 3-90.37 and must achieve a score of 80% or greater on end of course examination and in the assessment rubrics that used during mission 1, 2, and 3 planning and execution during the week 2 of the course. The identification includes:

1. Identify an IED and its components
2. Recognize the blast effects of an IED detonation

Learning Domain: Cognitive
Learning Level: Knowledge

3. Tasks to be taught

Task Number	Task Title	Task Type
052-COM-3261	React to an Improvised Explosive Device (IED) Attack (UNCLASSIFIED / FOR OFFICIAL USE ONLY) (U//FOUO)	Individual SUPPORTED
052-703-9107	Plan for an Improvised Explosive Device (IED) Threat in a COIN Environment (UNCLASSIFIED / FOR OFFICIAL USE ONLY) (U//FOUO)	Individual SUPPORTED
191-330-4053	Conduct a Risk Assessment	Individual REINFORCED
052-192-3262	Prepare for an Improvised Explosive Device (IED) Threat Prior to Movement (UNCLASSIFIED/FOR OFFICIAL USE ONLY) (U//FOUO)	Individual SUPPORTED
052-COM-1270	React to a Possible Improvised Explosive Device (IED) (UNCLASSIFIED//FOR OFFICIAL USE ONLY) (U//FOUO)	Individual TAUGHT
052-703-9113	Plan for the Integration of Counter-Improvised Explosive Device (C-IED) Assets (UNCLASSIFIED//FOR OFFICIAL USE ONLY) (U//FOUO)	Individual SUPPORTED

Additional Non-Standard Tasks

None

4. References:

Reference Number	Reference Title	Date
ATP 3-90.37	COUNTERING IMPROVISED EXPLOSIVE DEVICES	29 Jul 2014
ATP 5-19 (Change 001 09/08/2014 78 Pages)	RISK MANAGEMENT http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp5_19.pdf	14 Apr 2014
DD FORM 2977	DELIBERATE RISK ASSESSMENT WORKSHEET	01 Jan 2014
FM 3-34.210	Explosive Hazards Operations	27 Mar 2007
FM 3-34.5	Environmental Considerations	16 Feb 2010
FM 3-36	Electronic Warfare in Operations	09 Nov 2012

Additional Non-Standard References

None

5. Resources

TIME: Time of Instruction: 2 hrs 0 mins

LAND: Classroom, Training Area, and Range Requirements

Id	Name
72114	Enlisted Barracks, Transient Training
74046	Consolidated Open Dining Facility
44224	Organizational Storage Building
17120-M-1200-30	Classroom, Multipurpose, 1200 Square Feet, 30 Students

AMMO: Ammunition Requirements

DODIC	Name
None	

MISC: Materiel Items and TADSS Requirements

Id	Name
4110-01-485-3548	Chest, Ice Storage, White, 162 Quart Capacity
5820-00-NSN	SCREEN, PROJECTION
5820-00-T93-6432	PROJECTOR, VIDEO, LCD EPSON ELP33 WITH REMOTE
5860-01-363-8730	Laser Pointer
5895-01-540-4543	Computer, Laptop
6530-01-290-9964	Litter, Folding, Rigid Pole
6545-01-532-3674	Medical Equipment Set, Combat Lifesaver, Version 2005, UA 245A
6665-01-381-3023	Wet Bulb-Globe Temperature Kit
6665-01-C10-2210	Detecting Set, Mine: Vallon (Not in AESIP)
6685-01-590-1047	Monitor, Heat Stress: Questemp 44
6695-01-I00-0773	Detector, Body Worn, Strider
6695-99-494-7952	Detecting and Tracing Set, Metal
6760-00-985-6749	Tripod, Photographic
7021-01-C17-2297	PC Tablet, Data Entry: Galaxy Tab 2 WIFI 16GB Samsung
7110-00-T81-1805	BOARD, DRY ERASE
7110-01-208-6438	Board, Marker, Melamine Writing Surface, 2 X 2 Foot
7240-00-098-3827	Can, Military
7520-00-281-5918	Clipboard File, 9 X 12-1/2 Inch, Composition Board Back
7520-01-365-6126	Marker Assortment, Tube Type, Dry Erase, 12 Pens, Eraser, Cleaner, Case

(Note: Asterisk before ID indicates a TADSS.)

Additional Non-Standard Resources

None

6. A possible technique to achieve the outcome:

None

7. Conduct AAR with Soldier and Cadre.

None

NOTE: Before presenting this lesson, Instructors must be thoroughly prepared by studying the appropriate lesson plan and identified reference material.