

# CRM LESSON PLAN REPORT

GROUND SIGN AWARENESS  
071-FREBB001 / 02.0 ©

Analysis  
21 May 2013

Effective Date: N/A

**SCOPE:**

None

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

**SECTION I. ADMINISTRATIVE DATA**

<b>All Course Masters/POIs Including This Lesson</b>	<b>Courses</b>				
	<u>Course Number</u>	<u>Version</u>	<u>Title</u>	<u>Phase</u>	<u>Status</u>
	9E-F59/950-F38	02.0	Dismounted Counter-IED Tactics Master Trainer	N/A	Analysis
	<b>POIs</b>				
	<u>POI Number</u>	<u>Version</u>	<u>Title</u>	<u>Phase</u>	<u>Status</u>
	9E-F59/950-F38	02.0 ©	Dismounted Counter-IED Tactics Master Trainer	0	Analysis
<b>Task(s) Taught(*) or Supported</b>	<u>Task Number</u>		<u>Task Title</u>	<u>Status</u>	
	<b>Individual</b>				
	052-COM-3261		React to an Improvised Explosive Device (IED) Attack (UNCLASSIFIED / FOR OFFICIAL USE ONLY) (U//FOUO)	Superseded	
052-COM-1271 (*)		Identify Visual Indicators of an Improvised Explosive Device (IED) (UNCLASSIFIED//FOR OFFICIAL USE ONLY) (U//FOUO)	Approved		
<b>Reinforced Task(s)</b>	<u>Task Number</u>		<u>Task Title</u>	<u>Status</u>	
<b>Knowledge</b>	<u>Knowledge Id</u>	<u>Title</u>	<u>Taught</u>	<u>Required</u>	
	011-0190K	Safe handling of explosives	No	Yes	
	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	No	Yes	
	052-K-00123	Explosive Hazards Indicators	Yes	Yes	
	191-PRS-0011	Identify Explosives	No	Yes	
	052-K-00002	Knowledge of Mine/UXO Marking Requirements	Yes	Yes	
	052-K-00126	Minimum Safe Distance for Explosives	No	Yes	
	<b>Skill</b>	<u>Skill Id</u>	<u>Title</u>	<u>Taught</u>	<u>Required</u>
052-S-00007		Ability to Recognize Battlefield Hazard Indicators	Yes	Yes	
171-S0038		Ability to Alert leadership and other members to a possible IED and its distance, direction	Yes	Yes	
171-S0051		Ability to identify IED components, initiation systems, and delivery methods	Yes	Yes	
171-S0044		Ability to identify IED hot spots along a route	Yes	Yes	
171-S0050		Ability to identify IED initiation systems command, remote, victim operated	Yes	Yes	
171-S0049		Ability to Visually identify IED indicators	Yes	Yes	

**Administrative/  
Academic  
Hours**

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

<u>Academic</u>	<u>Resident Hours / Methods</u>		
Yes	0 hrs	10 mins	Discussion (small or large group)
Yes	4 hrs	40 mins	Practical Exercise (hands-on/written)
<hr/>			
Total Hours(50 min):	5 hrs	0 mins	

**Instructor  
Action  
Hours**

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

<u>Hours/Actions</u>		
0 hrs	10 mins	Classroom Breakdown
0 hrs	15 mins	Classroom Setup
0 hrs	30 mins	Training Event Clean-up/Breakdown (non-FTX)
1 hrs	0 mins	Training Event Prep/Setup (non-FTX)
<hr/>		
Total Hours (60 min):	1 hrs	55 mins

**Test Lesson(s)**

<u>Hours</u>	<u>Lesson Number Version</u>	<u>Lesson Title</u>
None		

**Prerequisite  
Lesson(s)**

<u>Hours</u>	<u>Lesson Number Version</u>	<u>Lesson Title</u>
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**

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**References**

<u>Number</u>	<u>Title</u>	<u>Date</u>
ATP 3-90.37	COUNTERING IMPROVISED EXPLOSIVE DEVICES	29 Jul 2014
ATP 5-19 (Change 001 09/08/2014 78 Pages)	RISK MANAGEMENT <a href="http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp5_19.pdf">http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp5_19.pdf</a>	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
STP 3-CIED-SM-TG	Soldier's Manual and Trainer's Guide for Counter Improvised Explosive Device	09 Dec 2011

**Student Study  
Assignment**

Assign reading for next day classes.

**Instructor Requirements**

Instructor must be certified in the following courses: Army Basic Instructor Course/ Foundations Instructor-Facilitator's Course (ABIC/FIFC) 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) taught in the DCT-MT course.

**Support Personnel Requirements**

NONE

**Additional Support Personnel Requirements**

<u>Name</u>	<u>Student Ratio</u>	<u>Qty</u>	<u>Man Hours</u>
Bus Driver	1:30		1.5
Combat Lifesaver		1	5.0
NCOIC		1	5.0
Driver, LMTV		1	5.0

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**Equipment  
Required  
for Instruction**

<u>ID - Name</u>	<u>Student Ratio</u>	<u>Instructor Ratio</u>	<u>Spt</u>	<u>Qty</u>	<u>Exp</u>
* 05-113/1 - IEDES, Increment 1, (IEDES1) Pressure Plate Training Device	0:0		1		No
* 05-113/2 - Improvised Explosive Device Effects Simulator, Increment 1, (IEDES1) Push Pull Booby Trap	0:0		1		No
* 05-114/1 - Improvised Explosive Device Effects Simulator (IEDES 1) 315 MHZ	0:0		1		No
* DDCT-5-41 - KIT, LAND MINE (Local TADSS – Not in TSMATS/PAM 25-30)	1:5				No
* L 05-107 - TIED, TRAINING IMPROVISED (Local Device - Not DA Supported)	1:5				No
* T 05-050/1 - Recognition Kit-Submunitions	1:5				No
* T 05-050/2 - Recognition Kit-Projectiles	1:5				No
* T 05-050/3 - Recognition Kit-Mortars	1:5				No
* T 05-050/4 - Recognition Kit-Rockets	1:5				No
* T 05-050/5 - Recognition Kit-Rifle Grenades	1:5				No
* T 05-050/6 - Recognition Kit-Thrown Items	1:5				No
* T 05-050/7 - Recognition Kit-Placed Mines	1:5				No
* T 09-129 - Iraqi Mine Kit	1:5				No
* T 09-146 - Afghanistan Kit	1:5				No
* T 20-009 - POMZ-2 Antipersonnel Mine	1:5				No
1240-01-540-2890 - ACOG Kit	1:1	0:0	No	0	No
2310-01-090-7709 - Bus Transit 44 Passenger	1:30	0:0	Yes	1	No
2320-00-440-8308 - Truck, Van, Shop, with Winch: M109A2	1:30	0:0	No	0	No
2320-01-354-3384 - Truck Van: LMTV W/E: M1079	1:15	0:0	No	0	No
2330-01-C02-5669 - Trailers, Assorted: Custom Made	0:0	0:0	Yes	1	No
2340-01-525-1656 - ATV, Polaris, 6x6	1:30	0:0	No	0	No
2530-00-245-0685 - WATER CAN (5 GAL.)	1:10	0:0	Yes	3	No
4240-01-515-6935 - Portal Ladder	1:5	0:0	Yes	1	No
5120-00-243-2395 - Mattock, Pick, 5 Pound	1:5	0:0	Yes	3	No
5120-00-293-3330 - Shovel, Hand, 46 Inch Wood Handle, Square Point Open Back Blade, Size 2	1:5	0:0	Yes	3	No
5820-00-NSN - SCREEN, PROJECTION	1:15	0:0	Yes	3	No

5820-00-T93-6432 - PROJECTOR, VIDEO, LCD EPSON ELP33 WITH REMOTE	1:15	0:0	Yes	3	No
5820-01-525-9144 - Receiver-Transmitter, Radio	1:15	0:0	Yes	2	No
5860-01-363-8730 - Laser Pointer	1:15	0:0	Yes	2	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	Yes	2	No
6545-01-532-3674 - Medical Equipment Set, Combat Lifesaver, Version 2005, UA 245A	1:15	0:0	Yes	2	No
6665-01-381-3023 - Wet Bulb-Globe Temperature Kit	1:15	0:0	No	0	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	1:15	0:0	No	0	No
6760-00-985-6749 - Tripod, Photographic	1:30	0:0	Yes	1	No
6910-00-NSN-0921 - BINOCULARS	1:5	0:0	Yes	6	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	1:7	0:0	Yes	4	No
7240-00-098-3827 - Can, Military	1:15	0:0	Yes	2	No
8415-00-935-3139 - Helmet, Safety, White, Size 6-1/2 to 8	0:0	1:1	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 Handbook
2. All references linked to this lesson
3. Pen/Pencil and note taking material

**Classroom,  
Training Area,  
and Range  
Requirements**

<u>ID - Name</u>	<u>Quantity</u>	<u>Student Ratio</u>	<u>Setup Mins</u>	<u>Cleanup Mins</u>
17710-0 Maneuver/Training Area, Light Forces, 0 Acre		1:30	50	30
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		0	0
44224-0-0 Organizational Storage Building, 0 Square Foot, 0 Cubic Foot		1:15	0	0
17120-M-1200-30 Classroom, Multipurpose, 1200 Square Feet, 30 Students			0	0

**Ammunition  
Requirements**

<u>DODIC - Name</u>	<u>Exp</u>	<u>Student Ratio</u>	<u>Instruct Ratio</u>	<u>Spt Qty</u>
None				

**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 small/large group discussion material presented. The entire class may be conducted thru the practical exercise.
4. Ensure all equipment listed for this Lesson Plan (LP) is present, operable, and set up for use before class.
5. Refer to the practical exercise, Appendix C, of this lesson plan. When necessary develop additional situations to use during the practical exercise.
6. Use the PE instructions in conjunction to the Job Aids found in the course CD.
7. 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.
8. 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.
9. Whenever necessary, ask leading questions of Soldiers in order to prompt Soldier discussion.
10. 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.
11. Encourage Soldiers to relate their own experiences during the activities.
12. Facilitate this lesson using ALM and ASLTE methodologies taught in ABIC/FIFC.
13. 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**

<u>Name</u>	<u>Rank</u>	<u>Position</u>	<u>Date</u>
None			NO DATA

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## SECTION II. INTRODUCTION

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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: 5 mins

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### Motivator

IEDs are the most dangerous and effective weapon system Coalition Forces (CF) face, inflicting more casualties than all other weapon systems combined. The information in this brief was compiled by the IED Task Force CONUS Advisory Team tasked by Army G-3. They have teams that are dispersed throughout various operational environments to collect information as it changes.

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

**Slide 1: Title slide - Ground Sign Awareness. Notes page includes two options for conducting this class.**

#### Note to the Instructor/Facilitator

You have TWO Options for conducting this class:

1. **OPTION 1.** Conduct the entire class using **Problem Based Instruction (PBI)** IAW Appendix C of this lesson plan and the Ground Sign Awareness Job Aid found in the student Course CD or ask your Team leader. Appendix C information is included in the last slides (hidden) slides for your convenience.

a. You don't have to use the PowerPoint slides but you must cover the academic portion (the first 40 min) of the class during the Ground Sign Awareness PE. You may even allow 30 minutes for the students to discuss the PPT slide in their groups prior to the PE.

b. You may have the students make notes on butcher paper or you may make key notes ahead of time.

c. If time permits, you may choose to make up a simple scenario to add realism to the PE. You should not include all of the details. You should not give detailed instructions because this is a problem based instruction and students should be able to figure out how to solve the problem on their own.

d. Definition. Problem-based instruction is a method where learners review a realistic, ill-structured scenario, determine the problem, research the information they need to solve the problem, and determine the solution. Unlike case-based instruction, learners typically do not receive instruction on the topic prior to being presented the problem. However, the method can be modified based on the background and experience of the target audience.

2. **OPTION 2.** Conduct the class as shown in this presentation that includes:

a. 40 minute classroom presentation and

b. 4 hour hands on Practical Exercise IAW appendix C. Appendix C information is included in the note pages of the last slide (hidden) for your convenience.

### 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 ground signs in an IED environment
Conditions:	In a classroom setting and field environment, given PowerPoint presentation, students resources, instructional materials, doctrinal references, and equipment.
Standards:	Identify ground signs IAW doctrinal references including ATP 3-90.37, STP 33-CIED-SM-TG and must achieve a score of 80% or greater on course examination rubrics. The identification includes: <ol style="list-style-type: none"> <li>1. Define Observation Theory</li> <li>2. Recognize Indicators of Ground Signs and IED markers</li> <li>3. Identify IED Emplacement</li> </ol> <p style="text-align: center;"><b>Learning Domain:</b> Cognitive <b>Learning Level: (C1)</b> Knowledge</p>
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.

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**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.

**Instructional Lead-in**

Soldiers must be vigilant in performing their duties, remain alert, and maintain a strong security posture to avoid becoming a victim of an IED ambush. Soldiers must have a good appreciation of the type of devices and employment techniques that they may encounter. All Soldiers must be able to identify improvised explosive devices.

**Note to the instructor/Facilitator:**

1. Use this statement or develop one of your own relating to the material.
2. Let the students know that during the next 5 hours (1hr classroom and 4 hrs PE), they will learn how to Identify ground signs in an Improvised Explosive Devices (IEDs) environment including:
  - a. Review Observation Principles
  - b. Recognize Indicators of Ground Signs and IED Markers
  - c. Identify IED Emplacement
3. Let the students know that there will be a 4 hour practical exercise.

## SECTION III. PRESENTATION

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TLO - LSA 1. Learning Step / Activity TLO - LSA 1. Review Observation Principles.

Method of Instruction: Practical Exercise (hands-on/written)

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, ABIC/FIFC Qual and CIED SME (1:5)

Time of Instruction: 20 mins

Media Type: CD-ROM / Actual Equipment /  
Conference/Demonstration / Equipment Based  
Instruction / Practical Exercise / Situational Based  
Instruction / 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: Review Observation Principles:**

1. Training the eyes requires training the mind.
  - Eyes must be trained to notice little things, such as bending of grass when there is no wind.
2. Learn to see things in proper perspective at distances.
  - Learn to look through vegetation, not at it.
  - When the sun is to your back, light will reflect from enemy's optical equipment and vice versa.
3. Factors affecting vision: Lack of vitamin A, colds, headaches, fatigue, narcotics, alcohol, smoking, exposure to bright light, etc.

#### **Instructor/Facilitator's note**

#### **Rules of Observation Techniques. You may cover this slide thru questions.**

1. FIRST TEACHING POINT: What do we mean by "training the eye requires training the mind as well?"
  - a. The eye must be trained to notice the little things such as, bending of grass when there is no wind or the unnatural shape of a shadow.
  - b. Even when you can't see the enemy, little things will give away his position such as a window now open that wasn't open before, a puff of smoke, signs of fresh soil, or disturbed undergrowth.
2. SECOND TEACHING POINT: An observer should keep the following rules in mind while observing:
  - a. Look for objects out of place, almost every object in the wild is vertical, if it is horizontal study it closer.
  - b. Learn to see things in proper perspective at distances.
  - c. Learn to see movement, color, shape, and contrast in miniature.
  - d. Learn to look through vegetation, not at it.
3. THIRD TEACHING POINT: The sun is constantly changing the lighting conditions, contrast and shadows should be studied at all times of the day.
  - a. When the sun is to your back, light will reflect from the enemy's optical equipment and vice versa.
  - b. It is more tiring for you when the light shines in your eyes, observer relief may be required more frequently, using shadow on the eyes may give some relief.

c. Smoking and lack of vitamin C reduces blood flow and thus negatively effects vision.

**Slide 4: The sliding scale**

1. HUMAN ACTIVITY

- a. Presence
- b. Patterns

2. DEVICE "SIGNATURES"

- a. Device traits
- b. Emplacement sites

3. Where are you? In the scale of:

HUMAN ACTIVITY \_\_\_\_\_?\_\_\_\_\_ DEVICE SIGNATURES

**Instructor/Facilitator's note**

1. In number 3 above, the slide illustrate human activity in one end of the scale and device signatures at the other end of the scale.

2. LOCARD'S –

- a. Explain theory of "exchange"
- b. "insert proper quote"
- c. Define Presence, patterns
- d. Define Device Traits (in a nut shell) , emplacement sites

**Slide 5: Eye and Brain Relationship**

- 1. Observation is a function of mentally processing images from the eyes.
- 2. Mental filters are in place to prevent information overload.
- 3. Can only "see" indicators for what they are after being exposed to them previously.

- Repetition allows indicators to be more easily detected.

**Instructor/Facilitator's note**

1. Observation Theory and Techniques

- a. Human Physiology and Eye/Brain Relationship.
- b. Observation is a function of mentally processing images received by the eye.
- c. The human eye is purely a receptor, it receives and focuses all light reflected off of objects located in the environment within its field of view.
- d. This is far too much information for the brain to process all at once so mental filters must be emplaced and the visual information is prioritized by level of importance to the observer.
- e. If the subconscious mind determines that a particular image is unimportant (regardless of its actual importance) it is automatically dismissed.
- f. An example of this is noticing something in your normal, everyday, environment only after another individual points it out to you, it then becomes stunningly obvious (count the Fs exercise).
- g. The same holds true for detection of IED indicators.
- h. Through repetition and study of indicators their images become more important to the subconscious and thus easier to detect.
- i. By understanding observation theory, human physiology, and the eye /

brain relationship we can prevent the brain from making assumptions, and see things for what they are.

2. You may opt to cover this slide thru guided open ended questions.

**Slide 6: Observation Techniques**

1. What is scanning?

- A general and systematic examination of an area to detect any unusual or significant object or movement.

2. What is searching?

- A thorough examination of a certain feature in the area.

**Instructor/Facilitator's note**

1. We will utilize scanning and searching throughout the course specifically during the STX.

2. When talking about the area, relate it to a sector of scan and explain how to scan your sector i.e. near to far, right to left, up down or down up.

3. When talking a certain feature talk about using optics to help confirm or deny if what they are looking at is a possible IED.

**Slide 7: How would you define positive space?** Positive space is space that is taken up by solid objects such as buildings, trees, signs, and vehicles.

1. Typically, you cannot shoot or see through positive space.

2. The human eye will naturally move from positive space to positive space as the eye is attracted to this.

- For example, in tree lines, your eyes are attracted to trunks and prominent branches.

**Slide 8: Wow would you explain negative space?** Negative space is between positive spaces.

1. The human eye subconsciously does not recognize or consider.

2. An Observation Post (OP) will try to operate in the negative spaces when feasible.

3. Good camouflage resembles negative space

**Instructor/Facilitator's note**

Negative space, in art, is the space around and between the subject(s) of an image. Negative space may be most evident when the space around a subject, and not the subject itself, forms an interesting or artistically relevant shape, and such space is occasionally used to artistic effect as the "real" subject of an image.

**Slide 9: Key Observation Points.** Limited visibility/night observation principles are:

1. Eyes must be trained to recognize outline alone

2. Eyes undergo changes which constantly cause the eyes to change focus-eyes tire quicker

- Night adaptation: Allow approximately 30 minutes for eyes to adjust

3. Maneuver to catch the light

- Place object between yourself and light

- Observer can pick up more light by lowering his body for off-center vision, it will resist from looking directly at object

4. Off-Center vision- resist looking directly at object

### **Instructor/Facilitator's note**

1. When talking this slide explain how to conduct SLLS (stop, look listen, and smell) night adaption so your eyes can adjust.
2. Explain that you can see things at night better when there is a light source behind you but you want to keep something between you and the light so you don't silhouette yourself.
3. Off center vision is using you peripheral vision to see at night instead of looking directly at the object.

### **Slide 10. Observation Exercise**

1. Count the number of Fs in the following sentence.
2. *"Finished files are the result of years of scientific study combined with the experience of years".*

### **Instructor/Facilitator's note**

1. Have the class read to themselves the above sentence.
2. Keep the slide up for about 15-30 seconds and black out the slide.
3. Ask the class how many "F's" there are.
4. Bring the slide back up and have the class read it backwards.
  - It's because your eyes and brain are trained to read from left to right so you don't have to read every word to know what the sentence says so that's why you miss the Fs in the small words.
5. There are 6 "F's".

### **Slide 11: Keep In Memory (KIM) Game**

KIM's Game:

1. History
2. Aids in establishing baselines
3. Develops awareness
4. Effective recording
5. Communication
6. Attention to detail
7. Following instructions
8. Functioning under stress

### **Instructor/Facilitator's note**

1. Kim's games have been used since the days of British rule in India and were originally documented in the book Kim by Rudyard Kipling.
2. The story is set against the backdrop of the political conflict between Russia and Britain in central Asia.
3. Kim, Kimball O'Hara, is the orphaned son of a British soldier and because of his peculiar heritage as a white child gone native and his peculiar ability to remember, in great detail, nearly 20 items that were spilled from a valet and then covered, Kim is recruited as a spy in Britain's struggle to maintain its colonial grip on India.
4. He is trained in espionage and a game of looking at a tray full of mixed objects and noting which have been added and taken away is used to develop his ability.
5. This technique was further developed by Canadian snipers to train their men in observation and recall. It is used today in military schools around the world to train

snipers to observe situations for short periods of time, extracting as much detailed information as possible, and recalling and recording the event accurately for future use.

6. KIM is also an acronym for "Keep in Memory". KIM's games can be used to develop more than an ability to memorize.

7. Some of the additional skills developed through a properly conducted exercise are:

a. Awareness: Being constantly attuned to a particular fact.

1) The observer must be aware of his surroundings at all times, taking nothing for granted.

2) The observer must also account for elements that influence and distort his awareness.

3) Helps develop the environmental baseline for the area of operations.

b. Understanding: Understanding is derived from education, training, practice, and experience.

- Understanding again ties into the "Realize" portion of the Six R's and enhances the observer's knowledge about what should be observed, allows the observer to consider all possible aspects of the observation, and aids in the evaluation of available information.

c. Recording: Recording is the ability to save and recall what was observed.

- The ability to record, retain, and recall information accurately depends on the mental capacity and alertness of the observer and his ability to recognize what is essential or necessary.

#### **Slide 12: Observation Worksheet**

##### **Instructor/Facilitator's note**

Explain the columns (Appears to Be, Size/Shape, Color, and Condition) in the Observation Worksheet and how they need to be completed.

#### **Slide 13: Observation Worksheet Example #1**

##### **Instructor/Facilitator's note**

Explain the contents that are included in Observation Worksheet (e.g., Appears to Be (Clothespin Tripwire Igniter), Size/Shape (.5" x 2.5") Color (OD Green w/copper wires), and Condition (Closed on Insulator).

#### **Slide 14: Observation Worksheet Example #2**

##### **Instructor/Facilitator's note**

Explain the contents that are included in Observation Worksheet (e.g., Appears to Be (M-1 Dynamite), Size/Shape (1.0" x 10.0") Color (Brown w/silver cap), and Condition (El. Blasting cap Inserted/Primed).

#### **Slide 15: Observation Exercise**

Prepare to Observe

##### **Instructor/Facilitator's note**

1. Explain to students they are about to see a number of objects on the next slide.
2. Apply KIM's game and attempt to remember/recall all the objects they see.
3. Students have one (1) minute to view the slide.

#### **Slide 16: Observation Exercise**

Photo with ten objects

**Instructor/Facilitator's note**

There are ten objects:

1. Black glove
2. USB Thumb drive
3. Sharpie yellow highlighter
4. 9v battery
5. Black metal binder clip
6. Box of wood matches
7. Keys on key ring
8. Black pocket knife
9. Silver coin
10. Metal carabineer

**Slide 17: Observation Exercise**

Record

**Instructor/Facilitator's note**

1. List as many objects as you can recall in the Observation Worksheet.
2. Students have five (5) minutes to complete the worksheet.

**Slide 18: Review Observation Worksheet**

**Note to the Instructor/Facilitator**

There are ten objects:

1. Black glove
2. USB Thumb drive
3. Sharpie yellow highlighter
4. 9v battery
5. Black metal binder clip
6. Box of wood matches
7. Keys on key ring
8. Black pocket knife
9. Silver coin
10. Metal carabineer

**Slide 19 Observation Exercises**

1. Observation Lane:
  - a. Application of observation theory
  - b. Variation of the baseline.
2. Ground Signs Identification Lane:
  - a. Search/scanning techniques
  - b. Ground signs awareness.
3. Hasty/Deliberate Emplacement Lane:
  - a. Identifying likely IED locations
  - b. Understanding enemy Tactics, Techniques, and Procedures (TTPs).

**Instructor/Facilitator's note**

1. Explain the Observation Exercises that will be conducted on Day 4.
2. This is a cumulative practical exercise in observation incorporating skills learned

in the classroom and developed during KIM's games.

3. Proper search techniques must be used to complete the exercise with a passing score.

4. The goal is to detect variations in the baseline which lead to the discovery of threat objects or IED components.

5. The location and type of object must be properly recorded.

**Slide 20:**

Check on Learning:

1. Scanning is defined as the thorough examination of a certain feature in the area. True or False?

**Answer:** False

2. Observation is a function of mentally processing images from the eyes. True or False?

**Answer:** True

3. Approximately how long should you wait for eyes to adjust your night vision?

- a. 10 min
- b. 15 min
- c. 20 min
- d. 30 min

**Answer:** d. 30 min

Review Summary:

Conduct a review and summarize observation training.

TLO - LSA 2. Learning Step / Activity TLO - LSA 2. Recognize Indicators and Ground Signs and IED Markers

Method of Instruction: Practical Exercise (hands-on/written)

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, ABIC/FIFC Qual and CIED SME (1:5)

Time of Instruction: 10 mins

Media Type: CD-ROM / Actual Equipment /  
Conference/Demonstration / Practical Exercise /  
PowerPoint Presentation / Situational Based Instruction /  
Slides

Other Media: Unassigned

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

**Slide 21: Recognize Indicators of Ground Signs**

### **What are indicators of ground signs?**

1. Indicators are nothing but a little piece of the puzzle that we use to help identify a possible threat.
2. Indicators can be stacked rocks, disturbed earth, or parts of a road way that everyone seems to avoid.
3. Ground signs, markers, or anything that doesn't seem to belong could be an indicator.
4. Indicators do not have to be on the ground
  - Ask the students for examples of indicators from their previous experiences.

### **Slide 22: Scan for Indicators**

- Ground signs, markers, or anything that doesn't seem to belong could be an indicator.

#### **Instructor/Facilitator's Note**

1. The students scan for indicators from a couple of pictures shown in the slide. Picture with a wall painted with "I Give My Life" painted in Arabic and a picture of a buried wire showing an ant trail and reference markers.
2. Ask the students for examples of indicators from their previous experiences.
3. Discuss the importance of using your interpreter.

### **Slide 23: Make a Threat Assessment**

- Determine the enemy's likely course of action using the Threat Triad.

#### **Instructor/Facilitator's Note**

1. Slide shows a picture of a vehicle entering a compound and a picture of a culvert<sup>1</sup>.
2. Ask the students to discuss the aspects of the threat triad. (Enemy Intent, Type of Threat, Location of Threat)
3. Bring up that they can get information from the ColST or S-2.

### **Slide 24: Definition of a Ground Sign**

- Any evidence of change from the natural state that is inflicted upon the environment by the passage of man, animal or machinery

1. Concealment of an IED will inevitably leave an element of ground sign
2. Markers and indicators can be left to warn others of the presence of an IED
3. Environment plays a key part into the likely location of IEDs

#### **Instructor/Facilitator's Note**

1. Allow a few minutes for the students to read the definitions and ask if someone wants to share their interpretation.
2. To get a discussion going ask what the students think environment means, get students to start thinking about where the enemy would emplace IED's.

### **Slide 25: Ground Signs**

1. Identify all potential indicators of IED emplacement on your route.
2. Identifying these indicators left behind by the insurgents will enhance your threat assessment and target process

### **Slide 26: Ground Signs**

1. Identify all potential indicators of IED emplacement on your route.
2. Identifying these indicators left behind by the insurgents will enhance your threat

assessment and target process.

- a. Discardables
- b. Color Changes
- c. Regularity
- d. Transference
- e. Flattening
- f. Disturbance
- g. Markers

**Instructor/Facilitator's Note**

1. During the patrol, threats assessments continue to change with the environment.
2. When you have identified every vulnerable point/area in your battle space you can plan and develop successful dismounted patrols and mitigate risk.
3. You must identify all potential indicators/precursors of IED placements on your route.
4. Identifying these indicators/precursors left behind by the enemy will enhance your threat assessment and target process.

**Slide 27: Common Discarded Articles**

Common articles left behind at IED emplacement sites include:

1. Cigarette butts
2. Wire ends
3. Bits of tape

**Instructor/Facilitator's Note**

1. Items the enemy may intentionally or unintentionally leave behind at the emplacement site of an IED.
2. Common articles left behind at IED emplacement sites are: cigarette butts, wire ends, and bits of tape.
3. The enemy may also leave behind metal fragments or expended brass in order to confuse sweepers and give false hits with the metal detector.
4. The enemy has been known to leave “souvenir” type items that may be connected to an antitamper device.
5. Items left behind include helmets, rifle magazines, weapons, and ammunition cans.

**Slide 28: Ground Color Changes**

1. Soil from the hole may differ in color from the surrounding area.
2. Known to pour water or urine on the top of the emplaced IED to pack soil back into the hole.

**Instructor/Facilitator's Note**

1. Color Change
  - a. Emplaced IEDs in the ground the soil from the hole may differ in color from the surrounding area.
  - b. Insurgents have been known to pour water or urine on the top of the emplaced IED in order to pack soil back into the hole.
2. Certain chemicals contained in Homemade Explosive (HME) can leak from their containers causing discoloration in the surrounding soil and vegetation.

### **Slide 29: Regularity**

Un-natural Ground Lines

- Look for un-natural lines that may be in circular, rectangular, or square shape which may reveal the outlines of mines or pressure plates.

#### **Instructor/Facilitator's Note**

1. Look for un-natural lines that may be in circular, rectangular, or square shape which may reveal the outlines of mines or pressure plates.

2. When command wires, pull lines, or trip wires are buried or concealed, often a distinct line will appear that's not natural to the area.

3. When insurgents try to conceal IEDs some things might appear out of place compared to nature soil, rocks, and vegetation. Look for un-natural lines that may be in circular, rectangular, or square shape which may reveal outlines of mines or pressure plates.

### **Slide 30: Ground Transference**

1. Occurs when an insurgent takes soil or any other material from one area to conceal an IED.

2. Often the transferred material will not naturally blend in the surrounding area.

#### **Instructor/Facilitator's Note**

1. It's when an insurgent takes soil or any other material from one area to conceal an IED in another area.

2. Often the transferred material will not naturally blend in the surrounding area.

### **Slide 31: Flattening**

1. Occurs after the hole is filled in.

2. Evident after it rains and after extended periods of time.

#### **Instructor/Facilitator's Note**

1. This occurs after the hole is filled.

2. Examples of flattening are evident after it rains and after extended periods of time.

### **Slide 32: Ground Disturbance**

- Any evidence of change or rearrangement from the natural state caused by the passage of the target.

#### **Instructor/Facilitator's Note**

See if the students have anything to add

### **Slide 33: Markers**

- Insurgents use markers for multiple purposes

- - May be used as aiming stakes or may be used to warn the locals about the presences of IEDs along routes or paths.

#### **Instructor/Facilitator's Note**

1. Common marker is stacked rocks as displayed in both of these pictures.

2. Explain that locals use rock piles for different things like property lines so that the insurgents will use rock piles already there for markers or aiming or timing markers.

### **Slide 34: Example Markers**

#### **Instructor/Facilitator's Note**

1. Discuss the placement of the battery pack in relation to direction of travel.

2. Upper left image - the ground sign used is a row of rocks.
3. Upper right image - pile of rocks that are displaced about 2 meters before the IED.
4. Lower left image - stacked rocks about 2 meters from blast seat.
5. Lower right image - stacked rocks on each end that separates the IED.
6. Have the Soldiers look at the slides and have them tell you what is in common about the stacks of rocks. They are in choke points.

**Slide 35: Example Markers (cont.)**

Instructor/Facilitator's Note

1. Upper left image: a red X on wall marks location of IED.
2. Upper right image: painted stacked rocks in line with main charge.
3. Lower left image: piece of cloth hanging from tree limb indicates IED.
4. Lower right image: hanging cloth from limb designates IED.

**Slide 36-37:**

Check on Learning:

1. What is the definition of a ground sign?

**Answer:** Any evidence of change from the natural state that is inflicted upon the environment by the passage of man, animal, or machinery.

2. Indicators do not have to be on the ground. True or False?

**Answer:** True

3. Look for unnatural lines that may be circular, rectangular, or square shape that may reveal the outlines of mines or pressure plates. True or false?

**Answer:** True

4. Markers are used only to warn the Taliban of the presence of IEDs along routes and paths. True or False?

**Answer:** False

5. A common marker is stacked rocks. True or False?

**Answer:** True

6. A piece of cloth hanging from a tree could be a marker. True or False?

**Answer:** True

Review Summary: Conduct a review and summarize Indicators and Ground Signs.

TLO - LSA 3. Learning Step / Activity TLO - LSA 3. Identify IED Emplacement.

Method of Instruction: Practical Exercise (hands-on/written)

Mode of Delivery: Resident Instruction

Instr Type (I:S Ratio): Military - ICH, ABIC/FIFC Qual, CIED SME (1:5)

Time of Instruction: 10 mins

Media Type: CD-ROM / Actual Equipment /  
Conference/Demonstration / Equipment Based  
Instruction / Practical Exercise / Situational Based  
Instruction / Slides

Other Media: Unassigned

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

### **Slide 38: Identify IED Emplacement**

#### **- Linked to Emplacement**

1. Concealing an IED inevitably will leave an element of ground sign
2. Can be in the form of foot print or the signature left behind from concealment
3. Different In any given area
4. Ground signs may vary with enemy emplacements
  - a. Hasty Emplacement
  - b. Deliberate Emplacement

#### **Instructor/Facilitator's Note**

- Get the students to start talking about hasty and deliberate before you go to the next slide

### **Slide 39: Hasty Emplacement - Site Prepared**

- Hasty Emplacement

- - Site Prepared

1. Known movement route
2. Rapid employment of IED

#### **Instructor/Facilitator's Note**

1. Hasty emplacement can be just laying command wire on top of the ground.
2. Another hastily emplaced IED. This is very easy to see, however if it were dusk or dark you may have some difficulty see this IED.
3. The rounds may blend in with background; you may mistake them for large rocks.

### **Slide 40: Hasty Emplacement with Device**

- Hasty Emplacement

- -Device Emplacement

1. Possible target of opportunity
2. Not as well camouflaged

#### **Instructor/Facilitator's Note**

1. Talk about the target of opportunity.
2. An insurgent watching a route that Coalition forces use and the insurgent can't emplace the IED because of locals in the area so he waits to see a coalition force element to emplace his IED.

**Slide 41: Deliberate Emplacement**

- Deliberate Emplacement
  - - Site Prepared
- 1. Pre-determined IED location, insurgent reconnaissance
- 2. Accomplished by unarmed personnel with plausible deniability

**Instructor/Facilitator's Note**

1. Both pictures are the same emplacement.
2. The first picture was prior to discovery and second picture was after removal of soil.
3. Explain that the components aren't together in the same hole.

**Slide 42: Deliberate Emplacement (Cont.)**

- Deliberate Emplacement
  - - Device Emplacement
- 1. Better camouflage
- 2. Placed during CF inactivity

**Instructor/Facilitator's Note**

1. These pictures are the same IED site.
2. Talk about the choke point (VP) and with the rocks that is probably not hastily emplaced.

**Slide 43: Deliberate Emplacement (Cont.)**

- Limited by the imagination of the enemy
- 1. Exploits CF/HNSF Patterns
- 2. Set in stages
- 3. More complex

**Instructor/Facilitator's Note**

1. This slide is in the same area.
2. Victim Operated Improvised Explosive Device (VOIED) was found.
3. Notice the power source is away from the pressure plate and main charge.
4. Explain that that is how the insurgents try to defeat metal detectors.

**Slide 44: Deliberate VOIED Emplacement**

- A picture that shows items found on scene:
- 1. Placement of the VOIED and 5L jugs
- 2. Initiation system on the VOIED

**Instructor/Facilitator's Note**

1. Upper left image - placement of VOIED with 5L jugs.
2. Upper right image-items used initiation of VOIED.
3. Lower left image-2 X 5L jugs.
4. Lower right image-2 X 5L jugs with syringes, HME and rounds.

**Slide 45: Elevated Emplacement**

- It's important to know that not all IEDs are placed on the ground.

**Instructor/Facilitator's Note**

1. Explain to the class that IEDs are sometime elevated to cause mass casualties while dismounted.
2. Talk about making sure when scanning that you must scan where insurgents can emplace IED's.

Check on Learning:

**Slide 46**

1. The two types of emplacements are referred to as \_\_\_\_\_ and \_\_\_\_\_.

**Answer:** Hasty and Deliberate

2. Hasty emplacements can be just laying command wire on top of the ground. True or False?

**Answer:** True

3. All IEDs are placed in the ground. True or False?

**Answer:** False

Review Summary:

Summarize material covered in this LSA

## 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 and CIED SME (1:5)
Time of Instruction:	5 mins

### Check on Learning

Determine if the students have learned the material presented by soliciting student questions and explanations. Make sure that students can:

1. Define Observation Theory
2. Recognize Indicators of Ground Signs and IED markers
3. Identify IED Emplacement

Ask the students questions and correct misunderstandings.

### Review/ Summary

#### Slide 47

During this lesson we covered:

1. General observation principles
  - a. Training the eyes requires training the mind.
  - b. Learn to see things in proper perspective at distances.
  - c. Factors affecting vision: Lack of vitamin A, colds, headaches, fatigue, narcotics, alcohol, smoking, exposure to bright light, etc.
2. Recognize Indicators of Ground Signs
  - a. Small piece of the puzzle that help identify a possible threat.
  - b. Can be stacked rocks, disturbed earth, or parts of a road way that everyone seems to avoid.
3. Identify IED Emplacement
  - a. Concealing an IED will inevitably leave an element of a ground sign.
  - b. Can be in the form of foot print or the signature left behind from concealment.

#### Slide 48: Ground Sign Awareness Hands on PE heads up

##### Instructor/Facilitator's Note

1. The next 4 hours you will be broken down in groups and will be outside in a ground sign awareness PE.
2. This PE is designed for three stations:
  - a. Station 1. Observation
  - b. Station 2. Hasty/Deliberate IED Emplacement
  - c. Station 3. Ground Sign

#### Slide 49: Questions

## SECTION V. STUDENT EVALUATION

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### Testing Requirements

This lesson will be tested during mission 1, 2 and 3 planning and execution on week 2. The Examination will be assessed thru rubrics. There will also be an end of course test. You must receive a passing score of 80% or higher 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 student questions about the test. Provide remedial training as needed.

**Appendix A - Viewgraph Masters**

**Ground Sign Awareness  
071-FREBB001 / Version 02.0 ©**

<b>Sequence</b>	<b>Media Name</b>	<b>Media Type</b>
None		

## **Appendix B - Assessment Statement and Assessment Plan**

**Assessment Statement: None.**

**Assessment Plan: None.**

Appendix C - Practical Exercises and Solutions

PRACTICAL EXERCISE(S)/SOLUTION(S) FOR LESSON 071-FREBB001 Version 02.0 ©

PRACTICAL EXERCISE SHEET 071-FREBB001 PE1

Time: 4 hours 0 minutes

**Title** Identify ground signs in an Improvised Explosive Devices (IEDs) environment

**Lesson Number/Title** 071-FREBB001 Version 02.0 © / Ground Sign Awareness

**Security Classification** For Official Use Only

**Introduction** Once students are broken down into groups, the Instructor orients the students to the terrain, gives a very brief threat overview, and places the students where they need to go at the start point.

**Motivator** On today's modern battlefield, Soldiers are being faced with new threats such as IED's. There is still the challenge of trying to win the hearts and minds of the population that resides in our theater of operation. To be effective, every Soldier needs to learn and adapt to the enemies tactics while being sensitive to the culture and religions of the region.

**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 ground signs in an IED environment
Conditions:	In a classroom setting and field environment, given PowerPoint presentation, students resources, instructional materials, doctrinal references, and equipment.
Standards:	Identify ground signs IAW doctrinal references including ATP 3-90.37, STP 33-CIED-SM-TG and must achieve a score of 80% or greater on course examination rubrics. The identification includes: <ol style="list-style-type: none"><li>1. Define Observation Theory</li><li>2. Recognize Indicators of Ground Signs and IED markers</li><li>3. Identify IED Emplacement</li></ol> <b>Learning Domain:</b> Cognitive <b>Learning Level:</b> (C1) Knowledge

**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. 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, and rally points etc).

**Risk Assessment Level**

Low

**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.

Training will be conducted in the proper designated areas only. This ensures natural and environmental resources are maintained properly for continued training realism. Using the proper designated areas also eliminates conflicting or controversial situations. Equipment will be operated to conform to environmental operating permits. Improper disposal of trash and refuse, inadequate clean up of training areas, pollutes ground and water resources. This may result in a potential health/safety hazard.

**Evaluation**

Identify 7 out of 10 Indicators of an IED as prescribed in the practical exercise to reduce the probability of injury to personnel or damage to equipment.

**Instructional Lead-in**

Soldiers must be vigilant in performing their duties, remain alert, and maintain a strong security posture to avoid becoming a victim of an IED ambush. Soldiers must have a good appreciation of the type of devices and employment techniques that they may encounter. All Soldiers must be able to identify improvised explosive devices.

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

**Resource Requirements**

*Instructor Materials:*

1. Lesson plan with Appendix A, C, and D as applicable
2. All references linked to this lesson plan
3. Visitor Book on DVD and automation equipment. I.E Warrior University.
4. Risk Assessment worksheet.

*Student Materials:*

1. Lesson plan with Appendix A, C, and D as applicable
2. All references linked to this lesson plan
3. Visitor Book on DVD and automation equipment. I.E Warrior University.
4. Risk Assessment worksheet.

**Special  
Instructions**

**Note to the Instructor/Facilitator (I/F). Inform the students of the following prior to starting the PE:**

1. This part of the Ground Sign Awareness class can be presented through **Problem Based Instruction (PBI)** method.
2. The 40 minutes academic material of the class can be covered at the beginning of this PE.
3. The following is a simple/generic scenario that can be issued to the students in order to add realism to the training.
4. **The 5Ws for this PE are as follows:**
  - a. **Who:** Team TF of which you are a member
  - b. **What:** Establish safe conditions which include identifying potential IED threats.
  - c. **Where:** Designated area starting approximately 1000 meters before the town entrance
  - d. **When:** In the next 24-36 hours
  - e. **Why:** For the a convoy transporting high ranking US diplomats to meet with local town officials
5. **Background.** You are a DCT-MT member of a Tm TF tasked with establishing safe conditions for a convoy that transports US Diplomats into a local town. US Troops have experienced several IED related attacks and incidents in that particular area in the last 10 months. You know that your life, the life of senior US official and your career it's at stake. Today you are preparing to rehearse what you learned in the Ground sign awareness class when you attended the DCT-MT course which includes:
  - a. Review Observation Principles
  - b. Recognize Indicators of Ground Signs
  - c. Identify the Markers of IEDs
  - d. Identify IED Emplacement
6. Feel free to modify this PBI or create your own as long as you are meet the objective of this exercise.

**Procedures**

**Note for the Instructor/Facilitator (I/F)**

1. Instructors will need to locate a piece of terrain that will support all three events, have a central location for starting, and all are within walking distance of each other. 1 hour per station is the planning requirement. Students are encouraged to bring optics from their unit. Actual round robin rotation will be determined by the Lead Instructor on site.

**2. This PE is designed for three stations; observation, Hasty/Deliberate IED Emplacement, and Ground Sign Awareness.**

a. **Observation Station:**

**Material Requirements:** Various recognizable items such as inert mortar rounds, inert grenades, inert mines, inert artillery rounds, etc. 10 x clip boards with paper lane marking material (high visibility marking tape).

1) **This station will require at least 1 hour for set up.**

Items are placed in a defined lane (left, right, near, far limits are marked and clearly identified for the students). Care is taken during emplacement to ensure that the items are placed at distances ranging between 5 meters from the observation point out to (no farther than) 200 meters. Items should not be camouflaged, but instead placed in the open while utilizing the available terrain for camouflage. From behind a starting line the students are given 15 minutes to observe the lane with both the naked eye and available optics. After 15 minutes have elapsed, the students are moved down the center of the observation lane in 5 meter increments and given an opportunity to observe from that location. The objective is to assist understanding of the “eye-brain” relationship in the identification of readily recognizable objects. At the completion of the event the students will conduct an AAR and discuss ways in which they, as Master Trainers, can set up stations in their units to train Soldiers.

2) When the students arrive at this station, give an explanation for the objective of the station and the problem base scenario.

b. **Hasty/Deliberate IED Emplacement Station.**

**Material Requirements:** This station will require at least one Hasty emplacement and one deliberate emplacement. Any IED type is sufficient as long as it meets the criteria and can be explained/ described to the students. Other requirements are 1 shovel, 1 mattock, and any necessary components to assemble the 2 separate IEDs.

1) **This station will require at least one hour for set up.**

Terrain plays a big part in setting up this station. Two locations will need to be identified within close proximity to each other that support a Hasty and a deliberate emplacement. For the Hasty emplacement, a CWIED normally works best, although this is not a rule. Depending on terrain, a VOIED may also be utilized. The key is to explain in detail the components in the ground, and the time it took to emplace the IED and camouflage it. Care should be taken by the Instructor not to “over camouflage” to ensure that the point of HASTY emplacement comes across to the students. Also this is an ideal time to discuss components and where the enemy can obtain them, i.e. stator wire, batteries, pressure plates, main charge explosives, etc.

2) For the deliberate emplacement, the Instructor should ensure that it is camouflaged to the MAXIMUM extent possible. The Instructor will point out the time that was required for emplacement, the chain of various enemy personnel that could have taken part in the emplacement (stages), and the simplicity vs technically challenging aspects of the emplaced device. Also, it is EXTREMELY important to point out to the students that this IED was

emplaced in a VP due to the enemy having a degree of certainty that CF would return to this area.

3) When the students arrive at this station, an explanation is given for the ELO of the station. They are first introduced to the Hasty Emplacement and then to the Deliberate Emplacement. It should take about 50 minutes to walk the students through both points, after which a Discussion, led by the Instructor, should be encouraged to solidify the points of how the students, as Master Trainers, can take what they have learned back to their unit to train their Soldiers.

c. **Ground Sign Awareness Station.**

**Material Requirements:** The only materials required for this station are various “discardables” i.e. pieces of electrical tape, used water bottles, wire insulation clippings, cigarette butts, etc.

1) **This station will require at least 1 hour for set up.**

A piece of terrain for this station will need to be identified that includes roads, trails, and open areas. The area will need to be prepared by removing any unwanted traces of human movement (trash). Specific areas will then need to be prepared to show the students different Ground Sign Indicators: discardables, color changes, regularity, flattening disturbance, transference, and markers. The students will start at a point on the lane and slowly be taken through in an attempt to identify these ground signs. If they miss them, the signs will be pointed out and discussed. At the end of the lane a Discussion will be led by the Instructor about how to implement ground sign awareness training as a Master Trainer.

2) When the students arrive at this station, give an explanation for the objective of the station and the problem base scenario.

**Feedback  
Requirements**

Feedback is essential to effective learning. Schedule and provide feedback on the any information to help answer student's questions.

**SOLUTION FOR  
PRACTICAL EXERCISE 071-FREBB001 PE1**

Identify 7 out of 10 indicators of an IED as prescribed in the practical exercise to reduce the probability of injury to personnel or damage to equipment.

**Appendix D - Student Handouts**

**Ground Sign Awareness  
071-FREBB001 / Version 02.0 ©**

<b>Sequence</b>	<b>Media Name</b>	<b>Media Type</b>
0	Ground Sign Awareness	PPT

## Appendix E - TRAINER'S LESSON OUTLINE

### Ground Sign Awareness

071-FREBB001 / Version 02.0 ©

DRAFT

#### 1. The importance of this lesson: (Why)

Identify ground signs in an IED environment

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

Identify ground signs IAW doctrinal references including ATP 3-90.37, STP 33-CIED-SM-TG and must achieve a score of 80% or greater on course examination rubrics. The identification includes:

1. Define Observation Theory
2. Recognize Indicators of Ground Signs and IED markers
3. Identify IED Emplacement

**Learning Domain:** Cognitive

**Learning Level:** Knowledge

#### 3. Tasks to be taught

<u>Task Number</u>	<u>Task Title</u>	<u>Task Type</u>
052-COM-3261	React to an Improvised Explosive Device (IED) Attack (UNCLASSIFIED / FOR OFFICIAL USE ONLY) (U//FOUO)	Individual SUPPORTED
052-COM-1271	Identify Visual Indicators of an Improvised Explosive Device (IED) (UNCLASSIFIED//FOR OFFICIAL USE ONLY) (U//FOUO)	Individual TAUGHT

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#### Additional Non-Standard Tasks

None

#### 4. References:

<u>Reference Number</u>	<u>Reference Title</u>	<u>Date</u>
ATP 3-90.37	COUNTERING IMPROVISED EXPLOSIVE DEVICES	29 Jul 2014
ATP 5-19 (Change 001 09/08/2014 78 Pages)	RISK MANAGEMENT <a href="http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp5_19.pdf">http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp5_19.pdf</a>	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
STP 3-CIED-SM-TG	Soldier's Manual and Trainer's Guide for Counter Improvised Explosive Device	09 Dec 2011

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### Additional Non-Standard References

None

### 5. Resources

*TIME: Time of Instruction: 5 hrs 0 mins*

*LAND: Classroom, Training Area, and Range Requirements*

<u>Id</u>	<u>Name</u>
17710	Maneuver/Training Area, Light Forces
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

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*AMMO: Ammunition Requirements*

<u>DODIC</u>	<u>Name</u>
None	

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*MISC: Materiel Items and TADSS Requirements*

<u>Id</u>	<u>Name</u>
* 05-113/1	IEDES, Increment 1, (IEDES1) Pressure Plate Training Device
* 05-113/2	Improvised Explosive Device Effects Simulator, Increment 1, (IEDES1) Push Pull Booby Trap
* 05-114/1	Improvised Explosive Device Effects Simulator (IEDES 1) 315 MHZ
* DDCT-5-41	KIT, LAND MINE (Local TADSS – Not in TSMATS/PAM 25-30)
* L 05-107	TIED, TRAINING IMPROVISED (Local Device - Not DA Supported)
* T 05-050/1	Recognition Kit- Submunitions
* T 05-050/2	Recognition Kit- Projectiles
* T 05-050/3	Recognition Kit- Mortars
* T 05-050/4	Recognition Kit- Rockets
* T 05-050/5	Recognition Kit-Rifle Grenades
* T 05-050/6	Recognition Kit- Thrown Items
* T 05-050/7	Recognition Kit- Placed Mines
* T 09-129	Iraqi Mine Kit
* T 09-146	Afghanistan Kit
* T 20-009	POMZ-2 Antipersonnel Mine
1240-01-540-2890	ACOG Kit
2310-01-090-7709	Bus Transit 44 Passenger
2320-00-440-8308	Truck, Van, Shop, with Winch: M109A2
2320-01-354-3384	Truck Van: LMTV W/E: M1079
2330-01-C02-5669	Trailers, Assorted: Custom Made
2340-01-525-1656	ATV, Polaris, 6x6
2530-00-245-0685	WATER CAN (5 GAL.)
4240-01-515-6935	Portal Ladder
5120-00-243-2395	Mattock, Pick, 5 Pound
5120-00-293-3330	Shovel, Hand, 46 Inch Wood Handle, Square Point Open Back Blade, Size 2
5820-00-NSN	SCREEN, PROJECTION
5820-00-T93-6432	PROJECTOR, VIDEO, LCD EPSON ELP33 WITH REMOTE
5820-01-525-9144	Receiver-Transmitter, Radio
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
6760-00-985-6749	Tripod, Photographic
6910-00-NSN-0921	BINOCULARS
7021-01-C17-2297	PC Tablet, Data Entry: Galaxy Tab 2 WIFI 16GB Samsung
7110-00-T81-1805	BOARD, DRY ERASE
7240-00-098-3827	Can, Military
8415-00-935-3139	Helmet, Safety, White, Size 6-1/2 to 8

(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.**

Have the **students** conduct an AAR at the end of the PE.

GUIDE:

What was supposed to happen?

What actually happened?

What went well?

What needs improvement?

How can we improve?

Insructor/Facilitators (I/F) should conduct an AAR at thier level as well IOT identify areas that I/F can improve.

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