

~~2016~~2017

National

Mine

Rescue

Skills

2016-2017 NATIONAL MINE RESCUE SKILLS INDEX

<u>TITLE</u>	<u>Page</u>
General Rules	1
Introduction	1
Team Composition	1
Isolation.....	1
Equipment and Materials	2
Field Event Rules	2
Smoke Exploration Rules	3
Firefighting Rules	3
Maps	4
Discounts and Review.....	4
Air Measurements Skill Sheet	5
Anemometer.....	5
Smoke Tube.....	5
Magnehelic.....	6
Breathing Apparatus Skill Sheet	6
Firefighting Skill Sheet	7
Lance Installation	7
Advancing on the fire	7
Firefighting General Rules	8
Firefighting Hose Management.....	9
Gas Detectors Skill Sheet	10
Smoke Exploration Skill Sheet.....	11
Two and Three Person Exploration Skill Sheet.....	11 - 12

Written Test Skill Sheet.....	12
First Aid Skill Sheets	13
Skill Requirements	13 - 14
Scene Size – up	15
Initial Assessment	15
Rapid Assessment/Final Assessment.....	16
Care-Vent	
Manual Ventilation and Cardiac Compressions	17
Automatic Ventilation	17
CPR.....	18
Life Threatening Bleeding	19
External	19 - 20
Internal	20
Sucking Chest Wound.....	21
Shock	21
Open Wounds	22
Burns.....	22
Fractures	23
Rib Fracture	23
Skull or Spinal Fracture.....	24
Four Man Log Roll.....	25

General Rules

Introduction

The National Mine Rescue Skills contest utilizes skills taken from the Nationwide Skills and IG 7a. The intent is to provide competition in skills not covered in Mine Rescue contests and may or may not be compliant with IG 7a or Nationwide contests.

The skills contest will consist of 3 separate events: smoke exploration, firefighting exercises, and a mine rescue field event.

Teams will be pre scheduled for working order and rotation between the 3 event sites. Teams will receive their rotation schedule when they register.

The field event will consist of a 2 man and a 3 man exploration teams, 2 man bench, 2 man gas detector test, 2 man air measurements test and first aid.

A written test will be given to the teams at 6:30 am to 7:00 am.

All events will start at 8:00 am.

Teams will receive any written and verbal information concerning the events at the end of the written test.

Team Composition

1. Team members cannot be substituted for the different skills events.
2. Only the six working members registered by the team and the briefing officer will work the problem.
3. If a team member has a physical problem, they can be replaced by an alternate if available.
4. The teams can use a Command Center Attendant in the field event if they choose. The Attendant will be stationed in an area isolated from the team and Briefing Officer.

Isolation

5. There will not be an isolation.

Equipment and Materials

- 6.** Teams are required to bring with them sufficient equipment and materials to work the problem.
- 7.** Team uniforms will consist of:
 1. Outer clothing will be one or two piece with long sleeves and pants, a 6 oz minimum weight and FR (fire retardant) rating.
 2. Standard mine hard hats and boots.
 3. FR rated gloves (at the fire pits)
 4. FR rated hood (at the fire pits)
- 8.** Team members are not required to have numbers on their uniforms.

Field Event Rules

- 9.** When teams report to the Fresh Air Base they will have 4 minutes to do any needed setup.
- 10.** Teams will draw 2 members from the 5 working members and briefing officer to perform the gas detector, air and pressure readings and 2 man bench skills.
- 11.** The team will start the clock, complete gas detector, air and pressure readings and 2 man bench skills.
- 12.** After all 3 skills are completed teams receive maps and written instructions and will don apparatus and check equipment according to the 2016 National Mine Rescue rules and examine openings and explore smoke free areas of the mine in 2 and 3 person teams.
- 13.** When working in 2 and 3 person groups any member can perform the duties of the Captain or other members, including the 20 minute apparatus check.
- 14.** One member of the 3 man team can remain alone in a center entry to allow 2 members to explore an adjacent entry. This one member must remain stationary when alone and have continuous communications with the briefing officer.
- 15.** As teams work or explore they will find a patient to perform first aid on. First aid may be required of a team member, patient at any time during the problem.
- 16.** All members can perform first aid on the patient (minimum of two members). First aid treatments will be scored by the first aid skill sheets. Teams may have to

perform first aid on more than one person. Captain is limited to verbal participation only.

17. Teams are not allowed to take Skill Sheets onto the field.

Smoke Exploration Rules

18. Each team must explore an area of the mine or entry for not less than 20 minutes and not to exceed 30 minutes.
19. All mines will have the same numbers of objects or placards with information to be located by the team. Each mine may have different objects or placards in different locations.
20. Teams may be required to crawl.
21. The briefing officer map and team map will be scored. The 2016 National Mine Rescue Rules Map Legend will be used.
22. Map items must be located in the general area where found. General area is defined as this: If an object or placard is on the right rib between break 1 and break 2 anywhere along the right rib in this location will be acceptable. Showing it on the opposite rib or another area will be discounted. Items located in an intersection must be mapped in the intersection.
23. Teams may use approved Sound Powered Communications Systems or MSHA provided IWT Communications Radios for this exercise.

Firefighting Rules

24. Teams will compete in a lance installation exercise and a hose exercise.

Maps

25. After the Captain starts the clock the team will be given written instructions, and maps as follows:
 - A. For the smoke room event 1 map for the briefing officer and 2 maps for the team.
 - B. For the field event 1 map for the briefing officer and 2 maps for the team.
 - C. No maps are required for the fire pit events.
26. The team maps will not be scored. The Briefing Officer Maps will be graded according to ~~2016-2017~~ **National Mine Rescue rules**.
27. An electronic map must be used by a Command Center Attendant. The Command Center Map will be used to support the Briefing Officer Map in the field event. (Command Center Attendant is optional during the field event)
28. All maps will be pre-labeled. Entries will be labeled alphabetically and crosscuts will be labeled numerically.

Discounts and Review

29. All events will be timed. The captain will start and stop a time clock. The team will get a 1 point discount for each minute or fraction of a minute of working time for each event.
30. Team's total discounts will be a combination of skill sheet discounts, one discount for each minute or fraction of a minute of working time and map discounts. Skill sheet discounts will be the first tie breaker, map discounts the second and working time the third.
31. Teams will be notified when they can review their score cards and maps. Teams have 30 minutes to review and must start their review within one hour after being notified.
32. If a team stops the clock before the problems are completed, the team will receive the applicable discounts for all parts of the problem not completed.
33. Failure to follow written instructions will result in 5 discounts for each instruction.

33-34. Team members must be under apparatus when working inby the fresh air base in smoke exploration and field event and both fire fighting exercises. Failure to do so will be 15 discounts for each member not under apparatus in each event.

Formatted: Font: (Default) Arial

Formatted: Indent: Left: 0.5", No bullets or numbering

Air Measurements Skill Sheet

1. The Air Measurement Competition will be held during the skills day field problem.
2. The air direction will be provided by the Judge.
3. Teams will be required to provide all necessary equipment.

Anemometer

4. Teams will be required to take air reading with an Anemometer.
 - A. Failure to provide anemometer, measuring tape and timing device _____ 1 discount
 - B. Failure to give a brief description of the anemometer (how to zero and turn on the anemometer). _____ 1 discount
 - C. Failure to take a measurement of the area to be tested _____ 1 discount
 - D. Failure to traverse the entry while taking a 1 minute reading in the area _____ 1 discount

The judge will give the area and velocity to the team.

- E. Failure to calculate correctly the air reading for the area (air reading must be calculated with pencil or pen and submitted to the Judge). No calculators will be allowed. _____ 1 discount

Smoke Tube

5. Teams will be required to take air reading with a smoke tube.
 - A. Failure to provide smoke tubes with aspirator bulb, measuring tape and timing device _____ 1 discount
 - B. Failure to measure off a distance (10 foot) _____ 1 discount
 - C. Failure of team members to verbally explain how smoke will be released and timed through each of the four quadrants _____ 1 discount
 - D. Failure to take measurement of area to be tested _____ 1 discount

The judge will give the team the area and travel time of the smoke.

- E. Failure to calculate smoke air reading for the area (air reading must be calculated with pencil or pen and submitted to the judge) _____ 1 discount

Magnehelic

- 6. Teams will be required to take a pressure reading with a Magnehelic.
 - A. Failure to provide a Magnehelic and necessary port hoses and fittings. _____ 1 discount
 - B. Failure to explain what the Magnehelic is used to measure _____ 1 discount
 - C. Failure to demonstrate how to zero the Magnehelic _____ 1 discount

For contest purposes, all returns will be low pressure and all intakes will be high pressure. Teams will be given information on their location and area to be tested.

- D. Failure to connect the hoses to the Magnehelic properly and simulate the reading _____ 1 discount

Judge will have a preset Magnehelic to show the team.

- E. Failure to give and explain the proper reading of the Magnehelic to the Judge (positive or negative pressure should be included in the explanation) _____ 1 discount

Breathing Apparatus Skill Sheet

- 1. The two person Breathing Apparatus Competition will be held during the field event.
- 2. Two team members will be selected from the 5 working team members and briefing officer.
- 3. Failure to completely disassemble apparatus _____ 1 discount
Failure to completely assemble apparatus _____ 1 discount
Failure to fill chemical cartridge during assembly _____ 1 discount
Failure to use a properly charged O2 cylinder _____ 1 discount
- 4. Team members may use the apparatus manual during testing.
Failure to perform all tests required for the apparatus.(this includes a face mask test) _____ 1 discount
- 5. Teams must provide all materials and equipment needed to complete this skill.
Failure to have any material or equipment needed for the skill _____ 1 discount
- 6. Teams will be allowed 30 minutes for this competition.

7. Failure to compete will result in an additional 15 point discount. _____ 15 discount

Firefighting Skill Sheets

Team members will be required to fight a fire by installing a fire lance (device to spray water while left unattended) down-wind of the fire and advance with fire hoses from the up-wind side of the fire to extinguish the fire. This will be a simulation without flowing water. The fire will be located either in the #1 or the #3 entry. All fire hose will be 50 foot in length.

Lance Installation

1. Failure of the lead person on the fire hose to take a gas test when the team enters smoke _____ 2 discounts
2. Failure of the lead person on the fire hose to state that he will do a visual and sound test of the roof before entering smoke _____ 2 discounts
3. Failure to flush the hydrant and fire hose before connecting to a lance or nozzle (team must verbalize to Judges) _____ 2 discounts
4. Failure to have 3 members on the lance protection fire hose _____ 2 discounts
5. Failure to have 3 members on the lance installation hose _____ 2 discounts
6. Failure to keep the fire hose nozzle ahead of the lance _____ 2 discounts
7. Failure to protect the fire hose, from unsafe roof, unsafe rib, unsafe overhanging brow, caved areas, passing through water over knee deep or fire area. _____ 2 discounts each occurrence

Advancing on the fire

1. Failure of the lead person on the fire hose to take a gas test when the team enters smoke _____ 2 discounts
2. Failure of the lead person on the fire hose to state that he will do a visual and sound test of the roof before entering smoke _____ 2 discounts
3. Failure of (2) 3 member fire hose teams to advance on the fire _____ 2 discounts
4. Failure to flush the hydrant and fire hoses before connecting to the nozzles(team must verbalize to Judges) _____ 2 discounts

5. Failure to protect the fire hose, from unsafe roof, unsafe rib, unsafe overhanging brow, caved areas, passing through water over knee deep or fire area. _____2 discounts each occurrence

Firefighting General Rules

1. Any team member between a pressurized hose and rib. _____2 discounts
2. Any team member not having hold of the fire hose when in smoke. _____5 discounts
3. Any team member turning their back to the fire while fighting the fire or retreating from the fire. (Defined as both feet pointed away from the fire) _____5 discounts
4. Failure to have nozzle on fog pattern when advancing on the fire. (team must verbalize to Judges) _____2 discounts
5. Failure to don firefighting gear when advancing on fire or installing lance. (no skin showing)
_____2 discounts no FR gloves
_____2 discounts no FR hood
_____2 discounts no FR clothing
6. Failure to advance in unison when two hand lines are used. _____2 discounts
7. Failure to street roll fire hose and place hose, nozzles and lance in location it was found. _____10 discounts
8. Failure to roll fire hose into a tight roll with male end inside the roll. _____2 discounts
9. Failure of team to install the lance before advancing on the fire. _____5 discounts
10. Failure to bring an extra apparatus _____2 discounts
11. Starting and stopping the clock to avoid discounts _____30 discounts

Firefighting Hose Management

1. Failure to flush the Y connector prior to connecting the fire hose or flushing the fire hose prior to connecting the nozzle _____ 2 discounts
2. Any team member stepping on the pad while moving the box or fire hose around the cones during the Z pattern shoot _____ 2 discounts
3. Any box that crosses the wrong side of a cone during the Z pattern shoot and is not returned to the correct side of the cone before proceeding to the next cone. (Team can return the cone with water pressure with no discounts or have the judge return with 2 discounts)
4. Any team member stepping on or crossing the yellow mid line while the box is being moved during the goal post shoot _____ 2 discounts
5. If the box is moved off the pad by water pressure during the Z pattern shoot, it must be put back on the pad by use of water pressure. Moving the box back onto the pad by any other means will constitute a 10 point discount.
6. If any of the 3 person team not flowing water is performing work while the other 3 team members are flowing water. 2 each occurrence

Note 1: The 6 man team will work in two 3 man teams.

Note 2: If any member of the 3 person team determines the box is hung up or not spray able while on the concrete pad during the Z pattern shoot, that person must notify the judges, and the judges will return the box to the cone nearest the yellow mid line without a discount but the clock will continue to run.

Note 3: If the box is moved off the pad adjacent to the goal posts by water pressure during the goal post shoot, it will be returned by the judges to the cone nearest the yellow mid line without a discount but the clock will continue to run.

Note 4: If any member of the 3 person team determines the box is hung up or not spray able while on the concrete pad during the goal post shoot, that person must notify the judges, and the judges will return the box to the cone nearest the yellow mid line without a discount but the clock will continue to run.

Formatted: Numbered + Level: 1 +
Numbering Style: 1, 2, 3, ... + Start at: 1 +
Alignment: Left + Aligned at: 0.25" +
Indent at: 0.5"

Formatted: Font: (Default) Arial

Gas Detectors Skill Sheet

1. The Gas Test Competition will be held during the field event.
2. Two team members will be selected from the 5 working members and the briefing officer.
3. Team members must make the following checks. 1 discount will be assessed for each check not completed.

Visual Damage	_____	1 discount
Power detector up	_____	1 discount
Battery Test	_____	1 discount
Detector range of gases in % or PPM	_____	1 discount
Calibration gas setting (set span)	_____	1 discount
Alarm settings (describe how to set)	_____	1 discount
Zero unit and calibrate	_____	1 discount
Proper in-date cal gas and proper regulator	_____	1 discount
Readings within 10% accuracy	_____	1 discount
Reset peaks	_____	1 discount

4. Team members will perform checks and calibration as per their manual and read gas for Methane, Oxygen and Carbon Monoxide.
5. Detectors will be high and low range as required by MSHA. Teams can have one detector that is high and low range or two detectors, one high and one low. Teams should use detectors that they will use in Mine Rescue work.
6. Failure to have one high and low range detector or one high range detector and one low range detector _____ 10 discounts

Smoke Exploration Skill Sheet

1. Any team member not mechanically attached to the lifeline while in smoke _____ 2 discounts
2. Failure to locate objects/placards accurately
2 discounts each object/placard on the team map
2 discounts each object/placard on the briefing officer map
3. Not following proper procedures while going under oxygen, 50 foot check or 20 minute checks.
Discounted according to ~~2016~~2017 National Mine Rescue Rules
4. Failure to have the face piece sealed other than at the fresh air base.
_____ 10 discounts
5. Failure to systematically explore the mine intersection by intersection, including crosscuts prior to moving inby to the next intersection.
_____ 5 discounts each occurrence
6. Failure to return immediately to the fresh air base in the event of a breathing apparatus failure.
_____ 10 discounts for every minute the team delays returning to the FAB
7. Failure to follow written instructions _____ 5 discounts each occurrence
8. Teams cannot start and stop the clock to avoid time discounts
_____ 30 discount and map discounts

Two and Three Person Exploration Skill Sheet

1. Teams may explore the areas of the mine that are smoke free in 2 and 3 person teams.
2. The team Captain will decide which members are paired up in the 2 and 3 person teams
3. Each member of each team can perform the duties of any team member including the Captains duties.
4. The team will not be required to maintain a team map. The Briefing Officer will maintain a map which will be scored according to ~~2016~~2017 NATIONAL MINE RESCUE RULES rules (Briefing Officer Map requirements).
5. The two or three person teams must stay within one crosscut of an adjacent team when exploring.
6. An outside team will notify the center team that they have stopped or ready to advance. The center team will notify the Briefing Officer that the teams have stopped or are

advancing. All other communications can be between the 3 teams and the Briefing Officer.

7. When exploring in 2 and 3 person teams, the teams will not be required to timber unsafe roof or pump water.
8. If a 2 or 3 person team is blocked in the entry they are exploring, they can retreat and advance up the adjacent entry to tie back into the entry they were exploring at the first accessible crosscut.
9. Discounts
 - A. Any member entering a smoke area _____ 5 discounts per person
 - B. Failure to tie in an accessible area _____ 4 discounts
 - C. Failure to communicate to the center team or Briefing Officer before advancing _____ 2 discounts each occurrence
 - D. Failure to take a gas test where required by [2016-2017 NATIONAL MINE RESCUE RULES](#) rules _____ 5 discounts
 - E. Failure to sound roof and ribs where required by [2016-2017 NATIONAL MINE RESCUE RULES](#) rules _____ 2 discounts
 - F. Entering an area of unsafe roof that has not been supported. _____ 5 discounts per person
 - G. Entering an area of unsafe rib, caved, or water over knee deep _____ 5 discounts per person
 - H. Failure of any team to not stay within 1 crosscut of another team when exploring _____ 4 discounts
 - I. Failure to airlock where required by [2016-2017 NATIONAL MINE RESCUE RULES](#) rules _____ 4 discounts
 - J. Failure of a team to check each entrance before advancing in the opening in by the fresh air base _____ 2 discounts
 - K. Failure of a team to not have an apparatus check at the first team stop and each 20 minutes there after _____ 5 discounts
 - L. Failure of the team to Don apparatus and check equipment at the Fresh Air Base as required by [2016-2017 NATIONAL MINE RESCUE RULES](#) rules _____ 2 discounts

Written Test Skill Sheet

1. The Written Test will be held at the beginning of the Skills Competition.
2. Failure to answer a question correctly. Each wrong answer. _____ 2 point discount
3. The 5 team members and briefing officer will take a 10 question written test.
4. The test will be open book and taken from the following reference books :
 - i. IG-7 (3028) Manual for Mine Rescue training – Coal (March 2008)
 - ii. IG-7a (2013)
 - iii. Mine Fires Prevention-Detection-Fighting, Don Mitchell 3rd edition

iv. MSHA SM3 First Aid Manual (2006 edition) This manual will be replaced with MSHA's Mine Emergency Response manual when it is completed.

5. Teams must furnish their own reference books and electronic devices are prohibited.
6. 30 minutes will be allowed for the test.
7. Teams must be isolated from each other until all tests are complete.

First Aid Skill Sheets

Skill Requirements

1. Materials List

12	Triangular Bandages
6	Adhesive compresses
12	Sterile gauze, (4"x4") and/or 4" Compresses
6	Roller Bandages
2	Blankets
1	Disposable Blanket
1	Scissors, EMT Utility
6	Pairs of Examination Gloves
2	Mask/face shields or masks and goggles combination meeting blood borne pathogen requirements (mine rescue apparatus face mask suffices)
1	Compliment of splints (may be pre-padded but not assembled)
1	Long back board with straps (Aluminum, Wood, etc.)(Cravat bandages or straps cannot be preassembled on the back board)
1	Burn Sheet, Sterile (40" x 80" minimum)
1	Rigid Extrication Collar
2	Trauma Dressings (minimum of 10" x 30")
2	Tourniquets
2	Occlusive Dressing
1	Care- Vent

1	Packet sugar/tube of instant glucose (for diabetic purposes)
---	--

Wheeled Stretchers can be used to carry supplies: However, patients cannot be transported on wheeled stretcher to FAB. Patient must be transported using a back-board, basket stretcher, stokes, etc. "Patient must be secured and carried to the FAB."

2. Teams must clean all materials from the mine after completion of the problem.
3. Life threatening injuries are: difficulties in breathing, spinal injury, skull fracture, open/sucking chest wound, life threatening bleeding, shock or life threatening open fractures.
4. Teams must treat all life threatening injuries before transport to the fresh air base and any other time during the problem before the clock is stopped.
5. Teams must furnish all materials from the materials list.
6. If CPR is part of the problem, a care-vent on a manikin must be used.
7. Teams must follow any written instructions given to them.
8. Protective equipment must be donned prior to patient contact (gloves, masks, and eye protection – eyeglasses are acceptable). (Apparatus face shield will be considered eye protection)
9. Teams are required to perform an Initial Assessment and rapid assessment in by the fresh air base and a detailed assessment at the fresh air base.

Failure to comply with the above 9 requirements will result in a 5 point discount for each infraction

10. Judges must be very clear to the teams if an injury is life threatening.
11. Injuries will be identified by card, envelopes or labels attached to the patient at or as near the location of the injury as possible or envelopes handed to the team at a required time or location. Injury descriptions and if it is life threatening will be bold letters and at least ¼ -inch in height.

12. Tail Captain does not have to remain stationary. He can move to assist in treatment of injuries.

13. The Captain's primary responsibility is to declare the area safe; he can verbally assist the team as they perform first aid.

14. All required first aid treatment must be scored by the attached skill sheets.

15. The Skills First Aid Manual will be MSHA ~~2016~~2006 SM3.

SCENE SIZE-UP

STEP	ACTION	DISCOUNT
Scene Safety	Observe the area to ensure team and patient safety * (Captain Verbalizes Area is Safe)	1
Team protection	Don protective gloves and/or any other protection if needed to protect against blood borne pathogens. (BSI)	1
Mechanism of Injury	If possible, determine what forces caused the injury or evidence of a medical problem. * Ask patient (if conscious) what happened	1
Communication	Notify the Briefing Officer/Command Center of the location of the injured person.	1

INITIAL ASSESSMENT

STEP	ACTION	DISCOUNT
Stabilization of Spine	During the assessment avoid unnecessary movement or rough handling of patient (Apply manual immobilization to neck if suspected spine injury)	1
Assess mental status	Determine if patient is alert and responsive or nonresponsive* * (Verbally describe the level of consciousness)	1
Assess airway	Look for absence of breathing (no chest rise and fall), or breathing less than 6 or more than 24 breaths per minute. <i>Unconscious Patient: Ensure airway is open by feeling air from nose or mouth or failure of chest or abdomen to rise and fall or skin is blue or gray</i> <i>Conscious Patient: * Verbalize that airway has been assessed</i> Correctly execute head-tilt/chin-lift or jaw thrust maneuver, depending on the presence of cervical spine (neck) injuries If present, treat sucking chest wound Card will be given to team when checking the chest area for breathing. (refer to skill sheet)	1 1

Assess circulation	Unconscious Patient: Check carotid pulse* (5 – 10 seconds) Note: If no pulse perform CPR (refer to skill sheet) Conscious Patient: * Verbalize circulation has been assessed	1
Check for Bleeding	Visual examination of patient (rapid head to toe visual assessment) <i>Judges must identify life threatening bleeding on placard (will be at least ¼ inch and in RED)</i> Note: Stop and Treat serious bleeding if found (refer to skill sheet)	1

RAPID ASSESSMENT/FINAL ASSESSMENT

A Rapid Patient Assessment will be performed after the initial assessment has been performed and before the patient is transported to the Fresh Air Base (FAB). This assessment is to determine any life threatening injuries. Treatment must start immediately on life threatening injuries as they are located.

A Final Assessment must be performed at the Fresh Air Base before the clock stops.

The Skill Sheet below is for Rapid and Final Assessment.

STEP	ACTION	DISCOUNT
Examine for life threatening injuries	Check Head	1
	Check Neck	1
	Check Chest	1
	Check Abdomen	1
	Check Pelvis	1
Verbalize each area examined	Check Legs	1
	Check Arms	1
	Check Back Surfaces	1

CARE-VENT - Manual ventilation and cardiac compressions

STEP	ACTION	DISCOUNT
Preparing Patient	Allow the device to cycle once and then apply the full face mask or attach the Care Vent DRA to the patient's full face mask. A tilt action is used to hyper-extend the neck and move the jaw forward. This helps displace the tongue away from the back of the throat and maintain an open airway.	1
	If the patient's chest does not rise or the gas escapes around the mask or the pressure relief system operator, reposition the patient's head and adjust your hand position to obtain an effective mask and an open airway.	1
	If mask indicates signs of vomit, remove immediately and clear the airway. Ensure the mask and valve is free from obstruction. Restart ventilation immediately after cleaning airway.	1
Ventilation	If manual ventilation is to be used, depress the manual button and observe the rise of the patient's chest. Release the button when the chest rise is adequate.	1
Evaluation	If no respiratory effort is observed, position yourself above the patient's head. Turn on the gas supply.	1
	Monitor the patient's skin, nail bed and lip color.	1

CARE-VENT - Automatic ventilation

STEP	ACTION	DISCOUNT
-------------	---------------	-----------------

Preparing Patient	Allow the device to cycle once and then apply the full face mask or attach the Care Vent DRA to patient's full face mask. A tilt action is used to hyper extend the neck and move the jaw forward. This helps displace the tongue away from the back of the throat and maintains an open airway.	1
Ventilation	Continue ventilation at an appropriate rate until relieved or spontaneous breathing returns. If mask indicates signs of vomit, remove immediately and clear the airway. Ensure the mask and valve is free from obstruction. Restart ventilation immediately after cleaning airway.	1 1
Evaluation	If no respiratory effort is observed, position yourself above the patient's head. Turn on the gas.	1

CPR

STEP	ACTION	DISCOUNT
Establish Unresponsiveness	Tap or gently shake shoulders "Are you OK?" *	1
Determine Patient is not breathing	Determine unconsciousness without compromising possible cervical spine (neck) injury	1
	Look , listen, feel for absence of breathing (no chest rise and fall) or gasping, which are not considered adequate	1
<i>Checks for Pulse</i>	Correctly locate the carotid pulse - on the side of the rescuer, locate the patient's windpipe with your index and middle fingers and slide your fingers in the groove between the windpipe and muscle in the neck	1
<i>Start Chest Compressions</i>	Locate the compression point on the breastbone between the nipples	1
	Place the heel of one hand on the compression point and the other hand on top of the first so hands are parallel	1
	Do not intentionally rest fingers on the chest	1
	Keep heel of your hand on chest during and between compressions	1
	Give 30 compressions	1
	Compressions are at the rate of at least 100 per minute (30 compressions delivered within 18 seconds)	1
	Compression depth. at least 2 inches for an adult	1
Ventilations Between Compressions	Kneel at the patient's side near the head	1
	Correctly execute head-tilt/ chin-lift or jaw thrust maneuver depending on the presence of cervical spine injuries	1

	Place barrier device (pocket mask / shield with one way valve / Care-Vent) on manikin	1
	Give 2 breaths 1 second each	1
	Complete breaths and return to compressions in less than 10 seconds (This will be measured from the end of last down stroke to the start of the first down stroke of the next cycle.)	1
	Provide 5 cycles of 30 chest compressions and 2 rescue breaths	1
Continue Chest Compressions	To check for pulse, stop chest compressions for no more than 10 seconds after the first set of CPR	1
	If no signs of circulation are detected, continue chest compressions and breaths and check for signs of circulation after each set	1
	A maximum of 10 seconds will be allowed to complete ventilations and required pulse checks between sets (this will be measured from the end of the last down stroke to the start of the first down stroke of the next cycle)	1

LIFE THREATENING BLEEDING

External

STEP	ACTION	DISCOUNT
Direct pressure	Takes appropriate body substance isolation	1
	Cover wound with a clean cloth or your gloved hand and apply direct pressure on the wound <i>If controlled, bandage dressing in place, if not controlled continue skill</i>	1
NOTE: If not controlled, Judge must now inform the person that the wound continues to bleed		
Elevation	If wound is on an arm or leg and there is no fracture, elevate extremity above heart level as you apply pressure unless spine injury is suspected.	1
NOTE: If not controlled, Judge must now inform the person that the wound continues to bleed		
Digital pressure	Apply pressure to appropriate pressure point and notify judge verbally that bleeding is controlled (Apply pressure to blood vessels leading to area -in arm, press just below armpit; in leg, press against groin where thigh and trunk join.) <i>If controlled, bandage dressing in place, if not controlled continue skill</i>	1
NOTE: If not controlled, Judge must now inform the person that the wound continues to bleed		
Tourniquets	Apply between the wound and the heart as close to the wound as possible (Approximately 1 inch above the wound) but never over a joint. Tighten till bleeding is controlled. Do not loosen. Make note of time applied. Mark T or TK on	1

	<p>forehead.</p> <p><u>Improvised Tourniquet:</u></p> <p>Apply a bandage around the extremity above the wound (one inch above but not on a joint) and tie a half knot in the bandage</p> <p>Place a stick or pencil on top of the knot and tie the ends of the bandage over the stick in a square knot</p> <p>Twist the stick until the bleeding is controlled, secure the stick in position</p> <p><u>Factory Tourniquet:</u></p> <p>Apply per manufacturer recommendation above the wound (one inch above but not on a joint)</p>	
Shock	Verbally state that person will be treated for shock (refer to shock skill sheet)	

LIFE THREATENING BLEEDING

Internal

STEP	ACTION	DISCOUNT
Examination	Monitor breathing and pulse	1
Treatment	Keep patient still	1
	Loosen restrictive clothing	1
	Nothing by mouth	1
	Treat for shock (Refer to shock skill sheet)	1
Transport	Transport to fresh air base as soon as possible	

Sucking Chest Wound

STEP	ACTION	DISCOUNT
Expose wound	Expose entire wound	1
Seal wound and control bleeding	Apply direct pressure "gloved hand" as needed to stop the bleeding	1
Apply an occlusive dressing	Place occlusive dressing over wound Ensure dressing is large enough not to be sucked into the wound	1
	Seal on three sides - Affix dressing with tape	1
Monitor Patient	"Monitor patient closely for increasing difficulty breathing" if breathing becomes difficult "shallow or rapid" release dressing and have patient exhale - reseal	1
	Place the patient on the injured side to allow expansion room for the uninjured lung if there is no spinal injury or other injuries would prohibit	1
Transport	Transport to fresh air base as soon as possible	1

SHOCK

STEP	ACTION	DISCOUNT
Assess for Shock	Assess for shock and verbally state treatment for shock	1
Treatment	Keep victim lying down	1
	Cover with blanket to prevent loss of body heat	1
	Elevate according to injury	1

	<p><i>This procedure is performed in most cases. Place the patient flat, face up and elevate the legs or foot end of the back board 8 to 12 inches. Do not elevate any limbs with possible fractures or pelvic injuries until they have been properly splinted and/or placed on a spinal board. Remember to consider the mechanism of injury for every patient.</i></p> <p><i>Do not elevate feet if you are treating a person with: head injury, heart attack, stroke, or chest injuries</i></p>	
	Reassure and calm the patient	1

Open Wounds

STEP	ACTION	DISCOUNT
Control Bleeding	Use direct pressure to control bleeding	1
Dressing	Apply sterile dressing over entire wound	1
	Do not remove dressing, if bleeding continues apply additional dressings directly over first dressing	1
Bandaging	Cover all edges of dressing (dressings completely covered)	1
	Do not bandage too tightly.	1
	Do not bandage too loosely.	1
	Do not cover tips of fingers and toes, unless they are injured.	1
Embedded objects	Do not remove embedded objects unless obstructing airway.	1
	Stabilize with a bulky dressing	1
	If object is too large to transport, cut off only enough to allow for transportation	1
	Check for exit wound	1
Impaled Objects in the Cheek	Examine; inside & outside	1
	If end not impaled in mouth - pull it out	1
	Position head for drainage: if spinal injury, immobilize 1st and tilt board	1
	Dress outside of wound	1
	Gauze on inside only if patient alert, (Simulate only in contest and state, "I would leave 3-4 inches of gauze outside of mouth.")	1

BURNS

STEP	ACTION	DISCOUNT
------	--------	----------

Type of Burn	Determine Type of Burn – Thermal, Electrical, Chemical	1
BURN CARE (All Types)	Keep site clean and keep the patient warm	1
	Separate Sites - burned areas that might come in contact with each other when bandaging	1
	Remove jewelry	1
	Apply moist dressings to first and second degree burns. Dry dressings to third degree burns	1
	Do not apply ointment, sprays, butter or ice to burned areas	1
	Do not break blisters	1
Chemical burns	Brush off dry powders	1
	Consider flushing with large amounts of water	1
Electrical burns	Ensure safety before removing patient from the electrical source	1
	Look for both an entrance and exit wound	1
	Monitor the patient closely for respiratory and cardiac arrest	1

Fractures

STEP	ACTION	DISCOUNT
Assess Injured Area	Examine possible injured site for signs and symptoms of fracture:	1
	Assess for circulation and movement below the fractured site	1
Immobilize suspected fracture	Splint in position found - Do not attempt to straighten any painful, swollen, deformed extremity.	1
	Provide manual immobilization - immobilize the limb and apply splint	1
	Check that splints are long enough to support joints above and below suspected fracture	1
	Pad improvised splints to ensure even contact and pressure between the limb and the splint.	1
	Secure fractured area to splint by applying bandaging material above and below the fractured site	1
	Secure all splinted/fractured limbs for transport	1
	Re-Assess for circulation and movement below the fractured site	1

RIB FRACTURE

STEP	ACTION	DISCOUNT
Assess Patient for	Assess for severe pain with each breath	1
	Tenderness over fracture	1

Possible rib fracture	Deformity at site of fracture	1
	Inability to take a deep breath	1
Treatment	Apply thick padding over injured ribs	1
	Apply two medium cravat bandages around the chest firmly enough to afford support centering the cravats on either side of the injury	1
	Support the arm on the injured side in a sling	1

SKULL OR SPINAL FRACTURE

STEP	ACTION	DISCOUNT
Assessment	Determine if patient is to be treated for possible skull or spinal injuries; This includes: All unconscious patients Deformity of the skull Open Wound – Clear fluid coming from ears and/or nose Pupils may be unequal in size; impaired vision Partial or complete paralysis	1
Treatment	Manually stabilize the head until patient is secured to your backboard	1
	Use modified jaw thrust to open airway if the airway is compromised	1
	Apply cervical collar.	1
Transport	Position patient on backboard (Refer to log roll skill sheet)	1
	Secure patient to backboard <i>The patient must have his head, arms, pelvic area, upper legs and both legs below the knees secured to the stretcher. Straps or cravats must be used. (See figure 18 page 37 MSHA SM3 First Aid Manual)</i> Note: Patient MUST be secured to back board to prevent movement during transport. If patient is allowed to move/slide/etc. on back board during transport discount for endangering patient. <i>Example: If during transport the backboard is tilted and the patient slides on back board.</i>	1

	Use blanket roll, padding, rolled up coats, etc. to stabilize the head and neck	1
	Treat for shock (use shock skill sheet)	1

FOUR MAN LOG ROLL

STEP	ACTION	DISCOUNT
Prepare for the Roll	Stabilize the neck and head and open airway by modified jaw-thrust	1
	Place spine board parallel to the patient	1
	Position one person at the shoulder, one at waist and one at the knee	1
	Shoulder rescuer extends patient's arm over the head on the side the patient will be rolled	1
	Rescuers will place hands under patient's shoulder, upper arm, waist, buttocks, knees and mid-calf	1
Roll	Roll patient in unison on side toward the rescuers	1
	Waist rescuer pulls spine board against patient	1
	On command roll patient as a unit onto board	1
		1

