NHFA FIREFIGHTER I COURSE GUIDE, CHAPTER 8: ROPES AND KNOTS

СНАР	SKILL DRILL	SKILL#	STAND. EVOL. #
8	Inspecting Ropes	8-18	
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NH FIRE ACADEMY FIREFIGHTER I

UNIT 8 BLOCK 1 (4HR)

CLASS NAME: ROPES AND KNOTS

NUMBER OF INSTRUCTORS: 3

EQUIPMENT	One Rope for each student (½") X 15 ft. (minimum length)
NEEDED	 Four bagged ropes for bagging and inspecting (4)

FACILITY NEEDED	An area where students can tie the required knots.
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SKILL DRILL REFERENCE	8-7	8-8	8-9	8-25		
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GENERAL INSTRUCTION	The Instructors shall demonstrate the step by step process for tying each knot.
	The students shall tie knots with coaching and guidance from the Instructors.
	Although gloves are required for tying all knots, it may be advisable for the students to tie knots without gloves until they gain confidence with the skill.

NH FIRE ACADEMY FIREFIGHTER I

UNIT 8 BLOCK 1 (4HR)

EVOLUTION	DESCRIPTION
10SE-1	The instructor shall demonstrate how to properly tie the following knots: Figure eight knot, Figure eight on a Bight, Figure eight follow through, and Girth Hitch
Tying Knots	
	The Students shall tie the following knots:
	-Figure eight knot, Skill Drill 8-7
	-Figure eight on a Bight, Skill Drill 8-8
	-Figure eight follow through, Skill Drill 8-9
	-Girth Hitch, Skill Drill 8-25
	The Instructors shall provide various situations for tying the knots such as: tying the figure
	8 follow- through and Girth Hitch around various size objects and how to successfully tie the knot with adequate free end.



UNIT 8, BLOCK 2 (4 HR)

CLASS NAME: ROPES AND KNOTS

NUMBER OF INSTRUCTORS: 4

EQUIPMENT NEEDED	 One Rope for each student. ½" X 15 ft. (minimum length) Bag of ½" X 75 ft. or longer downgraded rope (4)
	• 2 ½" hose (3 lengths)
	• 2 ½" nozzles (3)
	• Axe (3)
	Pike pole (3)

SKILL DRILL REFERENCE	8-2	8-7	8-8	8-9	8-12	8-13	8-15
	8-18	8-19	8-20	8-21	8-25		

GENERAL INSTRUCTION	Divide the class into groups of similar number with an assigned Instructors
	Groups then rotate to each station.
	The students must wear structural firefighting gloves while tying all knots and while hoisting tools and hose lines.

NH FIRE ACADEMY FIREFIGHTER I

UNIT 8 BLOCK 2 (4HR)

EVOLUTION	DESCRIPTION
Tying Knots	The student shall tie the following knots: -Figure eight knot, Skill Drill 8-7 -Figure eight on a Bight, Skill Drill 8-8 -Figure eight follow through, Skill Drill 8-9 -Girth Hitch, Skill Drill 8-25
Inspecting and Bagging Rope	The Instructor shall demonstrate inspecting a rope while bagging the rope, cleaning the rope, how to properly coil and uncoil a rope, and how to daisy chain a rope. Note: To inspect the rope while it is bagged normally requires two individuals. The students shall demonstrate how to bag and inspect a rope, cleaning the rope, how to properly tie a daisy chain a rope. Skill Drill 8-18, 8-19, 8-20, and 8-21
Tying and Hoisting Tools and Hose Lines	The Instructor shall locate an area where tools and hose lines can be tied and hoisted. The Instructor shall demonstrate tying & hoisting tools and tying & hoisting a charged and uncharged hose line. Each student shall tie the appropriate knots to hoist an axe, pike pole, and an uncharged and charged hose line. Skill Drill 8-2, 8-8, and 8-25

SKILL SHEET 8	R-2	Half Hitch Knot					
OBJECTIVE:			hamtaw 0				
		NFPA 1001, 4.1.2 & 4.3.20 FEH C	hapter: 8				
CANDIDATE NA	AME/NUMBER:	No.:					
TEST DATE/TIN	ME						
EQUIPMENT REQUIRED: [Add local requirements if needed]		A length of life safety or utility rope.					
EVALUATOR IN	NSTRUCTIONS						
CANDIDATE IN	STRUCTIONS:	The student will properly tie a Half Hitch Knot					
NOTE: The evaluator will read the following exactly as it is written to the candidate							
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guides					
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]					
Critical?			Pass	Fail			
	The stud	dent makes a loop in the standing part of the rope.					
		lent slides the loop over the object being hoisted. Make sure the runnin ses under the working end. This must tighten against itself.	9				
	The student verbalizes the primary uses of a half hitch.						
EVALUATOR C	OMMENTS:		•				
[ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]							
EVALUATOR SIGNATURE:							
STUDENT SIGNATURE:							

SKILL SHEET 8-7		Figure Eight				
OBJECTIVE:		NFPA 1001, 4.1.2 & 4.3.20	FEH Chapter: 8			
CANDIDATE NAME/NUMBER:			No.:			
TEST DATE/TIN	ЛЕ					
EQUIPMENT RI [Add local requ needed]		A length of life safety or utility rope.				
EVALUATOR IN	STRUCTIONS					
CANDIDATE IN	STRUCTIONS:	The student will properly tie a Figure Eight Knot				
NOTE: The eva the following e written to the c	xactly as it is					
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Gui	ides			
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]				
Critical?				Pass	Fail	
	The stu	dent places the rope in their palm with the working end away.				
	The stu	dent grasps the working end from between the rope and arm.				
		dent brings the working end of the rope around the back of their ows the fingers, from the wrist to the tips, through the loop.	hand			
	The stu	dent tightens the knot by pulling on both ends.				
EVALUATOR C	OMMENTS:					
[ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]						
EVALUATOR SIGNATURE:						
STUDENT SIGN	IATURE:					

SKILL SHEET 8	8-8	Figure Eight on a Bight					
OBJECTIVE:		NFPA 1001, 4.1.2 & 4.3.20	FEH Chapter: 8				
CANDIDATE NAME/NUMBER:		N	0.:				
TEST DATE/TIM	ME						
EQUIPMENT RI [Add local requ needed]		A length of life safety or utility rope.					
EVALUATOR II	NSTRUCTIONS						
CANDIDATE IN	ISTRUCTIONS:	The student will properly tie a Figure Eight on a Bight Knot					
NOTE: The eva the following e written to the c							
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guide	s				
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]					
Critical?			Pass	Fail			
		ident forms a bight in the rope and places it in their palm, with the bigon them.	ight				
	The stu	ident grasps the working end from between the rope and arm.					
		ident brings the working end of the rope around the back of their had ows the fingers, from the wrist to the tips, through the loop.	nd				
	The stu	ident tightens the knot by pulling on both ends.					
EVALUATOR C	COMMENTS:						
[ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]							
EVALUATOR SIGNATURE:							
STUDENT SIGNATURE:							

SKILL SHEET 8-9		Figure Eight Follow Through		
OBJECTIVE:		NFPA 1001, 4.1.2 & 4.3.20 FEH C	FEH Chapter: 8	
CANDIDATE NA	AME/NUMBER:	No.:		
TEST DATE/TIN	ΛE			
EQUIPMENT RI [Add local requ needed]		A length of life safety or utility rope.A ring or object		
EVALUATOR IN	ISTRUCTIONS			
CANDIDATE IN	STRUCTIONS:	The student will properly tie a Figure Eight Follow Through Knot		
NOTE: The evaluator will read the following exactly as it is written to the candidate				
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guides		
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]		
Critical?			Pass	Fail
		ident make a basic figure eight, leaving sufficient rope on the working eround the object they are securing the rope to.	nd	
	The stu	ident wraps the rope around the object to be tied.		
	The stu	dent now follows the rope back through the knot in the opposite direction	n.	
EVALUATOR COMMENTS: [ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED] EVALUATOR SIGNATURE:				
STUDENT SIGN	NATURE:			

SKILL SHEET 8-12		Hoisting an Axe			
OBJECTIVE:		NFPA 1001, 4.1.2 & 4.3.20	FEH Chapter: 8		
CANDIDATE NAME/NUMBER:			No.:		
TEST DATE/TIME					
EQUIPMENT RI [Add local required		Utility RopeAxe			
EVALUATOR II	NSTRUCTIONS				
CANDIDATE IN	STRUCTIONS:	The student will tie the appropriate knots to properly hoist an ax	æ.		
NOTE: The eva the following e written to the c					
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guides			
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]			
Critical?				Pass	Fail
	The stu	dent tosses a bag of rope while securely holding the rope			
		dent ties a figure eight on a bight onto the hoisting rope. Slide the n a bight down the handle from end to head. Rope is looped under			
		dent brings the rope back up the handle and secures it with two handle. Keeping the rope parallel to the handle	nalf		
	The too	I can now be hoisted.			
EVALUATOR C	OMMENTS:				
[ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]					
EVALUATOR S	IGNATURE:				
STUDENT SIGN	NATURE:				

SKILL SHEET 8-13		Hoisting a Pike Pole				
OBJECTIVE:			FEH Chapter: 8			
CANDIDATE NAME/NUMBER:		No.				
TEST DATE/TIN	ИЕ					
EQUIPMENT RI [Add local requ needed]		Utility RopePike pole				
EVALUATOR IN	NSTRUCTIONS					
CANDIDATE IN	STRUCTIONS:	The student will tie the appropriate knots to properly hoist a Pike Po	le.			
NOTE: The evaluator will read the following exactly as it is written to the candidate						
CRITERIA:	CRITERIA: NOTE: Based on material from the Skill Drill Instructor Guides [ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]					
Critical?			Pass	Fail		
	The stu	dent tosses a bag of rope while securely holding the rope				
	The stu	dent ties a girth hitch and passes the loops over the pike pole				
		dent secures two half hitches, one near the mid-point of the handle an half hitch just below the head of the pike pole. Keeping the rope para andle				
	The too	I can now be hoisted.				
EVALUATOR C	OMMENTS:					
[ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]						
EVALUATOR S	IGNATURE:					
STUDENT SIGN	NATURE:					

SKILL SHEET 8-15		Hoisting a Hoseline (Charged and Uncharged)				
OBJECTIVE:			FEH Chapter: 8			
CANDIDATE NAME/NUMBER:		No.:				
TEST DATE/TIN						
EQUIPMENT RI		a Hillity Page				
[Add local required		Utility RopeHoseline with nozzle attached				
EVALUATOR IN	NSTRUCTIONS					
CANDIDATE IN	STRUCTIONS:	The student will tie the appropriate knots to properly hoist hoselines				
NOTE: The eva the following ex written to the c	xactly as it is					
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guides				
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]				
Critical?			Pass	Fail		
	The stu	dent tosses a bag of rope while securely holding the rope				
	The stu	dent ties a girth hitch.				
	For a Charged he	oseline:				
	Pass th	e two loops around the hoseline and pull tight				
	Pass a	bight through the bale and over the head of the nozzle, pull the rope				
	For an uncharged	hose line				
	Fold the	e hoseline back three feet from the nozzle onto its self				
	Slide the rop	ne two loops through the object you wish to secure and cinch the ends e.	of			
		half hitch around the hose 6 inches from the nozzle and a second hale ar the hose hold.	f			
	The noz	zzle can now be hoisted via the rope.				
EVALUATOR C	OMMENTS:					
[ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]						
EVALUATOR S	IGNATURE:					
STUDENT SIGN	IATURE:					

SKILL SHEET 8	8-18	Inspecting a Rope				
OBJECTIVE:		NFPA 1001, 4.5.1	FEH Chapter: 8			
CANDIDATE N	AME/NUMBER:		No.:			
TEST DATE/TIM	ME					
EQUIPMENT R [Add local requipmedded]	•	A length of life safety or utility rope.				
EVALUATOR II	NSTRUCTIONS					
CANDIDATE IN	ISTRUCTIONS:	The student will explain and demonstrate how to properly ins	pect rope.			
NOTE: The evaluator will read the following exactly as it is written to the candidate						
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor G	uides			
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]				
Critical?				Pass	Fail	
	The stud	dent demonstrates feeling along the rope.				
		ompting, the student verbalizes that they are feeling for abrasic ations or flat spots.	ons,			
	with the	sked what the candidate should do in the event that an issue is rope, the student verbalizes that the rope should be removed fand the officer must be notified.				
EVALUATOR O	COMMENTS:					
[ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]						
EVALUATOR SIGNATURE:						
STUDENT SIGN	NATURE:					

SKILL SHEET 8	3-19	Cleaning a Rope				
OBJECTIVE:		NFPA 1001, 4.5.1	FEH Chapter: 8			
CANDIDATE NA	AME/NUMBER:		No.:			
TEST DATE/TIM	ИЕ					
EQUIPMENT REQUIRED: [Add local requirements if needed]		 A length of life safety or utility rope. A location to hang the rope out of direct sunlight A hose and water supply to rinse the rope A bucket, mild detergent, and a soft bristle brush. 				
EVALUATOR II	NSTRUCTIONS					
CANDIDATE IN	STRUCTIONS:	The student will explain and demonstrate how to properly cle	an rope			
NOTE: The eva the following e written to the c						
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guides				
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIA	\L]			
Critical?				Pass	Fail	
	The stud bristle b	dent demonstrates washing the rope with a mild detergent and rush.	a soft			
	The stud	dent rinses the rope thoroughly with clean water.				
	The stud	dent hangs the rope to dry out of direct sunlight.				
EVALUATOR COMMENTS: [ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]						
EVALUATOR SIGNATURE:						
STUDENT SIGN	NATURE:					

SKILL SHEET 8-20		Daisy Chain				
OBJECTIVE:		NFPA 1001, 4.1.2 & 4.3.20	FEH Chapter: 8			
CANDIDATE NAME/NUMBER:		No	lo.:			
TEST DATE/TIME						
EQUIPMENT RI [Add local requ needed]		Utility Rope				
EVALUATOR IN	NSTRUCTIONS					
CANDIDATE IN	STRUCTIONS:	The student will demonstrate how to properly create a Daisy Chair	in.			
NOTE: The eva the following e written to the c						
CRITERIA:	CRITERIA: NOTE: Based on material from the Skill Drill Instructor Guides		es			
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]				
Critical?				Pass	Fail	
		nould double up the rope by bringing both ends together. They shou not, leaving the loose ends in a short tail.	uld tie			
	The student the overhand knot	en makes the first chain by looping the rope as if they were making	g an			
	through. This i	eaches their free hand down through the loop and pulls the rope parts the start of the second "chain link" The candidate then continues to rope through each successive loop until reaching the end.	rt way to pull			
	the final loop.	The student now secures the daisy chain by tying a knot with the end of the rope and the final loop. To undo the daisy chain, the candidate simply unties the knot, and pulls on the running				
EVALUATOR C	COMMENTS:					
[ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]						
EVALUATOR S	SIGNATURE:					
STUDENT SIGN	NATURE:					

SKILL SHEET 8-21		Creating a Drop Bag			
OBJECTIVE:		NFPA 1001, 4.1.2 & 4.3.20	FEH Chapter: 8		
CANDIDATE NAME/NUMBER:			No.:		
TEST DATE/TIME					
EQUIPMENT RI [Add local requ needed]		A length of life safety or utility rope.A rope bag			
EVALUATOR IN	STRUCTIONS				
CANDIDATE IN	STRUCTIONS:	The student will demonstrate the proper steps to create a Drop	Bag.		
NOTE: The eva the following e written to the c	xactly as it is				
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Gui	ides		
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL	.]		
Critical?				Pass	Fail
	The stud	dent ties a figure 8 near the end of the rope.			
		dent feeds the rope through the interior of the bag and through th t in the bottom of the bag.	ne		
		dent ties a figure 8 on a bight with the tail of the rope that is stickiom of the bag.	ing out of		
		lent loads or coils the rope into the bag by starting around the ou d filling up the middle of the bag. Touch visual inspection	ıtside		
		lent ties a figure 8 on a bight at the end of the rope and places it p of the bag and close the bag.	on the		
EVALUATOR C	OMMENTS:				
[ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]					
EVALUATOR S	IGNATURE:				
STUDENT SIGNATURE:					

SKILL SHEET 8	3-2	Girth Hitch Knot				
OBJECTIVE:		NFPA 1001, 4.1.2 & 4.3.20 FEI	FEH Chapter: 8			
CANDIDATE NA	AME/NUMBER:	No).:			
TEST DATE/TIM	ИЕ					
EQUIPMENT RI [Add local requ needed]	•	A length of life safety or utility rope.				
EVALUATOR II	NSTRUCTIONS					
CANDIDATE IN	STRUCTIONS:	The student will properly tie a Girth Hitch Knot				
NOTE: The evaluator will read the following exactly as it is written to the candidate						
CRITERIA:		NOTE: Based on material from the Skill Drill Instructor Guides				
		[ADDITIONAL LINES FOR AHJ TO ADD OTHER MATERIAL]				
Critical?			Pass	Fail		
	The stud	dent makes a bight in the standing part of the rope.				
		e bight in both hands and spread your hands apart. Twist the two si om you and pull inward.	ides			
	Pass th	e two loops around an object and pull tight				
EVALUATOR C	OMMENTS:		<u> </u>			
[ANY COMMENTS PRO OR CON REGARDING WHAT THE STUDENT ACCOMPLISHED]						
EVALUATOR SIGNATURE:						
STUDENT SIGN	NATURE:					