

ASSESSMENT GUIDELINE

Demonstrate canoeing and kayaking river rescue skills on Grade III water

Unit Standard: 20123

Level: 4 Credit: 9 Version: 2

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Purpose:

People credited with this unit standard are able to: demonstrate knowledge of river rescue principles and equipment for canoeing and kayaking; and demonstrate canoeing and kayaking river rescue skills on Grade III whitewater as a rescuer.

Recommended entry criteria:

Unit 20122, *Demonstrate kayaking skills on Grade III whitewater*; or Unit 20821, *Demonstrate canoeing skills on Grade III whitewater*; or demonstrate equivalent knowledge and skills.

Special Notes:

1. Definitions

Belayed contact rescue is where the rescuer is belayed by a rope attached to a releasable towline on their buoyancy aid.

Cumecs is a measure of how much water flows past a point in one second.

Grade III whitewater contains rapids with moderate, irregular waves which may be difficult to avoid. Complex manoeuvres in fast current and good kayak or canoe control in tight passages or around ledges is often required; large waves or strainers may be present but are easily avoided. Strong eddies and powerful current effects can be found, particularly on large-volume rivers. Scouting is advisable for inexperienced parties. Injuries while swimming are rare; self-rescue is usually easy but group assistance may be required to avoid long swims.

Paddle hook refers to a combination of gear that allows a rope to be hooked to an attachment point on the canoe or kayak.

2. Simulated rescues should be carried out at a site where the boat and/or swimmer are in proximity to a big rock, shallow water or the riverbank but still on Grade III whitewater.
3. *Co-ordinate technical rescues* in this unit standard means assessing the site and establishing priorities, making efficient use of people and resources, and ensuring no losses are incurred.
4. There are minimum assessor requirements for assessment against this unit standard. The details of these requirements are available on the Sfrito website <http://www.sfrito.org.nz/>.

Overview of assessment:

This assessment has 6 tasks -

- Task 1: Demonstrate knowledge of river rescue principles
- Task 2: Demonstrate background knowledge required for river rescue
- Task 3: Demonstrate river crossing and self rescue skills on Grade III white water
- Task 4: Demonstrate river rescue skills on Grade III white water
- Task 5: Justify techniques used and demonstrate knowledge of alternatives
- Task 6: Demonstrate knowledge of river hydrology and hazards.

Resources for all tasks:

- Ferrero, F. (1998). *Whitewater Safety and Rescue*. Pesda Press.
- Walbridge, C. (1995). *Whitewater Rescue Manual: New Techniques for Canoeists, Kayakers and Rafters*. Tab Books.

Each candidate will need to have available:

- Personal kayaking equipment - Kayak, paddle, helmet, buoyancy aid, spraydeck, paddle jacket, warm clothing.
- Rescue equipment such as ropes, pulleys, slings, prussiks, river saw
- Personal rescue equipment must include a knife, whistle, throw bag, towline.
- In addition, candidate(s) will need to have the additional rescue equipment available:
 - Spare paddle, first aid equipment, repair kit & tools.
 - Consideration may also be given to carrying additional equipment (spare warm clothing, extra snack food, thermos), based on the weather conditions, duration and nature of the assessment.

The assessor or trip leader will be required to carry safety and rescue equipment also. The equipment carried will depend on the weather conditions, duration and nature of the assessment, but could include:

Throw bag, split paddle, first aid kit, cell phone, spare warm clothing, thermos with a hot drink, extra snack food.

Notes to Assessor:

1. The candidate may choose which craft they will use for this assessment – either a kayak or a canoe. They do not need to be assessed on their knowledge or skills for both.
2. The only boat based rescue skill assessed in this unit is towline use. Boat based rescues such as barrel rolls, swimmer carries, T and X rescues are assessed in Unit 20126 *Demonstrate independent kayaking skills on Grade II whitewater* or Unit 20820 *Demonstrate canoeing skills on Grade II whitewater*. These are the respective prerequisites for Units 20122 and 20821, either one of which is a recommended entry criteria to assessment of this unit.
3. Ideally, sites suitable for the assessment of Task 2 (pre trip knowledge), Task 3 (rescue skills), & Task 4 (river hydrology & hazard identification) can occur during one river trip. If sites suitable for the assessment of the rescue skills are not available on one trip, an additional river trip / site may need to be accessed.
4. A radio system is required to assess PC 2.6. This could be a Mountain radio, UHF walkie talkies used by some rafting operators, or VHF repeater systems used by DOC and some outdoor education centres.

If this is provided by the assessor, candidates should be informed of the type to be used in advance.

Task 1: Demonstrate knowledge of river rescue principles

Resources:

- 20123 Assessment Questions (attached as part of this document)
- 20123 Model Answers (available from a Sfrito Client Liaison)

Instruction to candidate:

During the task you are required to show an understanding of the following:

- Grading system of rivers
- River flow
- Risk management strategies
- Potential health problems and how to avoid them

Element 1: Demonstrate knowledge of river rescue principles for canoeing and kayaking

Performance criteria	Evidence/Judgment
1.3 Strategies to reduce risk and avoid hazards are described.	All questions in 20123 Assessment are completed in full. Answers match 20123 Model Answers. Answers show a level of knowledge and research that matches the Level 4 descriptors below.
1.4 The grading system of rivers is described. Range: Grades I-VI.	
1.5 Current speed, force of water, and cumecs are explained and their effects on a trapped canoe or kayak are described.	
1.6 Knowledge of management strategies for potential health problems associated with Grade III whitewater is demonstrated. Range: hypothermia, cold water immersion, cramps, sunburn, blisters, dislocations, head injuries.	

LEVEL	PROCESS	LEARNING DEMAND	RESPONSIBILITY
4	Carry out processes that: <ul style="list-style-type: none"> - require a wide range of technical or scholastic skills - offer a considerable choice of procedures - are employed in a variety of familiar and unfamiliar contexts 	Employing: <ul style="list-style-type: none"> - a broad knowledge base incorporating some theoretical concepts - analytical interpretation of information - informed judgment - a range of sometimes innovative responses to concrete but often unfamiliar problems 	Applied: <ul style="list-style-type: none"> - in self-directed activity - under broad guidance and evaluation - with complete responsibility for quantity and quality of output with possible responsibility for the quantity and quality of the output of others

Task 2: Demonstrate background knowledge required for river rescue

Resources:

- http://www.americanwhitewater.org/content/Wiki/safety:start#universal_river_signals
- <http://www.greatoutdoors.com/published/paddle/howtos/signalingyourintentions/>
- http://www.capital.net/com/nckayak/nck_safety_p4.htm (cold water immersion)
- http://www.hypothermia-ca.com/hypothermia_publications/hypothermia.html (hypothermia)

Notes to Assessor:

This task could be assessed immediately prior to the river trip.

Instruction to candidate:

During the task you are required to:

- Demonstrate knowledge of personal and group rescue equipment
- Demonstrate knowledge required to identify and avoid potential health problems associated with kayaking and canoeing.
- Identify and understand kayaking communication systems
- Tie knots commonly used in river rescue situations

Element 1: Demonstrate knowledge of river rescue principles for canoeing and kayaking.

Element 2: Demonstrate knowledge of canoeing and kayaking river rescue equipment.

Performance criteria	Evidence/Judgment
<p>1.6 Knowledge of management strategies for potential health problems associated with Grade III whitewater are demonstrated.</p> <p>Range: hypothermia, cold water immersion, cramps, sunburn, blisters, dislocations, head injuries.</p>	<p>In a discussion with the assessor, the candidate covers:</p> <p><u>Safety features:</u></p> <ul style="list-style-type: none"> • Identifies and discusses the significance of safety features of their chosen craft - Kayak: cockpit, pillars, buoyancy, end loops, air bags - Canoe: buoyancy, end loops, thwart braces, air bags <p><u>Personal & Group Safety Equipment:</u></p> <ul style="list-style-type: none"> • Personal clothing and equipment is appropriate for the nature of the trip, water temperature and weather conditions. • Candidate has the personal safety gear specified in the range.
<p>2.1 Canoe and kayak safety features are identified.</p> <p>Range: kayak – cockpit, pillars, buoyancy, end loops, air bags; canoe – buoyancy, end loops, thwart braces, air bags.</p>	
<p>2.2 Personal safety gear is selected and its selection justified</p> <p>Range:</p> <p>Gear - buoyancy aid, helmet, footwear, clothing, knife, whistle, throw bag, towline;</p> <p>Justification – characteristics, positives and negatives</p>	

<p>2.3 Group safety gear is selected and its selection justified.</p> <p>Range:</p> <p>Gear – spare paddle, sling, karabiners, pulleys, mechanical devices, Prussik-brake, first aid, repair kit and tools, river saw, paddle hook, food and drink;</p> <p>Justification – characteristics, positives and negative</p>	<ul style="list-style-type: none"> • Group gear, as specified in the range, is carried by candidate or group members. • Candidate justifies the selection of: <ul style="list-style-type: none"> - 1 item of clothing, - 1 additional item of personal safety gear - 2 items of group safety gear • Justification includes positive and negative characteristics of the item’s use or application.
<p>2.6 Communications systems are identified and understood on and off the water.</p> <p>Range: hand, paddle and whistle signals, voice, radio.</p>	<p><u>Communication systems:</u></p> <ul style="list-style-type: none"> • Candidate identifies the commonly used river signals and tells the assessor what they mean: <ul style="list-style-type: none"> - Whistle – attention; help. - Hand – stop; go; go that way; eddy out; help; OK - Paddle – stop; go; go that way; help • Identifies radio systems likely to be effective in the river environment. • Demonstrates the use of the radio system carried (if no radios are used on the river then the use of a radio must be demonstrated in a different environment)

Task 3: Demonstrate river crossing and self rescue skills on Grade III white water

Notes to the Assessor:

1. Parts of this task (particularly solo river crossing skills) could be assessed in Task 4.
2. The site chosen for assessing the river crossing must be challenging and realistic, while being mindful of the assessor's need to manage safety. Many Grade 3 sites may not be suitable. It is acceptable to use the run out of a Grade 3, or a Grade 2 rapid. The assessor must consider the context of river rescue skills on Grade 3 white water, adjusting tasks accordingly.
3. Swimming to the bank with a boat may not be realistic with all craft e.g. large open whitewater touring canoe. In this case part of the task may be adapted or omitted.
4. Downstream safety (throw baggers or boat-based) may be required.

Instruction to candidate:

During this task you are required to

- Cross a river solo and using mutual support
- Swim in a rapid to the safety of an eddy or the bank both with and without your gear

Element 1: Demonstrate knowledge of river rescue principles for canoeing and kayaking

Element 3: Demonstrate canoeing and kayaking river rescue skills on Grade III whitewater as a rescuer.

Performance criteria	Evidence/Judgement
<p>1.7 Understanding of river crossing techniques is demonstrated. Range: mutual support, solo.</p>	<p><u>River Crossing (mutual support and solo)</u></p> <ul style="list-style-type: none"> - Consideration is give to the site used, water speed, depth entry, exit and run out. - Candidate's decision to cross takes into account each individual's abilities. • Mutual support: <ul style="list-style-type: none"> - The plan is discussed with participants, and includes how to retreat & what to do if swim. - Participants are positioned to maximize individual's strengths - Control of group & technique is maintained until the crossing is complete. • Solo: <ul style="list-style-type: none"> - Demonstrates the use of a paddle as support - Demonstrates a range of techniques (swimming, walking on river bed, stepping between rocks) matched to their abilities and the hydraulics present. <p><u>Self rescue (with and without equipment)</u></p> <ul style="list-style-type: none"> - Where a risk of foot entrapment exists the candidate stays in the whitewater position. - Where no risk of foot entrapment (or other hazard) exists, the candidate actively swims to safety. • Swims in a rapid to the safety of an eddy or the river bank. • Swims to safety with paddle and boat • Stays upstream of boat while in the current
<p>3.1 Self-rescue is demonstrated. Range: with and without equipment.</p>	
<p>3.5 River crossings in slow moving sections of Grade III whitewater are performed. Range: mutual support, solo.</p>	

Task 4: Demonstrate river rescue skills on Grade III white water

Notes to the Assessor:

1. Many parts of the task below can be carried out individually, but some require a team approach e.g. tag lines, pulley systems. An ideal assessment would include a number of these scenarios, at least one of which the candidate leads.
2. Many parts of the task can be integrated, e.g. during a foot entrapment scenario a candidate may demonstrate throw bagging, or belayed contact rescue
3. All demonstrations are to occur on Grade III whitewater
4. All demonstrations that require candidates to use a towline must only be assessed **after** competence at the towline release is demonstrated. (See PC 3.4, 3.2, 3.6)
5. The demonstration of some rescues (see PC 3.6, 3.7 & 3.8) will require additional kayakers /canoeists to be present.

Instruction to candidate:

During this task you are required to

- Demonstrate a range of river rescue skills
- Respond to a number of simulated rescues and an entrapped kayak/canoe

Element 1: Demonstrate knowledge of river rescue principles for canoeing and kayaking

Element 2: Demonstrate knowledge of canoeing and kayaking river rescue equipment.

Element 3: Demonstrate canoeing and kayaking river rescue skills on Grade III whitewater as a rescuer.

Performance criteria	Evidence/Judgement
<p>1.8 Understanding of incident management is demonstrated.</p> <p>Range: roles, responsibilities, sequence of rescue.</p>	<ul style="list-style-type: none"> • At all times the candidate: <ul style="list-style-type: none"> - Demonstrates correct use and understanding of river signals - Ties knots tidily and correctly. • During any scenario that the candidate leads (at least 1): <ul style="list-style-type: none"> - Establishes a plan and communication system with the group - Allocates roles, including downstream rescuer where appropriate - Maintains an overview of the whole rescue process <p><u>1a. Non-belayed contact rescue</u></p> <ul style="list-style-type: none"> • Candidate swims to the aid of a victim, securing and assisting them to shore. • Candidate considers own safety prior to rescue. • Is able to respond to a victim who is panicking. • Orientates & supports the victim in a face-up position. <p><u>1b. Belayed contact rescue</u></p> <ul style="list-style-type: none"> • Candidate attaches rope to towline • Swims to secure victim, and is belayed back to shore
<p>2.4 Knots are tied and their use and limitations for river rescue are described.</p> <p>Range: figure-eight on a bight, re-threaded figure-eight, directional figure-eight, tape knot, double fisherman's, clove hitch, tension knot, bowline, Prussik knot, klemheist, classic, Italian hitch.</p>	
<p>2.5 Understanding of retrieval systems used in river rescue is demonstrated.</p> <p>Range: anchors, mechanical systems, non-mechanical systems.</p>	

<p>3.2 Contact rescues are demonstrated.</p> <p>Range: swimmer – conscious and unconscious; rescuer – belayed and not belayed.</p>	<p><u>2. Throw bag rescues</u></p> <ul style="list-style-type: none"> - The position selected is stable, and will not expose the victim unnecessarily to downstream hazards. - Alerts the victim to the rescue. - The rope is thrown within an arms reach of the victim. - Candidate absorbs the force of the victim (e.g. bracing, moving downstream, giving out rope); then pendulums/assists victim to the bank. <ul style="list-style-type: none"> • a) Candidate uses a packed throw bag to rescue a swimmer at least 15 metres away. • b) Uses a coiled throw bag (re-throw) to rescue a swimmer at least 10 metres away. <p><u>3. Tow line use</u></p> <ul style="list-style-type: none"> • Demonstrates the release of a towline while upside down in a kayak/canoe. - Candidate tips upside down with towline attached to another craft. - Force is exerted via the towline. - Candidate remains calm while releasing towline underwater then rolls up. • Clips to a boat full of water in the main flow and tows it to the side <p><u>4. Tagline</u></p> <ul style="list-style-type: none"> • Carries a rope across the river. • Manages the positioning of the tag line so that current assists the crossing. <p><u>5. Simulated foot entrapment rescue</u></p> <ul style="list-style-type: none"> • Victim is stabilised using a support line, person etc. • Victim is extracted using an upstream pull. • Where appropriate, the application of taglines, throw bagging, contact rescues (detailed above) are demonstrated. <p><u>6. Simulated stranded victim rescue</u></p> <ul style="list-style-type: none"> • Victim is safely transported to the bank. • Where appropriate, the application of taglines, throw bagging, contact rescues (detailed above) are demonstrated.
<p>3.3 Throw bag rescues are demonstrated.</p> <p>Range: bagged and coiled.</p>	
<p>3.4 Towline rescues are demonstrated.</p> <p>Range: towing a kayak or canoe across the current using a towline, executing a towline release and roll up while capsized, paddle.</p>	
<p>3.6 Simulated people-based retrievals in Grade III whitewater are demonstrated.</p> <p>Range: victim – foot entrapment, stranded victim; rescue – tagline, throw bag, belayed contact rescue.</p>	

<p>3.7 Retrieving a canoe and a kayak from an entrapment without mechanical advantage is demonstrated.</p> <p>Range: vector pull, 10 boy scouts.</p>	<p><u>7. Boat Entrapment (broach and vertical pin)</u></p> <ul style="list-style-type: none"> • Candidate manages and /or demonstrates attaching a rope to the craft. • Candidate demonstrates techniques for retrieving the craft progressing through the following sequence: <ul style="list-style-type: none"> - 10 boy scouts - Vector pull - 3:1 Z drag using a prussik brake - 4:1 pig rig using a tied-off Italian hitch on the main line. • Demonstration includes establishing anchors, as required.
<p>3.8 Retrieving a canoe and a kayak from an entrapment using mechanical advantage is demonstrated.</p> <p>Range: entrapment – broach, vertical pin;</p> <p>rescue – 3:1 Z-drag using a Prussik brake, 4:1 pig rig using an Italian hitch on the main line, tied off.</p>	

Task 5: Justify techniques used and demonstrate knowledge of alternatives

Notes to the Assessor:

The purpose of this task is to fill out any gaps that may have occurred in the assessment because of the rescues being team-based, or where the assessor needs further clarification of the candidate's ability to successfully complete the rescue and lead a rescue under different circumstances.

Instruction to candidate:

During this task you are required to:

- Tie any knots not already demonstrated, and explain their use and limitations
- Explain the decision making and techniques used in Task 4

Element 1: Demonstrate knowledge of river rescue principles for canoeing and kayaking

Element 2: Demonstrate knowledge of canoeing and kayaking river rescue equipment.

Element 3: Demonstrate canoeing and kayaking river rescue skills on Grade III whitewater as a rescuer.

Performance criteria	Evidence/Judgement
<p>1.8 Understanding of incident management is demonstrated.</p> <p>Range: roles, responsibilities, sequence of rescue.</p>	<ul style="list-style-type: none"> • Candidate demonstrates the tying of any knots not demonstrated in previous tasks. • Describes the use and limitations of any 2 knots selected by the assessor. <p>In a discussion with the assessor, the candidate explains their decision making, techniques used, and management of the rescue scenarios. Discussion covering for example:</p> <ul style="list-style-type: none"> • Incident Management <ul style="list-style-type: none"> - The importance of role clarity & responsibilities within the group - The role of the leader in managing the safety of themselves, the group and the victim (e.g. establishes a plan, allocates roles, keeps overview) - The need to prioritize the response when developing a plan - The importance of communicating this plan to the group • Alternative methods of river crossing. • Rationale for using tag lines, concept of sinking and floating tag lines. • Advantages and disadvantages of belayed contact rescues and throw bag rescues. • The mechanical advantage gained from different techniques.
<p>1.7 Understanding of river crossing techniques is demonstrated.</p> <p>Range: mutual support, solo.</p>	
<p>2.4 Knots are tied and their use and limitations for river rescue are described.</p> <p>Range: figure-eight on a bight, re-threaded figure-eight, directional figure-eight, tape knot, double fisherman's, clove hitch, tension knot, bowline, Prussik knot, klemheist, classic, Italian hitch.</p>	
<p>3.6 Simulated people-based retrievals in Grade III whitewater are demonstrated.</p> <p>Range:</p> <p>victim – foot entrapment, stranded victim;</p> <p>rescue – tagline, throw bag, belayed contact rescue.</p>	
<p>3.8 Retrieving a canoe and a kayak from an entrapment using mechanical advantage is demonstrated.</p> <p>Range: entrapment – broach, vertical pin;</p> <p>rescue – 3:1 Z-drag using a Prussik brake, 4:1 pig rig using an Italian hitch on the main line, tied off.</p>	

Task 6: Demonstrate knowledge of river hydrology and hazards.

Notes to the Assessor:

1. To occur on Grade III white water.
2. Ideally this task is integrated into the river trip used to demonstrate rescue skills

Instruction to candidate:

During this task you are required to scout 2 different rapids, and identify:

- The approximate flow in cumecs, and how this is determined
- Features in the river
- Any hazards that are present or could be present
- Strategies to deal with those hazards

Element 1: Demonstrate knowledge of river rescue principles for canoeing and kayaking

Performance criteria	Evidence/Judgement
<p>1.1 Knowledge of river hydrology is demonstrated</p> <p>Range: upstream and downstream V's, rooster tail, laminar and helical flows, boils, eddy walls.</p>	<p>While scouting at least two different Grade III rapids, the candidate identifies to the assessor:</p> <ul style="list-style-type: none"> • Approximate cumec flow, and describes how this is determined. • Features that are present in the rapids and the hazards they represent. • Strategies to deal with at least two of the hazards.
<p>1.2 Potential hazards associated with canoeing and kayaking are identified.</p> <p>Range: strainers, sieves, man-made objects, undercuts, siphons, stoppers, weirs.</p>	<p>If present in the rapids scouted, the following features and hazards are identified.</p> <ul style="list-style-type: none"> • Features: <ul style="list-style-type: none"> - Upstream & downstream Vs - rooster tails, laminar & helical flows - boils - eddy walls. • Hazards: <ul style="list-style-type: none"> - strainers - sieves - man made objects - undercuts - siphons - stoppers - weirs
<p>1.3 Strategies to reduce risk and avoid hazards are described.</p>	<p>If the features and hazards listed are not encountered, then an accurate description of the feature and its effects on a boat and swimmer is required. In addition, strategies for dealing with at least two hazards are discussed, if not addressed earlier.</p>

Candidate Name _____ NSN _____

**Unit 20123 v2 Checklist
Demonstrate canoeing and kayaking river rescue skills on Grade III whitewater**

Assessor name: _____

Organisation name: _____

C/NYC

Comments

Throughout all tasks:

- Uses and acts upon communications signals – hand, paddle, whistle and voice

Task 1: Demonstrates knowledge of river rescue principles

- All questions in 20123 Assessment are completed in full.
- Answers match 20123 Model Answers and NZQA Level 4

Task 2: Demonstrate background knowledge required for river rescue

- Identifies and discusses the significance of safety features of their chosen craft
- Personal clothing and equipment is appropriate
- Candidate has appropriate personal safety gear
- Group gear is carried.
- Candidate justifies the selection of:
 - 1 item of clothing
 - 1 additional item of personal safety gear
 - 2 items of group safety gear
- Candidate identifies the commonly used river signals
- Identifies radio systems likely to be effective
- Demonstrates the use of the radio system carried.

Disadvantages

Advantages

Task 3: Demonstrate river crossing and self rescue skills on Grade III white water

- Mutual support river crossing
- Solo river crossing
- Self-rescue without equipment
- Self-rescue with equipment

Task 4: Demonstrate river rescue skills on Grade III white water

	1 Contact	2 Throwbag	3 Towline	4 Tagline	5 Foot	6 Strand	7 Boat
<ul style="list-style-type: none"> • Plan and communication system is established • Roles are allocated, incl. downstream rescuer • Demonstrates the correct use of river signals • Ties knots tidily and correctly 							
1 <ul style="list-style-type: none"> • Non-belayed contact rescue • Belayed contact rescue 							
2 <ul style="list-style-type: none"> • Packed throw bag rescue (15 metres) • Uncoiled throw bag rescue (10 metres) 							
3 <ul style="list-style-type: none"> • Releases towline while upside down. • Clips to a boat full of water and tows it to the side 							

4	<ul style="list-style-type: none"> Carries a rope across the river to set up a tag line Manages the positioning of the tag line 		
5	<ul style="list-style-type: none"> Foot entrapment victim is stabilised. Victim is extracted using an upstream pull Where appropriate, use of taglines, throw bagging, contact rescues are demonstrated. 		
6	<ul style="list-style-type: none"> Stranded victim is safely transported to the bank Where appropriate, use of taglines, throw bagging, contact rescues are demonstrated. 		
7	<ul style="list-style-type: none"> Attaches a rope to an entrapped boat Progresses through the following sequence: <ul style="list-style-type: none"> 10 boy scouts Vector pull 3:1 Z drag using a prussik brake 4:1 pig rig using a tied-off Italian hitch 	Broach	Vertical
Task 5: Justify techniques used and demonstrate knowledge of alternatives			
	<ul style="list-style-type: none"> Ties any knots not demonstrated in previous tasks Describes use and limitations of 2 knots selected by assessor 		
	<p>Explains their decision making, techniques used, and management of the rescue scenarios, e.g.:</p> <ul style="list-style-type: none"> Incident Management including roles, responsibilities, sequence of actions, communication Alternative methods of river crossing Rationale for using tag lines, sinking and floating tag lines Advantages and disadvantages of belayed contact rescues and throw bag rescues The mechanical advantage gained from different techniques 		
Task 6: Demonstrate knowledge of river hydrology and hazards.			
	<p>While scouting at least two different Grade III rapids, identifies:</p> <ul style="list-style-type: none"> Approximate cumec flow, describes how this is determined. Features present in the rapids and the hazards they represent Strategies to deal with at least two of the hazards 		
DATE	CANDIDATE'S SIGNATURE	ASSESSOR'S SIGNATURE	C/NYC
Comments:			



Written / Oral Questions

Demonstrate independent kayaking on Grade III whitewater

Unit Standard: 20123

Level: 4 Credit: 9 Version: 2

Published by Sfrito Jan 2007

Candidate Name

The purpose of these questions is to check that you are able to describe:

- The grading system of rivers
- Characteristics of river flow
- Health problems that can present while kayaking and how to avoid them
- Risk management strategies

Answer all questions in full. Answers may be written or oral

Questions meet the requirements for PCs 1.3, 1.4, 1.5, 1.6.

1. For each of the 6 river grades below: provide an example of a river or rapid, and estimate its normal flow in cumecs.

Grade 1	River: Flow:
Grade 2	River: Flow:
Grade 3	River: Flow:
Grade 4	River: Flow:
Grade 5	River: Flow:
Grade 6	River: Flow:

2. What are two limitations of the current grading system?

a.

b.

3. Identify at least four strategies that you can apply to reduce or avoid each of the following.

Risk	Strategies to reduce or avoid the risk
Drowning from a swim	1.
	2.
	3.
	4.
Foot entrapment	1.
	2.
	3.
	4.

4. What is the minimum approximate current speed required for a kayak to broach on a tree, rock or bridge pillar?

- a. Very slow walking speed (0.5 km/hour)
- b. 20 cumecs
- c. Running speed (8-12 km /hour)
- d. Walking speed (2-4 km/hour)
- e. Sprinting speed

5. How would the forces on a broached or wrapped kayak alter if the river flow doubled?

- a. Double
- b. Halve
- c. Increase exponentially
- d. Decrease exponentially
- e. None of the above

6. a) Give a brief definition and describe how you would avoid each of the following:
(provide two methods of avoiding for each condition)

Hypothermia	Definition:
	Avoided by: 1. 2.
Cold water immersion	Definition:
	Avoided by: 1. 2.

b) Describe two methods to avoid each of the following:

Condition:	Avoid by:
Cramps	1. 2.
Sunburn	1. 2.

Blisters	1. 2.
Dislocations	1. 2.
Head Injuries	1. 2.