

Teacher resource and guide

WAI SURVIVAL

**An aquatic education resource
for secondary schools**

**Drowning
Prevention
Auckland**

education • research • advocacy







Foreword

Aquatic education in, on and around the water really can, and does, save lives. Water safety is about the decisions made in and around water and being able to take the skills and thinking processes from a pool into open water where conditions are changeable and risks may not be apparent.

Youth (14 - 25 years) are the most at-risk age group. It is a priority of ours to educate before entering the age of self-discovery, where our youth tend to partake in riskier behaviour, and there is an increased likelihood of our youth being unsupervised by adults.

The NZ Curriculum (2007) states that all children should be taught basic aquatic skills by the end of year six. However, many New Zealand schools face challenges when it comes to the delivery of aquatic education as most children learn to swim in shallow water. Many Primary and Intermediate school pool facilities are only designed for shallow water aquatic experiences. However, the majority of drownings occur when victims are in open water and have insufficient skills/knowledge to cope.

This programme of developing water competencies for open water, entitled *Wai Survival*, and developed by WaterSafe Auckland Incorporated (WAI), now known as Drowning Prevention Auckland (DPA), recognises the importance of developing deep water confidence and safety strategies, skills and practices already learnt in shallow water environments.

It is hoped that by providing the teacher with an innovating and stimulating programme as well as presenting students with realistic and demanding aquatic challenges, future generations of New Zealand young people will be better prepared for the unexpected, and able to enjoy the wonderful opportunities that our aquatic environment offers.

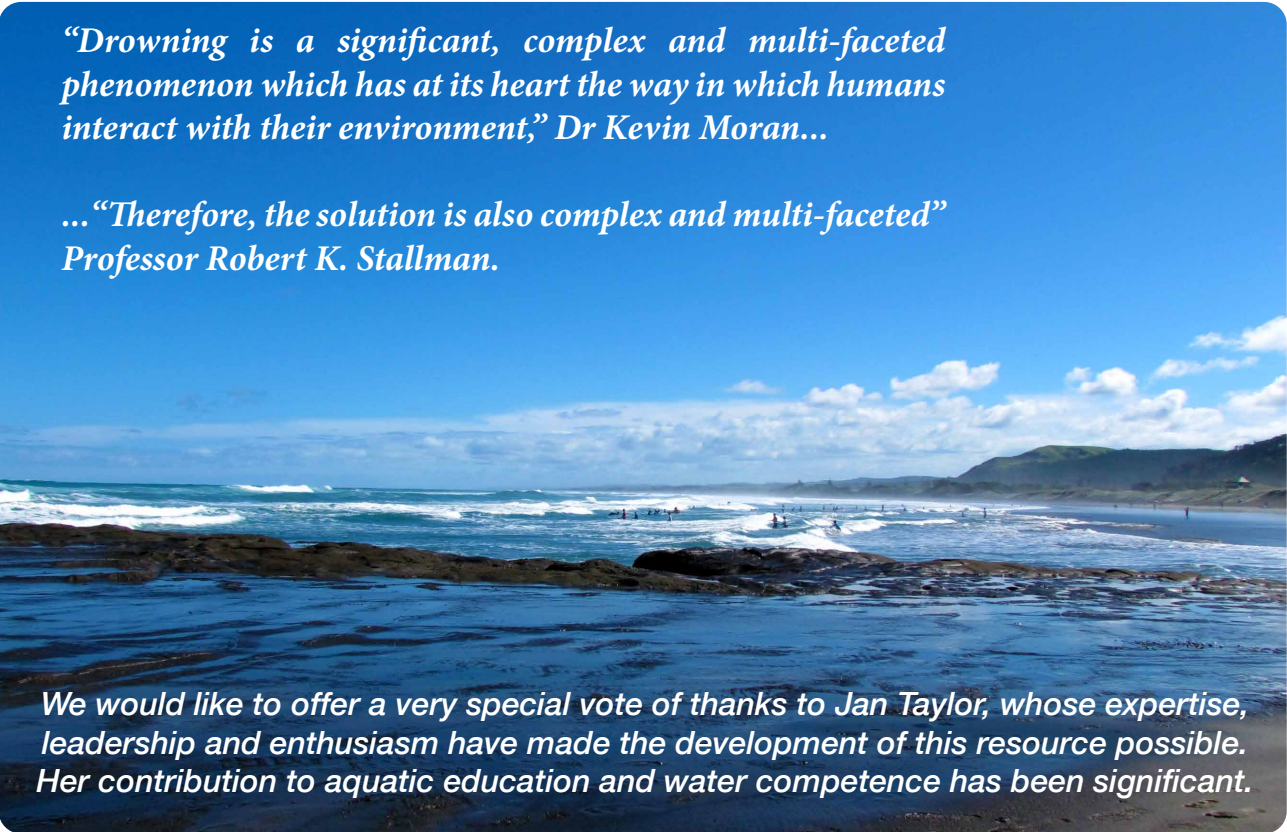
Denise Atkins

Chairperson

WaterSafe Auckland Inc. operating as Drowning Prevention Auckland

“Drowning is a significant, complex and multi-faceted phenomenon which has at its heart the way in which humans interact with their environment,” Dr Kevin Moran...

*...“Therefore, the solution is also complex and multi-faceted”
Professor Robert K. Stallman.*



We would like to offer a very special vote of thanks to Jan Taylor, whose expertise, leadership and enthusiasm have made the development of this resource possible. Her contribution to aquatic education and water competence has been significant.

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***Water is one of our great treasures. It is essential for life,
good for wellbeing but has the power to wipe out whole
communities in a flash. Let us respect it.***

Introduction

Evidence¹ shows that youth often put themselves at risk when playing around water, and continued high incidence of drowning for male youth² confirms this behaviour. This water safety resource, WAI Survival, supports secondary school teachers to help youth develop water competencies, make safer decisions and change their risky behaviour around water.

WAI Survival is structured to meet the requirements of the New Zealand Curriculum (2007), Health and Physical Education (HPE) at levels 4 and 5. It is a resource to assist in the development of water competencies designed to develop life skills, knowledge, safety attitudes and values in, on, under and near water. It can also be used for aquatic or community groups.

The aim of WAI Survival is to build a water safety consciousness that develops a platform for safer participation in the future. To meet the learning needs of the students', teachers need to identify the critical water safety skill deficits such as poor skill development, lack of knowledge of the nature and variability of natural water, and how to prevent panic when things go wrong.

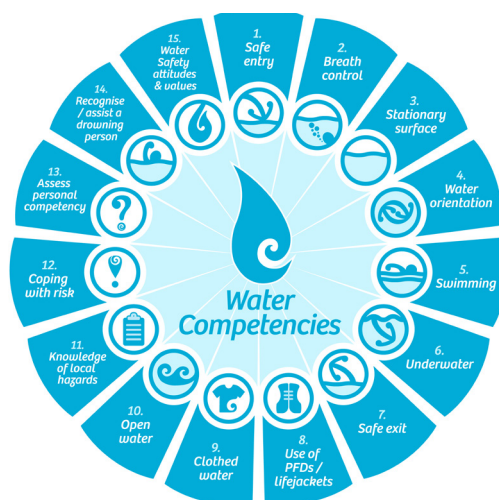
WAI Survival is designed to complement students in a traditional 'learn to swim programme', support those preparing for an aquatic EOTC experience or participating in an outdoor education programme.

The practical component supports the classroom learning, and are of equal importance in the development of water competence to prevent drowning. Ideally the two should be taught concurrently.



Introduction to Water Competencies

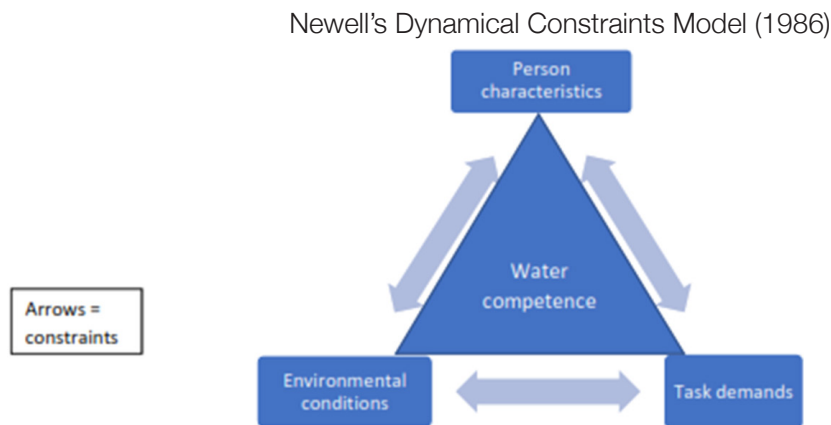
Water competence is the 'sum of all personal aquatic movements that help to prevent drowning as well as the associated water safety knowledge, attitudes values, judgement and behaviors that facilitate safety in, on and around water' ³. New evidence recommends 15 water competencies be taught to prevent drowning^{4 5}.



¹Moran. K., (2003). Youth Water Safety Survey. <http://www.watersafe.org.nz/research/youth/>

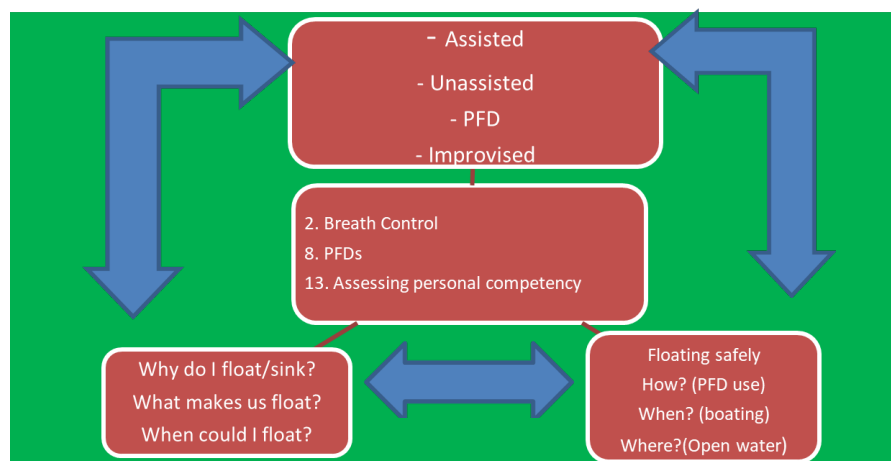
²Water Safety New Zealand. (2019). NZ Drowning Deaths 1 Jan 2014 – 31 Dec 2018. Drownbase™. Wellington.

These water competencies should not be viewed or taught in isolation as drowning prevention is complex and requires a holistic and integrated approach that integrate the water competencies to meet the demands placed upon us when in, on, or near water. These ever-changing demands are best viewed as a moving system that integrates personal characteristics (for example, male youth), task demands (such as playing in the surf), and environmental contexts (such as a surf beach or indoor pool). Based on Newell's Dynamic Constraints Model (1986)⁶, water competence is constantly constrained (shaped) by the interaction of these three factors.



When teaching water competence, water competencies are often interlinked and overlapping, as well as showing the association with the person, task and environment. An example teaching floating is shown below.

Example Teaching Water Competence – 3. Stationary Floating



All water competencies should be taught using developmentally appropriate practices. For example, open water competencies could be introduced in a shallow, then deep pool environment where rough water and waves can be simulated, before moving to open water environments.

³ Moran, K. (2013). Defining 'swim and survive' in the New Zealand drowning prevention context: A discussion document. Unpublished manuscript. Available at <http://www.watersafe.org.nz/educators/research-and-information/research-reference/>

⁴Stallman, R.K., Moran, K., Quan, L., & Langendorfer, S. (2017). From swimming skill to water competence: Towards a more inclusive drowning prevention future. *International Journal of Aquatic Research and Education*, 2(3), 1-35. Published online 7th October 2017, at: <http://scholarworks.bgsu.edu/ijare/vol10/iss2/3>

⁵Langendorfer, S.J., Moran, K., & Stallman, R.K. (2018). Guiding Principles: Applying Water Competence to Drowning Prevention," *International Journal of Aquatic Research and Education* 11(2), Article 22. Published online 30th October 2018, at: <https://scholarworks.bgsu.edu/cgi/viewcontent.cgi?article=1489&context=ijare>

⁶Newell, K. M. (1986). Constraints on the development of coordination. In M. Wade & H.T.A. Whiting (Eds.) *Motor development in children: Aspects of coordination and control*. (pp. 341-360). Dordrecht, Netherlands: Martinus Nijhoff.

Resource Structure

Section 1:

Guiding principles to meet the needs of students. It includes planning and how to use the resource, lifelong learning and curriculum links for both section 2 and 3.

Section 2:

Part 1: Competencies 1 to 10 - Teaching ideas for practical water safety and survival skills of oneself and others.

Part 2: Competencies 11 – 15 - Teaching ideas to develop a critical approach for safer aquatic participation, based on developing knowledge, understanding, skills, attitudes and values. It includes the teaching of critical thinking, decision making and building experience for a range of environments.

Section 3:

Resources to support teaching and student learning.





Section 1: Guiding Principles

Planning

WAI Survival can be used to:

- Develop ideas for planning units of work.
- Develop a module that precedes, or is part of, the learning experiences at a camp that includes water activities.
- As a HPE programme of work for students that develops their water competence – water safety and survival techniques, skills and knowledge.
- Raise awareness of aquatic first aid, aquatic volunteer opportunities, clubs or career pathways.
- Create practical skill, laminated resources for student use and exploration in the water.

Teachers may use the resource over a two stage cycle as it contains two themes:

- Stage 1 - safety of self in a range of controlled environments.
- Stage 2 - safety of others in a range of familiar and unfamiliar aquatic environments.

The practical learning develops water safety and survival skills for deep, open and moving water environments. The ideal sequence for student learning should be along the continuum from dry, shallow to deeper water activities, from still to moving water and then into controlled natural environments.

The classroom approach of learning critical thinking and taking critical action follows the fundamental concepts of:

- Planning and preparation for a water activity.
- Coping with the risk
- Assessing personal competency, especially in relation to the activity and environment
- Keeping safer by knowing and following safety guidelines to minimise risks.
- Looking after yourself and others.
- What if something goes wrong? – Emergency procedures.

- Critical thinking processes make sense of information by deconstructing and analysing it. New knowledge and understanding is created; this will in part depend on personal experience and the contexts it applies to.

A Harm Minimisation Approach

It would be unrealistic to claim that we are going to completely stop drowning or reduce risky behaviour such as our youth jumping off structures or bombing. We need to give students strategies that raise awareness, stimulate them to think of the risks and minimise the potential for harm.

Students could start to take responsibility for their own behaviour in the classroom with discussions of consequences, reflections, decision making together with scenario work. This learning can be reinforced with pool activities and the development of new skills such as the feet first dive used to look for obstacles, and to check the depth of water before jumping in and bombing into natural bodies of water.

This learning satisfies several aspects of the health learning area that pertain to the behavioural change model. This is a preventative model and focuses on lifestyle behaviours that impact on health. It is important that social factors and pressures are included in the discussions as these can influence an individual's behaviour.

Aquatic education and EOTC opportunities could start the transfer of aquatic skills to other activities that students may participate in after school or later in life. A range of activities is shown above.

- William Pike Challenge Award (Y9)
- Duke of Edinburgh's Hillary Award Scheme
- CPR/First Aid training
- Royal Life Saving Society awards e.g. Bronze Medallion
- NZ Underwater courses
- Pool Lifeguard Practising Certificate
- Coastguard courses such as Day Skippers Award
- Surf Life Saving club membership and surf lifeguard training
- Introducing students to new aquatic activities and local clubs.

opportunities or a career direction. Career education (or pathways education) can be integrated into curriculum work as it can.

- Increase student self-awareness and lead to an understanding of their interests and passions.
- Give students direction when opportunities in learning and work are explored.
- Help with decision making as students explore pathways available to them.

This information will help to highlight what attributes and skill sets students need for transitions to higher learning or the work place. Some career ideas associated with the aquatic industry are shown in **Resource 12: Aquatic career ideas on page 71.**

Suggested Learning Experiences – What are the needs of your students?

Teachers should survey their classes in order to gather basic information regarding their students' aquatic interests. Information gained will include an indication of activities that are popular in the school community and what bodies of water are used. This information will help in the selection of environmental contexts for study.

Curriculum Links with NZC (2007)

The following links are examples for planning purposes.

Links with Key Competencies

Participating and contributing

- Developing skills; building and sharing aquatic experiences; creating checklists/safety plans to help with current and future planning. Accept the challenges of scenarios to act out emergency procedures.
- Students develop interpersonal skills and an awareness of others.

Managing self

- Bringing gear; following aquatic rules; understanding the risks and local conditions; knowing personal limits and when to stay out of the water. Avoid mixing water activities with alcohol.
- Understand risks and learn how to look after yourself first when helping others.

Thinking

- Assessing conditions; making sound decisions around water; can we do this activity today and be safe?
- Assess the situation before helping a person who is in trouble. Critical reflections of group and peer activity.

Using language, texts and symbols

- Using graphic organisers; understanding and following aquatic signage.
- Recognising people in distress; learn effective communication and language in times of emergencies.

Relating to others

- Buddy communication; recognising and positively managing peer pressure.
- Buddies helping to keep each other safer; helping others in distress; learning the need for reassurance and the importance of staying calm during aquatic misadventures.

Links with the Underlying Concepts

Hauora/wellbeing

- Reflection on skill learning, participation and planning in a range of conditions, effects of poor planning on an individual's physical, mental, emotional, social and spiritual wellbeing.
- Creating and reflecting on the benefits of safer group participation in a range of conditions and environments and the impact on wellbeing. Describing how an emergency can affect wellbeing.

Attitudes and values

- Building responsible attitudes for the management of self and others, as well as gear, and build respect for the aquatic environment. Respect the potential power of water and know when to stay out.
- Value of assessment and perseverance in emergency situations.

Socio ecological perspective

- Accepting group decision making, cultural differences with recreational uses of water, together with society's expectations of good behaviour in aquatic environments, especially related to alcohol.
- Building links with lifeguards and rescue services.

Health Promotion

- Learning to take action to improve personal safety skills as a result of participation and planning.
- Taking action to improve safety skills for self and others, increase physical activity in water environments.

Learning Outcomes Level 4

- **Safety management** – Access and use information to take critical action for safer choices in a range of aquatic conditions and environments.
- **Positive attitudes** – Develop movement skills that help to manage challenging situations.
- **Movement skills** – Demonstrate consistency and control of movement in a range of aquatic conditions.
- **Community resources** – Investigate community resources that support wellbeing and their effectiveness.

Learning Outcomes Level 5

- **Safety management** – Investigate and practise safety procedures and strategies in aquatic risk situations when helping others.
- **Positive attitudes** – Develop skills and responsible attitudes in challenging aquatic situations when helping others.
- **Relationships** – Identify issues e.g. peer pressure associated with relationships and describe options to overcome these and achieve positive outcomes.
- **Interpersonal skills** – Demonstrate a range of interpersonal skills and practices that make participation safer for self and others.
- **Rights responsibilities and the law** – Identify and evaluate rules and bylaws associated with aquatic recreation.

Assessment ideas

Both the practical and classroom teaching and learning afford an opportunity for students to prepare for NCEA assessment. Assessment should be measured against identified learning intentions and these should reflect student needs.

For example, students could:

- Use a practical performance matrix/rubric, which is aligned to an NCEA format. The matrix could be used/amended to suit school needs, see [Resource 4: Water safety assessment matrix on page 57](#).
- Practise different forms of NCEA assessment techniques, such as oral presentations, the development of an e portfolio, multimedia presentations, written submissions and reflective logs.
- Reflect on their practical involvement and discuss the impact of this on their wellbeing.
- Demonstrate learning through group scenario work, see [Resource 9: Scenarios on page 63](#).
- Rate social responsibility while at camp or during a unit of work using Hellison's model.
- Demonstrate an understanding of hypothermia and how it affects the functioning of the body during prolonged periods of activity/inactivity in cold water. Use a magic square as a pre/post-test task.

Drowning Prevention

Teacher Guide Hypothermia: Magic Square Senior

A 16	B	C	D	Total
E	F	G	H	Total
I	J	K	L	Total
M	N	O	P	Total
Total	Total	Total	Total	Total

Instructions

- Match the statement in Column A with a word in Column B
- Write the number of the Column B word in its box
- All your answers are correct when the filled in numbers add up to 34 (columns, rows and diagonal)

Column A	Column B
A. What causes death when body temperature is below 30°C?	1. Unconsciousness
B. Does the body lose heat more quickly in air or water?	2. 37°C
C. What is normal core body temperature?	3. Water
D. Why is the greatest heat loss from the head and neck?	4. Gasp reflex
E. Falling into 10°C water - how long for hypothermia to be detected?	5. About an hour
F. How long does a cold shock response last for?	6. 35°C
G. Who is predisposed to hypothermia?	7. Loss of physical skills
H. How do you recover from cold shock?	8. Keep calm, control breathing
I. With severe hypothermia shivering stops - at what body temperature?	9. 32°C
J. What body temperature signals the onset of mild hypothermia?	10. Lasts 3-5 minutes
K. What is cold incapacitation?	11. Elderly and the very young
L. How do you slow the onset of hypothermia?	12. Wear clothes and keep still
M. What reflex is stimulated by cold shock?	13. No vaso constriction in scalp
N. Cold shock follows immersion in cold water - how cold?	14. 1°C
O. If core temperature fluctuates by as little as _____ medical problems result	15. below 15°C
P. What is the 3 rd stage of cold water immersion when wearing a lifejacket?	16. Heart failure

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Teacher Guide available from Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>

Section 2: Water Competencies

Part 1: Water Competencies 1 - 10 Practical Water Safety and Survival Competencies

A range of practical competency learning is suggested. Teachers should select those activities that best meet their students' learning needs. We suggest that goggles are not worn as it is very unlikely that people would be wearing goggles if they fall in to water or recreating in open water.

Some of these skills should be taught by following the sequence of dry, shallow water, deep water and moving water, while others like treading water have to be practised in deeper water. Initially the skills can be developed in isolation, however, to make the learning more authentic, scenario work could be based on the examples given ([Resource 9: Scenarios on page 63](#)) or taken from real life examples as illustrated in newspapers. When undertaking scenario work and a person is in a survival situation the following should be considered:

- When and how to call or signal for assistance?
- What flotation is there, personal flotation device (PFD) or improvised?
- What are the conditions – wind, temperature, swell and currents?
- What is the distance to safety – is it possible to swim there?
- What clothing is worn and how does it affect flotation and warmth?
- Time – how long might it be until rescued or safety is reached?

The most effective survival strategy depends on the conditions, and the water competence of those affected. Once a strategy has been decided upon it should be adhered to unless the conditions change. Then the strategy may need revising.

“Survival in a deep water emergency will depend on the ability to use survival knowledge, judgement, skill and fitness to cope with the situation”¹.

¹ The Royal Life Saving Society Australia, (2004). Swimming and Lifesaving 5th Edition Water Safety for all Australians. Elsevier Mosby p 48.

CHECKLIST – Stage 1



Safe entries



Breath control



Stationary surface competencies



Water orientation



Swimming / Propulsion



Underwater competencies



Safe exits



Use of PFDs / lifejackets



Clothed water competencies



Open water competencies

Learning outcomes and success criteria

should be developed and shared with the students each lesson, for example: Students will:

- Demonstrate basic water safety skills for personal survival dry, in shallow, deep and disturbed water. AO Level 4 2b.
- Improve personal survival skills while considering the conditions, time waiting for help to arrive, and distance from safety. AO Level 4 1c.
- Understand the difference between water safety and survival (energy saving) skills and why these skills are needed. AO Level 4 1c.

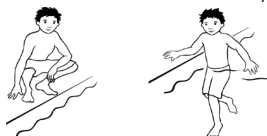



Success Criteria – ‘I can do the following skills correctly and with confidence, in still, deep and rough water.’

The following skill learning activities can be laminated for use in the water.

Safer entries and exits To be safer in the water with or without a lifejacket on, students should always check that they:

- Have safe entry and exit points before entering the water.
- Know the depth of the water and choose an appropriate entry for that depth.
- Never enter unknown water head first. When diving into known water do not dive deep or pull out of the dive early as that reduces head protection.

See <https://www.watersafe.org.nz/lessons/safe-entries-and-exits>


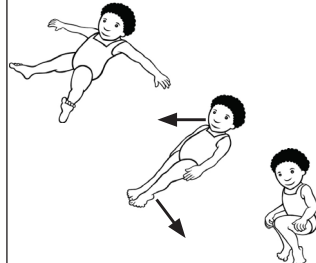

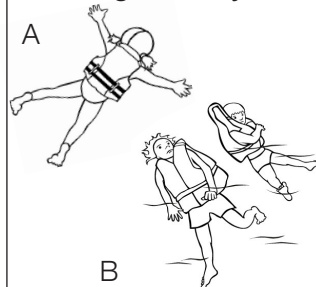
Skill	Student activity	Teaching points	Some questions to ask to develop thinking
Crouch and quarter turn – sit and turn entry 	<ol style="list-style-type: none"> 1. Sit on the poolside. 2. Place one hand on poolside, quarter turn and slide into the pool. 3. Practice in shallow then deep water. 	<ul style="list-style-type: none"> • All students place one hand on the same side so they do not hit heads when entering. • Ensure the students keep hold of the poolside until their feet touch the bottom. 	<ul style="list-style-type: none"> • In different environments what could safer entries and exits look like? <i>Wade in beach and river, wade in, and dolphin dive and glide through surf.</i>
Compact jump – deep water 	<ol style="list-style-type: none"> 1. Jump in both legs straight, both feet together arms across chest or place one hand across mouth and nose. 2. If wearing a lifejacket use both hands to hold onto the neck by the top of the zip. 	<ul style="list-style-type: none"> • Check for depth and hazards under water before jumping in. • Aim for little splash. • Break jump once under water by tucking. 	<ul style="list-style-type: none"> • What is the potential problem with jumping/diving into unknown water? <i>Unsure of depth and obstacles may be hidden in the water. This is a common cause of impact spinal injury.</i>
Stride Entry from low height to deep water <i>(to maintain vision and keep head above the water)</i> 	<ol style="list-style-type: none"> 1. Standing on side, step out with one leg. 2. Lean forward so that the rear leg is extended backwards and is slightly bent. 3. Hold arms forward and out – slightly bent. 4. On entering the water push down arms and scissor legs closed. 	<ul style="list-style-type: none"> • Step out for distance do not jump up. • Lean slightly forwards but do not fall in. • Do not scissor or push down with arms too early i.e. before entry into water. • Aim to keep face and head out of the water on entry. 	<ul style="list-style-type: none"> • Why is jumping in safer than diving in? <i>Jumping in is a feet first entry so it protects the head.</i> • When would you use a stride entry? <i>When rescuing someone in deep water and constant visual contact is needed.</i>
Exit – Push and hook both shallow and deep water 	<ol style="list-style-type: none"> 1. Hands on side, push up off pool floor onto hands. 2. Raise knee/shin onto side. 3. Climb out. 4. Practise in shallow and deep water. 	<ul style="list-style-type: none"> • When exiting deep water use your hands to guide and legs for propulsion. 	<ul style="list-style-type: none"> • When wearing a lifejacket why do we hold the lifejacket on entry? <i>So it does not rise up to cover the nose and mouth, or cause injury.</i>

Skill	Student activities	Teaching points
Feel cold shock	<ol style="list-style-type: none"> 1. Use ice cream containers filled with icy water (15° or less) for students to feel the effects of cold water shock. 2. Get them to put their hands in for up to 2 minutes. 3. Have them wiggle their fingers around and describe what they are feeling. 	<ul style="list-style-type: none"> • Breathing rate increases up to 66 breaths / minute. • Heart rate increases up to 130 beats/min. • Vasoconstriction of blood vessels. • Increased blood pressure. • This reflex lasts for up to 5 mins. • Decreased muscle ability for meaningful movement to self-rescue.

Flotation – Flotation is an important water safety and survival skill as it can help to relax a person and give rest and thinking time.


See <https://www.watersafe.org.nz/lessons/floating-lifejackets/>.



Skill	Student activity	Teaching points	Some questions to ask to develop thinking
Flotation  Float and stand 	<ol style="list-style-type: none"> 1. Back float and find feet. To stand: Lift head to get hips and knees to sink, bend knees and find feet. 2. Front float and find feet. To stand: lift head, push arms down, knees to chest then push down to put feet on pool floor. 3. Rotate from back to front while floating and vice versa. 4. Float making different shapes, e.g. letters X, T, Y, I, words or group patterns. 5. Try floating while wearing clothes. 	<ul style="list-style-type: none"> • Students struggling to float unassisted should use flotation aids, such as milk bottles (hold handles) or kick boards (hands resting on top). • Buddies may have to support (hands grip floater's shoulders with thumbs upper most). • Star fish (X) float is most stable as the arms and legs are wide and long. • Back float - if legs sink - bend at the knees, tummy up, arms extended past head and lift fingers out of water. • Vertical float - Use top up breathing i.e. quick shallow breathing in. If you feel you are sinking take a deeper breath. 	<ul style="list-style-type: none"> • If we lift our head what happens to our feet? <i>They sink.</i> • If we extend our arms above the head what happens to our feet? <i>They tend to stay up.</i> • Tuck float on front, blow out - what happens? <i>The body rotates so the back is at the surface then it slowly sinks.</i> • If your boat sank, what flotation gear could you cling onto? <i>A bucket or chilly bin.</i> • What is the problem of using inflatable toys or rushing in after a ball when there is an offshore wind? <i>The wind could blow the bed, ball and person into deeper water, away from the beach.</i> • What are the problems of floating in a poorly fitting lifejacket? <i>The jacket could ride up to cover the nose and mouth, be uncomfortable when swimming or get pulled off by the waves. Water circulates around the body so the jacket cannot keep the person warm.</i>
Improvised flotation 	<p>Float using improvised flotation aids – milk bottles, buckets, balls etc. experiment with the best method of support.</p>	<ul style="list-style-type: none"> • Hug the improvised aid close to the tummy or chest for the best results. • Hold the bucket upside down to trap air in it or hold against the tummy or chest. • Turn away from the rough water. 	
Floating in a lifejacket 	<ol style="list-style-type: none"> 1. Float on front, back and rotate while wearing a lifejacket. 2. Experience the flotation of a lifejacket when trying to duck dive or sit on the bottom of the pool. 3. Experience poorly fitted lifejackets, see diagram B. 	<ul style="list-style-type: none"> • To float horizontally the centre of gravity and centre of buoyancy (in chest) must be aligned vertically through the mid line of the body. 	

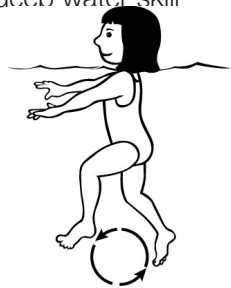


Sculling – is an important water safety skill. It is the movement of the forearm and hands to provide linear or rotational movement of the body.


Skill	Student activity	Teaching points	Some questions to ask to develop thinking
<p>Sculling – vertical and horizontal</p> <p>Sculling hand movement</p> <p>Hands 45° thumbs down</p> <p>← →</p> <p>Return thumbs up</p> <p>→ ←</p>	<ol style="list-style-type: none"> 1. Vertical float with hand scull and rotate 360° in both directions. 2. Float on back – all face shallow end – relax and scull to move up the pool – head first. 3. Reverse the scull action and move back feet first (river float preparation action). 	<ul style="list-style-type: none"> • Scull – move hands out to side and back to body to push and pull on the water. • To move head first, thumbs up when hands move towards the body and flatten out on return. • Remain streamlined head back, tummy up. 	<ul style="list-style-type: none"> • When would you use the feet first scull action? <i>When in a fast flowing river and trying to manoeuvre yourself out of the current.</i> • What does the leg cycling action do when you are sculling feet first? <i>Slows you down in moving water, or helps to keep you still in still water.</i>
<p>Improvised river float</p> 	<ol style="list-style-type: none"> 1. River float with hips down in a seated go-kart position (to increase drag) and then in a normal streamline position. 2. In a seated go-kart position, scull with hands. 3. Add cycling leg action, to become stationary in the pool. 4. In a seated go-kart position with leg action add arms – circling back to pull under water. This will move students' backwards, head first in still water. 	<ul style="list-style-type: none"> • Compare speed and ease of movement in the still water of being streamlined and in a sitting position. Which would be preferable in a flowing river? Why? • Angle yourself feet first at 45° to the current. You will be pushed down stream and across the current. • The arm movement will slow you down more when in a river. 	<ul style="list-style-type: none"> • What does the big arm back circle action do when you are caught in a river current? <i>Slows you down in moving water.</i> • When would you use a head first scull/float in a semi streamlined position? <i>When floating in a rip and signalling for lifeguards on the beach to help.</i> • How far do rip currents go? <i>The head of the rip is near the start of the waves.</i> • Why can't we swim against a rip? <i>Rips can travel up to 4 metres per second.</i> • Sculling is the basis of what sport? <i>Synchronised swimming.</i>



Treading water is a useful water safety skill for deep water as it gives a person time and vision while stationary to assess situations. It is not a survival skill as it does not conserve energy.


Skill	Student activities	Teaching points	Some questions to ask to develop thinking
Treading water - deep water skill 	<ol style="list-style-type: none"> 1. While vertical in the water – cycle legs or do a breaststroke leg action. 2. Sculling action of hands. 3. Extend to a timed activity, remove clothes or put on an overhead, sheltered water lifejacket then lie on back to tighten straps. 	<ul style="list-style-type: none"> • Try and use as little energy as possible. • Turn often to watch others in the pool. • Repeat in rough water. 	<ul style="list-style-type: none"> • What is the advantage of learning this skill in water safety? <i>Easy vision 360°, able to put on a lifejacket that goes over the head.</i> • Why is treading water not a survival skill? <i>The movement of the arms and legs uses energy and exposes the whole body to cold water.</i>

Assistance required signal - indicates the person is in distress and needs some help.

Skill	Student activity	Teaching points	Some questions to ask to develop thinking
Assistance required signal 	<ol style="list-style-type: none"> 1. From a floating position/ treading water position indicate that assistance is needed. 2. Stay calm and consider options e.g. stay still or swim to safety. 3. Signal while in HELP. position and maintain balance. 	<ul style="list-style-type: none"> • Raise one hand straight up into the air. • Do not wave. • Do not call out – this can raise panic levels. • Try to avoid calling this the HELP. signal as students may get muddled with the HELP. position. • This and shouting for help is an early indication that someone is in trouble. As the situation deteriorates the victim is unable to signal or call for help as they struggle to keep airways out of the water. • When in HELP. position try and retain balance by opening knees or moving head position. 	<ul style="list-style-type: none"> • When would you use the assistance required signal? <i>When help is needed, e.g. when caught in a rip current and there are people on the beach.</i> • Why signal for help and not shout? <i>Shouting raises the panic level, may not be heard.</i> • Why do we not wave? <i>Waving says "Hello!" or it looks as if they're playing around!</i>



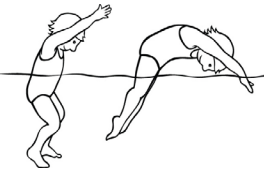
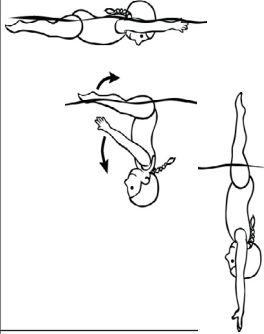
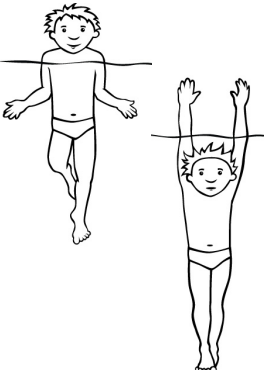
Survival Strokes is any stroke done when the arms do not leave the water during recovery. Swimming for survival (with or without a lifejacket on) may need many changes of direction, unexpected immersion, and not just swimming up and down a pool. Survival Strokes help conserve energy in the water. See **Survival Strokes Teacher Guide**, available from the Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/> See <https://www.watersafe.org.nz/lessons/propulsion/>

Skill	Student activity	Teaching points	Some questions to ask to develop thinking
Survival Strokes	<p>1. Try the following strokes:</p> <p>Survival Breaststroke - moving head first allows your eyes on the target. Use breaststroke kick and breaststroke pull with the arms.</p> <p>Survival Sidestroke - breaststroke or scissor kick, reach out and pull through with your arms on your side.</p> <p>Survival Dog Paddle - slow reaches out in front of you, to then pull the water past you.</p> <p>Survival Backstroke - protects your airway, using a breaststroke kick and pulling through with your arms under the water.</p>	<ul style="list-style-type: none"> Relax, keep calm, save energy, swim slowly Head up looking where you are going. Occasionally rest and float on back. Change strokes. Increase swim distance. 	<ul style="list-style-type: none"> What is a survival stroke? <i>Strokes where your hands are under the water, thus saving energy.</i> What are the advantages of survival swimming on your back? <i>Can see a hazard e.g. when kicking away from rocks or an oil slick.</i> What is the disadvantage of swimming on your back? <i>You cannot see where you are going.</i> What are the advantages of survival swimming on your front? <i>You can see where you are going.</i> What can you do if you get tired? <i>Roll over on to your back and float for a while.</i> Why is it difficult to determine distance in open water? <i>There are no markers for scale, so safety may be further away than first thought.</i>
<p>Zigzag and other formations swimming</p> 	<ol style="list-style-type: none"> Change stroke on each change of direction, front, back and swimming under water. Turn without touching the pool floor or sides. Some turns made under water. Retrieve an object and carry it to the next direction change, swim through a submerged hoop, vertical scull 360° at some point in journey. Swim on front in a figure of 8 formations. Rectangular swim and repeat swimming in the opposite direction on both front and back. Swim the above patterns using improvised flotation. Swim by yourself, in pairs or small groups depending on the size of the pool. 	<ul style="list-style-type: none"> Survival swimming could be coping with unexpected immersion e.g. when teacher blows three short blasts of a whistle. Vertical scull 360° in both directions. Hold objects close to chest while swimming on your back. Swim side stroke while pulling a floating object e.g. a loose lifejacket. 	

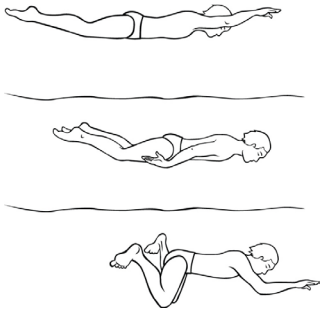
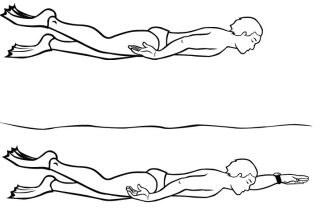


Surface dives – surface dives are a way to get under water when swimming in deep water and include dolphin, duck dives and feet first dives.

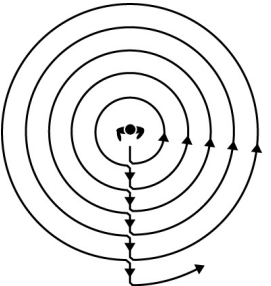
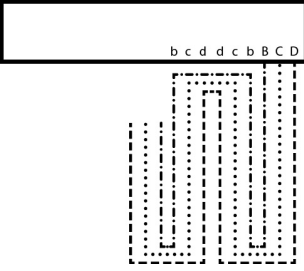
See <https://www.watersafe.org.nz/lessons/under-water-competencies/>

Skill	Student activities	Teaching points	Some questions to ask to develop thinking
Dolphin dives 	<ol style="list-style-type: none"> 1. Practise dolphin dives from standing. 2. Lead with extended arms and push off pool bottom over the water surface. 3. Enter fingers first followed by the head. 	<ul style="list-style-type: none"> • Practice doing a handstand in the water to get the diving movement. • Lead with the hands, entering fingers first followed by the head. • Push off the pool bottom with your feet. 	<ul style="list-style-type: none"> • When could dolphin dives be used to enhance safety at the beach? <i>When entering surf and diving through the waves, especially dumpsters.</i> • Why should a duck dive be performed only in deep clear water? <i>To protect the head – hazards can be avoided.</i>
Duck dives (in deep clear water) 	<ol style="list-style-type: none"> 1. Hand stands in shallow water. 2. Swimming in deeper water - start the duck dive as if doing a handstand. Both arms, head and chest move down, hips rise above shoulders, legs straight up in the air to push the body down. 3. Pull arms down to thigh. 4. Swim down to the pool bottom and push off to resurface. 5. Retrieve objects and return them to the side. 	<ul style="list-style-type: none"> • Practise handstands in shallow water for the initial arm, head, and upper body movement. • To submerge, hips and legs must go vertically. • Resurface before one gets out of breath. • On resurfacing lead with one arm extended if preparing for open water. 	<ul style="list-style-type: none"> • Why should a diver surface with an arm leading when in open water? <i>To protect the head in case of boats or other obstacles being above the resurfacing spot.</i> • Why should a feet first dive be performed in murky water? <i>When the bottom and underwater hazards cannot be seen it is best to lead with the feet, rather than the head. This protects the head and spine from potential injury.</i>
Feet first dives (deep murky water) 	<ol style="list-style-type: none"> 1. Tread water or vertical float. 2. Use an upward arm action to help get down. 3. Keep your toes pointed and legs together. 4. Feel for the bottom and push up to resurface. 	<ul style="list-style-type: none"> • Upward arm action with open hands pushes up against the water to submerge the person downwards. • Use this to check for hazards and water depth before jumping into murky water. • Never dive head first into unknown water. 	<ul style="list-style-type: none"> • When would it be useful to do a feet first dive? <i>To check for depth and/or hazards, before jumping in to deep, tidal or unknown water.</i>

Underwater swimming is an important water safety skill and should be practised only in clear water. Do not hyperventilate before underwater swimming. Heavy expiration and hyperventilation reduce the carbon dioxide (CO²) content in the blood. It is the build up of CO² that stimulates breathing rather than a reduction of oxygen, with a possible involuntary intake of breath underwater.

Skill	Student activities	Teaching points	Some questions to ask to develop thinking
<p>Underwater swimming</p>  <p>Modified breaststroke</p>	<ol style="list-style-type: none"> 1. Take a deep breath and push off the wall or dolphin dive to swim under water. 2. Use a modified breaststroke, arm pull past hips to thighs, glide and kick with arm recovery, short glide. 	<ul style="list-style-type: none"> • Do not hyperventilate before swimming. • Keep eyes open throughout. • Chin held towards chest to keep depth. • Build up distance gradually. • Surface before running out of breath. • If surfacing near a boat then lead with one arm raised/extended to protect the head. 	<ul style="list-style-type: none"> • Why can hyperventilation before this swimming cause blackout? <i>If a person hyperventilates then holds their breath and exercises, they may use up their oxygen supply before the carbon dioxide trigger point is reached. This could lead to blackout, unconsciousness and possible drowning.</i> • Why is this technique only used in clear water? <i>You need to see where you are going and any obstacles that may be in the way.</i> • How would you modify this technique if you found yourself in murky water? <i>Do not use arms to pull out as it exposes the head as it becomes the leading body part.</i> • If swimming in murky water what method of getting down under water would be best? <i>Using a feet first dive.</i> • If students suffer sore ears or sinus while swimming underwater what should they do? <i>They should return to a shallower depth or re-surface and wait a few minutes before attempting to equalise. If they continue to experience pain or discomfort, they should seek medical advice.</i>
<p>Fins</p> 	<ol style="list-style-type: none"> 1. If wearing fins use a freestyle leg kick with a breaststroke arm pull or keep arms by side. 2. Change direction often. 3. Increase underwater swimming experiences while wearing a lifejacket or a diver's weight belt. 4. Retrieve submerged objects and scenario work. 5. Snorkelling communication sign language could be practised with a buddy, first dry then underwater, Resource 8, page 56. 		

Searching for submerged objects

Skill	Student Activity	Teaching points	Some questions to ask to develop thinking
<p>Searching for retrieval – deep clear water</p> <p>Single search</p>  <p>Pair search</p> 	<ol style="list-style-type: none"> 1. Duck dive to perform an individual search of pool bottom with eyes open and leading arm extended. 2. Leading arm sweeps side to side while swimming in an enlarging circular formation. 3. Two or more people searching in murky water holding a rope, searching with their free hand. 4. Take objects to dry land – pool side. 5. Repeat using a partner and doing a grid search. 	<ul style="list-style-type: none"> • Hold breath. • Eyes open. • Body nearly horizontal for best results. • With eyes closed or wearing darkened goggles, leading arm to sweep over the pool bottom to locate objects. • Ensure the students have enough space to do this safely. • Swimmers should communicate with each other through agreed signals, such as rope tug, e.g. need to surface (1 tug), found it (2 tugs). The rope could be knotted at given distances along the rope to enable the searchers to expand the search area. 	<ul style="list-style-type: none"> • When could it be important to search for missing items? <i>When items are lost in murky water, e.g. car keys, flares, unconscious person.</i> • How would searchers search in shallow water? <i>Searchers could join up in a straight line and shuffle forwards. They would rely on their sense of touch in their feet to find missing items.</i> • How can searchers ensure continuity of a search when they have to come up frequently for air? <i>They should come up vertically then move back a bit so that their re-entry point overlaps their end of their search spot.</i> • What is the advantage for searchers to hold a rope? <i>It keeps the searchers connected in low visibility (safety in numbers) and is a simple communication tool.</i>
<p>Searching for retrieval in deep murky water</p>	<ol style="list-style-type: none"> 1. Feet first dive with eyes closed. 2. Search for and retrieve objects with eyes closed. 	<ul style="list-style-type: none"> • May used blackened goggles. • Leading arm sweeping pool floor. • Retrieve and carry heavy objects on chest while swimming on back. 	

Clear perspex items are hard to see on a pool floor. Golf balls are slightly easier to see and dive bricks are obvious.

Water safety survival circuit - To develop water competence

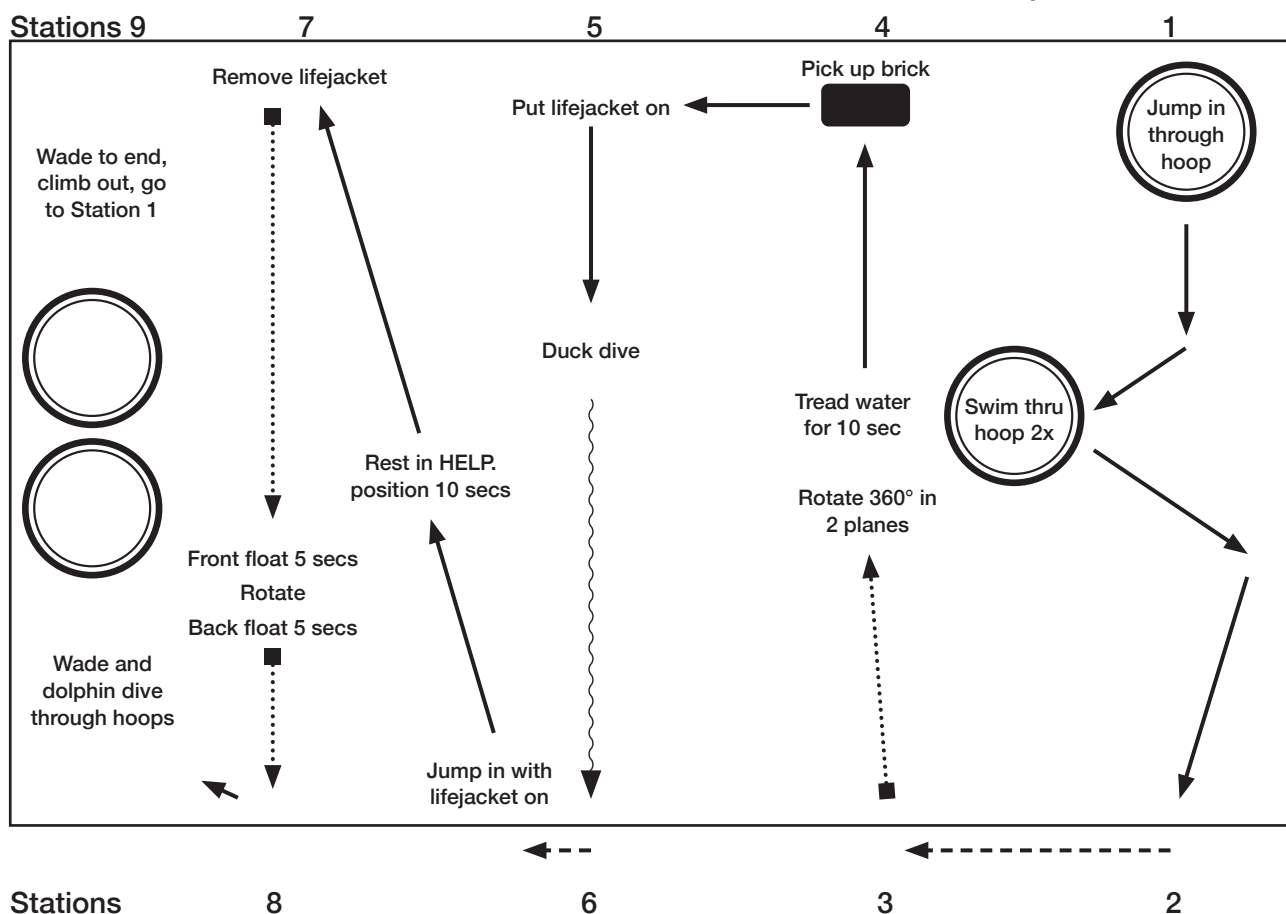
Gear needed – hoops, dive bricks, lifejackets, timer

Instructions

- Each student to have a buddy.
- Buddy 1 to compete the safety circuit first while buddy 2 helps by timing and directing from the pool side. Swap roles when circuit completed or when teacher indicates it is time to change.
- Swimmers be aware of others and avoid collisions by sighting and swimming around others.
- Divide swimmers, 1-2 to start circuit at every station except 9.

Shallow end

Deep end



Key

Hoops suspended in water

Survival swimming on front

Survival swimming on back

Underwater swimming



Walking on pool side



Lifejacket fitting - Working with a buddy to fit a lifejacket on dry land, in still, shallow water and in rough deep water.

See [Lifejacket Teacher Guide](https://www.watersafe.org.nz/education/teaching-learning-toolbox/), available from the Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>

See <https://www.watersafe.org.nz/lessons/floating-lifejackets/>

Skill	Student activity	Teaching points	Some questions to ask to develop thinking
Buddy up and fit a lifej. 	<ol style="list-style-type: none"> 1. Find and work with a buddy. 2. Put on a lifejacket - zip, clip and tighten the belts. 3. Lift shoulders of buddy's lifejacket to check fit. 4. Refit buddy's lifejacket if needed. 5. Re check. 	<ul style="list-style-type: none"> • Make sure all lifejackets are fitted correctly. When lifted at shoulder area by the buddy it shouldn't rise up to the nose or mouth area. • Buddy should be looking out for themselves and their buddy at all times. • Buddy always checks lifejacket is fitted correctly. When lifted at the shoulders - if it rises up it needs tightening. 	<ul style="list-style-type: none"> • Why should you always have a buddy when you are in a water environment? • Why wear a lifejacket? <i>It keeps you afloat, still and warm, and is bright so is easily seen.</i> • How effective would the lifejacket be if it was not fitted correctly? <i>Not very, it could come off or smother your mouth and nose.</i>
Fitting a front opening lifejacket dry as if in deep water 	<ol style="list-style-type: none"> 1. Lie on your front on an open lifejacket, grasp at shoulders. 2. Turn on to back and push an arm through an arm hole, try and keep head up and dry. 3. Hold the opposite side of the lifejacket and push the other arm through the other arm hole. 4. Remain on back to zip, clip and tighten the belt. 	<ul style="list-style-type: none"> • This can be done in the gym, poolside or classroom. • Open out and lie on the inside of the back of the lifejacket with head at head end. • Hold onto the lifejacket at all times especially in rough water. • Easiest to do preferred arm first. • A dry head is a warmer head. • Remain on back throughout. • If it is difficult to tighten the jacket; you may have to unclip the belts to do this. • Repeat in shallow water, deep and rough or moving water. 	<ul style="list-style-type: none"> • What is the difference between a lifejacket and a buoyancy vest? <i>The lifejacket has a collar and floats you higher in the water.</i> • Why should we learn to put a lifejacket on when we are already in the water? <i>A lot of people do not wear their lifejackets when in a boat. See Maritime Rule Part 91:Navigation Safety Rules.</i> • How could we help ourselves if we did not have a lifejacket but had a bucket for example? <i>Hug the bucket for flotation.</i> • Not all lifejackets are the same. If we had one that goes over the head how would we put it on in the water? <i>Put it over the head while treading water then lie on back to tighten the straps.</i>

Lifejackets are essential for some of the following skills such as HELP. and huddle. However for other activities their use is optional.



Wearing Clothes in the Water

See <https://www.watersafe.org.nz/lessons/wearing-clothes-in-the-water/>

Competencies 1 to 8 should all be practiced wearing clothes. Start with lighter clothing with shorter sleeves and legs. Move to bulkier and longer clothes as confidence and competence develop.

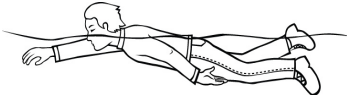


In an emergency, generally clothing should be kept on in open water as it provides warmth. The air trapped in clothing offers initial assistance to buoyancy. Clothing is weightless in the water, so shouldn't make floating more difficult. Competencies such as overarm swimming and exiting the water may be more difficult as the water in clothing will make the clothing heavier when it is lifted out of the water. Shoes such as sneakers or sports shoes may assist buoyancy.

Some clothing can be used to assist buoyancy by filling with air, this however, will reduce the insulation effect of clothing.

If clothing is restricting movement in life-threatening situations it can be removed and could even be used to assist flotation.



Clothed swim – wearing clothes, e.g. cotton vs synthetic; shorts and t-shirt; heavy clothes, e.g. hoodie and shoes; removal of clothes in calm and rough water.

Skill	Student Activities	Teaching Points	Some questions to ask to develop thinking
Clothed swimming 	<ol style="list-style-type: none"> 1. In pool wear shorts or light longs and long sleeved tee shirt. 2. Advance to heavy long clothes, shoes and socks. 3. Change stroke regularly, float for a set time and have sudden immersions while wearing clothes. 	<ul style="list-style-type: none"> • Swim a set distance while wearing clothes. • Compare and contrast freestyle swimming with survival swimming while swimming in clothes. • Be streamlined in the water to try and reduce some drag. 	<ul style="list-style-type: none"> • Why is it important to experience swimming in clothes? <i>Many drownings happen when people are not planning to go in to the water. They fall in so they are wearing ordinary clothes not togs.</i> • What are the best clothes to wear in the water? <i>Togs, rash shirt, wetsuit.</i> • Why is it more difficult to swim in clothes? <i>Increased drag and weight. Have a bucket of wet togs and another of wet jeans and hoodie. Students to compare weight of the buckets.</i> • Explain why is it best to swim survival strokes when wearing clothes. <i>Less energy is used and forward vision is easier.</i> • Why make flotation aids from clothes? <i>It may help to save energy and stay in the HELP. position. It may also help to reduce panic.</i> • What clothes are best to use as flotation? <i>Trousers that are lined as they do not leak so much air.</i> • What is the advantage of keeping clothes on versus removal? <i>Wearing clothes helps to slow the onset of hypothermia.</i> • Give some examples of inappropriate clothing to swim in. <i>Heavy denim.</i>
Removing clothes in water 	<p>Shorts/longs</p> <p>Roll down from waist over hips and remove one leg, then the other.</p> <p>T-shirt</p> <p>Roll up t-shirt from waist to armpit and remove 1 arm, take over the head and remove other arm.</p>	<ul style="list-style-type: none"> • Only remove heavy or loose clothing. Ordinary clothing may reduce cooling rate up to 50%⁷. • Remove lower clothes first to insulate chest for maximum time. • Tread water while removing clothes. • Remove clothing in rough conditions. 	
Using clothes as flotation aids 	<ol style="list-style-type: none"> 1. Remove trousers. 2. Knot each leg end. 3. While treading water, hold waist open with two hands, take behind head, and then quickly pull them back over your head to inflate them with air. 4. Close off the waist and hold by chest as an airbag. 	<ul style="list-style-type: none"> • Open out the waist with hands before filling with air. • Quickly trap the air once it has been collected. 	


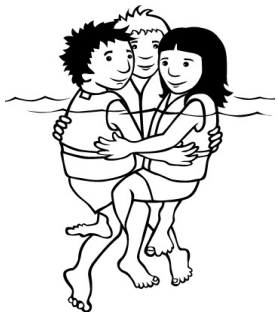
⁷ Swimming and Lifesaving. (2004). Water Safety for all Australians. Royal Life Saving Australia. p54




Cold water skills: HELP. position – a survival skill in deep, still and rough water, wearing a lifejacket or using improvised gear.

Huddle position – a group survival skill to maximise body heat. Both positions slow the onset of hypothermia. See **Cold Water Immersion and Hypothermia**, available from the Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.

See <https://watersafe.org.nz/lessons/cold-water-survival/>

Skill	Student activities	Teaching points	Some questions to ask to develop thinking
<p>HELP. position wearing a lifejacket or using improvised gear</p> 	<ol style="list-style-type: none"> 1. Practise on dry land, in water then in waves. 2. Tuck up to HELP. position, cross lower legs, spread knees out. 3. Cross arms over chest, keep armpits. 4. Keep balanced and still. 5. Signal for assistance, cover open armpit with free hand move head for balance. 	<ul style="list-style-type: none"> • Keep head as dry as possible- turn back to waves. • Cross lower legs and open out knees for balance. • Hug improvised flotation aids (rugby ball, large water bottle, bucket etc). • Have students wear clothes. 	<ul style="list-style-type: none"> • What happens to motor skills during cold shock experiences? <i>Fine motor skills decrease immediately, swimming skills deteriorate more slowly.</i> • What does HELP. stand for? <i>Heat Escape Lessening Position.</i> • Where do we lose a lot of heat? <i>Head, chest, arm pits and groin.</i> • What is hypothermia? <i>Lowering of core body temperature.</i> • Why do we have to protect ourselves from it? <i>It can be fatal and lead to drowning.</i> • What is a bad HELP. position? <i>Head in water, open arm pits, moving around.</i> • Why is a huddle effective? <i>It limits the cold water movement around the group. Everyone is still with bodies touching - everyone is helped to stay warm. Talking to others helps to reassure and keep spirits high.</i> • What is a bad huddle? <i>One with unoccupied water in the middle, legs moving, and members lying back loosely linked up.</i> • Students could summarise the key points of how to survive a cold water immersion. <i>Wear PFD, get on top of an upturned boat, keep head out of water, keep still in HELP. or huddle position, stay calm.</i>
<p>Huddle</p> 	<ol style="list-style-type: none"> 1. Huddle together with maximum body (chest) contact with minimum water in the middle. 2. Stay still and talk to each other. 3. Move colder people from the outside in to the middle. 4. Repeat with one group making rough water. 	<ul style="list-style-type: none"> • Huddle reduces body cooling as less of body is exposed to cold water. • Arms around waist not shoulders, arm pits closed not open for decreased heat loss. • Head out of water. • Legs intertwined – staying still. • Reassure each other. • Explain about hypothermia when in a huddle. Get students to re-explain to group. • Remove lifejackets at end to show warmth gained from group. • Another useful practice for students to feel the difference in temperature is to break the huddle and float on back in wide stance (X shape). 	

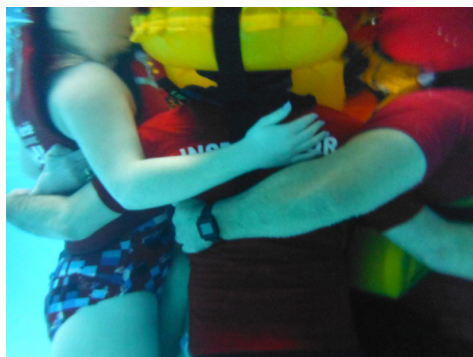


<p>Huddle scenarios</p> 	<ol style="list-style-type: none"> 1. Stay in huddle and kick away from hazard, oil on water or rocks. 2. Signal to a helicopter. 3. Demonstrate the importance of reassurance – talk about family. 4. Repeat in rough water. 	<ul style="list-style-type: none"> • Swap without breaking up the huddle. 	<ul style="list-style-type: none"> • Why does movement in cold water accelerate hypothermia? <i>Movement ensures that the warm blood in the chest is redistributed to the cold limb muscles so it will return to the heart cooler.</i>
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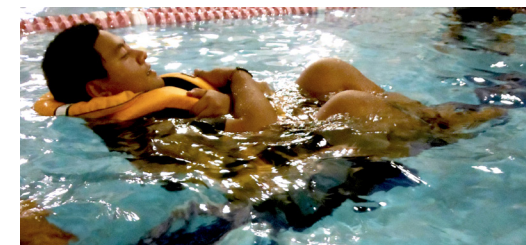
Above: Example of GOOD Huddle: tight circle with strongly linked arms; feet not drifting out; mainly well-fitting lifejackets.

Below: Example of GOOD Huddle because of the close contact and strong linking of arms with closed armpits therefore reducing heat loss.



Above: Example of POOR Huddle: legs up in HELP position making it difficult to form tight circle, lots of water surrounding the individuals leading to increased heat loss.

Below: Example of POOR huddle Example of POOR Huddle: ill-fitting lifejackets; arms poorly linked exposing armpits; loose circle with too much water surrounding the individuals, leading to increased heat loss.





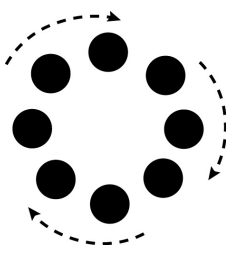
Above: Example of a GOOD HELP position. Well fitting lifejacket, stable in the water, legs curled up as much as possible reducing the body's exposure to cold water.



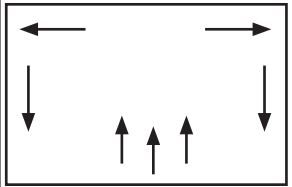
Transferring skills from still to rough and moving water – preparation for swimming in natural water.

See [Making Water Move](https://www.watersafe.org.nz/education/teaching-learning-toolbox/), available from the Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.

See <https://www.watersafe.org.nz/lessons/open-water/>.

Skill	Student activity	Teaching points	Some questions to ask to develop thinking
<p>Creating moving water</p> <p>Waves</p>  <p>Rough water/currents</p>  <p>Whirlpools and Rips</p> 	<p>Creating Waves – half the class in two rows facing each other about 2-3 metres apart. Create a wave action using flutter boards (kick boards). Waves meet in the middle creating choppy rough water. The rest of the class now take it in turns to move through the rough water.</p> <p>Whirlpools and Rips – Make a circle (or spread out in a lazy river), face the same direction and rotate with increasing speed, running in a circle. The class then stops and holds still or tries to swim against it - the water will continue to move in the same direction.</p> <p>Make two whirlpools moving in opposite directions to create a rip current in the middle going up the pool.</p>	<ul style="list-style-type: none"> This is to experience the effect of moving water. Do not cheat by swimming through under the water or with the head down and without any breaths. Swim with the head above the water, trying the different strokes each time. Work in a corner area of the pool. All students must keep their feet on the pool floor when running. Watch for rotating water before issuing the next command. Experience the force of the whirlpool; on command all stop and feel power of water. Other actions include turn and walk, float or swim against the current. 	<ul style="list-style-type: none"> Why is working in moving water important for water safety? <i>It starts the transfer from the still water of a pool to the moving water of the sea or river. Once students have experienced moving water it may help them to stay calm if they get into trouble in natural water.</i> What happens to swimming skills in moving water? <i>We swim slower, for less time and breathing is harder so we get tired quickly.</i> Could you swim against a rip? <i>No, not in a fast flowing rip. Even the best swimmers cannot do it as some rips may travel up to 4 metres per second. Michael Phelps can swim at about 2m per second⁴.</i>



⁴ Davison I., (2012) deadly Rips: How to Beat Them. New Zealand Herald 21.1.2012

<p>Improvised escape from a rip current</p>  <p>Beach</p>	<ol style="list-style-type: none"> 1. Stand close to the middle on one side of the pool (by the beach). 2. In threes float on back and scull head first across the width, slow down as approach the wall (reaching the head of the rip). 3. Swim parallel to the pool side to an end, when close turn to swim back to the other, beach side. <ul style="list-style-type: none"> • During the sculling stop and raise one hand, then continue across the width. • As the head of the rip is reached momentum lessens. • Swim parallel to the beach into the waves. This can be on the front. • Do not cut back to the opposite side too early as the feeder current will take the swimmers back into the rip.
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Boat skills – your local community pool or swim school may have a boat that your school can use. Parents may be able to lend this type of equipment for a lesson. This could be a challenge by choice activity.

See **Boat Safety Circuit Teacher Guide**, available from the Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.

Skill	Student activity	Teaching points	Some questions to ask to develop thinking
Boat skills 	<ol style="list-style-type: none"> 1. Wear a well fitted lifejacket. 2. Working in twos or threes. Enter the boat from pool side keeping it stable. 3. Push off from side, roll out and capsize boat. 4. Explore air space under boat. 5. Return boat to upright. 6. Re-enter boat. 7. Students to change position in the boat without destabilising it. 8. Return to base. 9. Explore vulnerability of one person being alone/boat over loaded boat in calm and rough water. 	<ul style="list-style-type: none"> • Keep centre of gravity low at all times when in boat, especially when getting in and changing positions. • Capsize boat by rolling out by holding the opposite side or the attached rope. • Find rope and throw it over boat for partner to upright boat by having 2 feet on boat's side and pulling on rope. • Strongest person enters first – may need assistance from buddies. • Team work to get all back into boat • Stability is enhanced when keeping centre of gravity low at all times. • Most stable position to pull a victim over may be the stern. However the sides are often used. 	<ul style="list-style-type: none"> • If you could not upright the boat how you best protect yourself from hypothermia? <i>Get on top of it.</i> • What is the best way of getting a victim back into the boat? <i>The quickest way possible.</i> • Why is it important that the area under a capsized boat can be explored? <i>There may be someone trapped in the cabin or the flares may be stored there.</i> • Why do we not stand up in small boats? <i>The boat would be more unstable and could capsize.</i> • What is the most stable place in the inflatable boat to pull a person in from? <i>Over the stern as the bow stern length is greater than that from gunnel to gunnel (side to side).</i> • Why do you need two forms of communication? <i>As a back up if one does not work, e.g. no cell phone coverage. .</i> • How do you protect a cell phone? <i>Have it in a waterproof bag.</i> • How do you protect your car keys? <i>Put them in a plastic bottle and screw the lid on tightly.</i>
Rolling out of a boat 	<ol style="list-style-type: none"> 1. Working in twos or threes – never go out in a boat alone. 2. Sit on the gunnel holding the neck of the lifejacket. 3. Roll backwards into the water. 	<ul style="list-style-type: none"> • Sit with buddy on same side of boat to destabilise it. • Roll out with buddy holding onto the boat or rope attached to opposite gunnel if you want to capsize it. 	



River crossing – using the mutual support method allows the group to cross together, maximising the safety of self and others during this activity. This can be taught dry, in a pool or in the bush while at camp. Often the best place to cross is at the widest part of the river/stream where the currents are less strong. See <https://www.mountainsafety.org.nz/resources/toolbox/river-safety/>.

Skill	Student Activities	Teaching Points	Some questions to ask to develop thinking
<p>River crossing using the mutual support system</p> 	<ol style="list-style-type: none"> 1. Ensure there is a safe entry and exit point and the river is not running too fast. 2. Stand in line with arms across the back of both adjacent partners holding onto their clothes or the far back pack strap. 3. Shuffle forwards in unison, do not rush. 4. Stay linked until you are out of the water or on dry land. 	<ul style="list-style-type: none"> • If wearing a pack release the chest strap. • Depth of water no deeper than thigh level for a slow moving river, knee level if river is flowing faster. • Cross at an angle to the current. • Tallest and strongest upstream with a walking pole if possible. • Wear boots as you may have to shuffle through mud and rocks. • The best point to cross is when the river is at its widest and away from faster moving bends. • If in doubt do not cross, have an escape route. 	<ul style="list-style-type: none"> • Why is the mutual support system safer for self and others? <i>Everyone is supporting each other so if one person falls there could be two others already supporting them.</i> • When should we not cross the river? <i>When it is too deep, flowing too fast and the water is discoloured, or when there are no easy entry and exit points.</i> • Why is it important to check there is a safe run out below the crossing point? <i>If a person falls they do not want to get caught in rapids, waterfalls, eddies, strainers or snags.</i> • Why does a pack float? <i>The waterproof liner traps the air inside e.g. in the billies and some other objects will float when dry.</i>
<p>Pack Float</p> 	<ol style="list-style-type: none"> 1. Before entering the river repack your pack with billies upside down and at the top. 2. If you end up in the water use your pack as a buoyancy aid and float on top of it. 3. On reaching your exit point or shallow water, stand up, release waist strap, take off the upstream strap and rotate the pack to your front and remove other strap. 	<ul style="list-style-type: none"> • Float feet first, keep waist strap tight. • Increase resistance by sitting in the water • Kick or cycle legs and circle arms backwards. • Float at an angle to the current. • Aim for shallow, slow moving water or an exit point. 	

Section 2: Water Competencies

Part 2: Water Competencies 11 - 15 Developing Knowledge and Critical Thinking

Teachers should select those activities that best meet their students learning needs. Classroom lessons should support the practical learning, ideally running concurrently with the skill learning. They can be timetabled as part of Health or PE time.

A range of possible learning experiences is suggested. Some activities are complemented with Teacher Guides, others by video clips ([Resource 11: Useful video clips on page 70](#)).

Stage 1 – needs to include core knowledge/critical thinking required.

CHECKLIST – Stage 2

Recap of Group 1 competencies



Competency 11
Knowledge of local hazards



Competency 12
Coping with risk



Competency 13
Assessing personal competency



Competency 14
Recognise / assist a drowning person



Competency 15
Water safety attitudes and values



Knowledge of local hazards – Suggested learning activities

Using the information gained from the needs analysis teachers will be able to identify the range of venues that their students frequent. This may include local bodies of water as well as holiday locations.

These venues can be grouped according to their common characteristics, for example beaches can be classified as high energy beaches, calm water beaches, tidal mud flat beaches, estuarine beaches, sandy or rocky. The common factors are the salt water, tides and waves but each beach may have a very different land form which can affect the potential hazards at each location. Calm water beaches may be adversely affected by certain winds, such as east coast beaches, e.g. Browns Bay, Auckland. This has experienced several drownings, all after prolonged, strong easterly winds.

Lakes, river water and river dynamics have their own characteristics. This local knowledge and experience is of prime importance in knowing the potential dangers of each venue.

A range of learning around recognising the hazards and knowing the dangers is suggested and this can be linked to specific environments. Teachers should select those activities that best meet their students learning needs.

COMPETENCY 11 - Knowledge of local hazards

- Still versus moving water - tides, currents, swells, waves, rapids, eddies, waterfalls
- Beaches: rips, holes
- Rivers/creeks: strainers, obstacles, waterholes
- Lakes; drop off zones
- Weather & winds
- Hypothermia
- Fresh, salt and aerated water
- Deep and shallow water
- Understanding signage
- Other people and activities, rescue and supervision
- Alcohol
- Sea creatures
- Pollution



Hunua Falls

Knowing the hazards and potential dangers – Suggested teaching activities

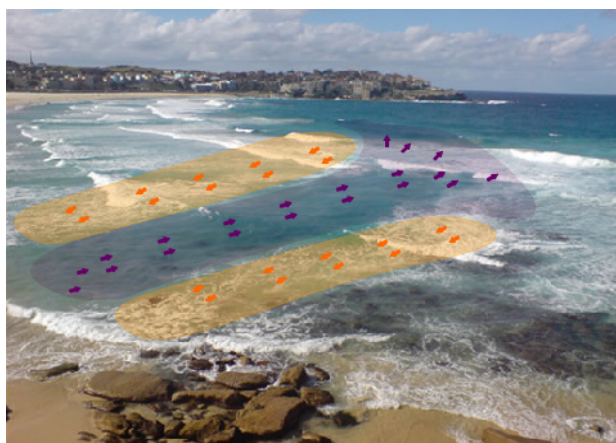
- Research different types of beaches in New Zealand and those from the countries represented by the class members. Research the structure of a local river from the source to estuary. Identify hazards associated with these environments.
- In groups, compare/contrast swimming pool water with beach and / or river water, or fresh, salty and aerated water include potential hazards. Or compare/contrast local beach types, e.g. west coast beaches, e.g. Piha with East coast beaches, e.g. Takapuna with mudflat beaches of the Manukau or Waitemata Harbours. Create a master copy of beach /river characteristics and hazards and by discussing and combining ideas from all groups. If in a year 7-13 school present this to the junior classes.
- Investigate the literacy of tides: times and tidal range variations in a range of New Zealand locations.

Table showing the tidal range and the frequency of spring and neap tides which vary between the two coasts of New Zealand, (source: Land Information New Zealand).

	Spring range (m)	Neap range (m)	Spring/Neap cycle
West Coast	3.5 – 4.0	1.5 – 2.0	Fortnightly
East Coast	1.0 – 2.0	0.5 – 1.5	Monthly



- Identify the implications of the tidal activity for recreational participation e.g. use of Manukau Harbour boat ramps, jumping in off wharves in tidal areas, setting nets, safer times/tides for swimming or rock fishing. See [Language of Tides Teacher Guide](#), available from Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.
- Using a variety of resources students could research and learn to recognise the different types of waves and a rip current. See [Rip Current and Language of Waves Teacher Guides](#), available from the Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>, and rip videos referenced in [Resource 11: Useful video clips on page 70](#). River features such as eddies, rapids, strainers and their associated dangers could be studied.



Above: Dynamics of a rip. Courtesy of Rob Brander



Above: Rip current at North Piha. Courtesy of Surf Life Saving NZ.

- After research or watching a hypothermia video clip, students can discuss, plan and create pamphlets or fact sheets on the dangers of hypothermia in aquatic emergencies. A similar task may involve the effect of alcohol on aquatic participation. See [Cold Water Immersion and Hypothermia and Alcohol and Water Safety Teacher Guides](#), available from Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.
- Students could write an article for a local community paper on the potential hazards and dangers (to others during aquatic participation) at a local aquatic venue of watercraft, overcrowding in swimming pools, jumping off wharfs or bridges and the need for supervision for children. Water safety tips could be included.
- Understanding signage - students look at the language of signs and could match sign messages with non-identified signs. See [Water Safety Signage Teacher Guide](#), available from Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.
- Invite the school nurse to talk about first aid at the beach e.g. the drowning episode and the importance of CPR, jelly fish stings and their treatment. See [Resource 6: CPR on page 60](#) and [Resource 7: Aquatic First Aid on page 61](#).
- Visit your local council website to investigate the procedures for swimming in the sea after a storm, heavy rain or after a sewerage spill, storm water drains, beach water quality testing, dog, liquor and firework regulations.
- Discuss this quote from Stallman⁸, "Swimming is learned indoors while drowning happens primarily outdoors".

⁸ Stallman. R., Junge. M., Blixt. T., (2008). The teaching of Swimming Based on a Model Derived from the Causes of Drowning. International Journal of Aquatic Research and Education. Volume 2. Issue 4. November 2008, p383-387.



Coping with risk – Suggested teaching activities

- In small groups students could discuss what water means to them and to their culture. A variety of cultural icons and practices around water could be shared with the rest of the class, e.g. Maori rahui, Tangaroa, Waka Ama, Pacific Island fishing customs, Muslim women's burqini or burkini. Each group could report back to the class.
- Students could explore different aquatic activities, then record and justify the gear needed for them. For example 1. Boogie boarding – board, wrist strap and fins, and explain why each is important. 2. Communication gear; how to keep a cell phone dry at all times during an aquatic experience; what to do with car keys when you are kayaking. 3. Essential gear for boating. What gear could be used in an emergency? Consider planned and improvised gear.
- Brainstorm what details should be known about the group members who are going to participate in a group experience in, on or near water. Then students could design an aquatics intention form that could be left with family members or neighbours while they are away having their aquatic experience. It should include the following information:
 - Date
 - Leaving and expected returning times
 - Destination and activity
 - Swimming ability
 - Number of people and phone numbers
 - Cell phone number
 - Car number plate
 - What gear should be taken
 - Weather/swell reports
 - Description of the craft/boat
- Students could brainstorm and create a Yellow Pages list of community agencies, e.g. aquatic providers such as kayak hire, lifejacket hire, surf clubs and patrolled beaches, sea scouts, boat ramps, local weather and swell forecasts, URLs for tide information, aquatic first aid information. This information could be collated for display.
- Students could plan a trip to a local facility, beach or for a specific aquatic activity for

COMPETENCY 12 - Coping with risk

- Planning for an aquatic experience
- Knowing the group/experience
- Gear and equipment
- Risk Assessment and Supervision Plan - RAS

a class, family or a group of peers. Start by creating a checklist with a time line. Or complete a Venn diagram comparing the planning for a visit to two different locations, such as a pool and beach/river.

- Students could discuss the hazards and risks associated with an aquatic activity and complete a Risk Assessment process. See Resource 5: Risk Assessment and Supervision – A Group Planning Exercise to facilitate this process. See Overarching Risk Management Guidance (GPGs/Overarching-Managing-Risk-Guidance) for an explanation of current risk management practice. Students can compare their plan with good practice examples for water activities such as Inland Waterway Swimming Planning template (good-practice/good-practice-guidelines/ or GPG-Inland-Waterway-Swimming) to help them focus on significant risks in the activity they have planned for. If planning for an EOTC experience, it is also a good idea to evaluate the effectiveness of the plan after the trip and note any learning for next time.
- Students can compare their plan with good practice examples for water activities such as Inland Waterway Swimming Planning template (good-practice/good-practice-guidelines/ or GPG-Inland-Waterway-Swimming) planning for an EOTC experience, it is also a good idea to evaluate the effectiveness of the plan after the trip and note any learning for next time.
- Students could analyse newspaper reports of activities that went wrong and identify gaps in the planning and what they would do to rectify the situation, e.g. the conditions, weather,



the activity and personal skill level, gear and parental influence.

Understanding Panic

Understanding panic is important for water safety survival situations but also important for teaching and learning. When people panic, the cerebellum and brain stem take over from the cortex, thoughts and learning cease, and instinctive behaviour takes over. If this happens when a 'person gets into trouble' their heart rate, blood pressure and breathing rates rise as the body prepares itself for action – fight or flight. This stress will decrease the ability to make decisions and may reduce survival time.

If panic happens in an open water survival situation such as being caught in a rip, the person loses the ability to think rationally and make decisions. They see that they are taken away from the beach into deeper water. Instinctively the person tries to swim against the rip as this appears to be the quickest way back to the beach. This is not what students are taught to do. Recognising being in panic and knowing what to do is important. The STAR system (see blue box) can help.

In experiential learning, students do not learn if they are operating in their panic zone. Senninger's (2000) Learning Zone Model (see diagram below) is useful in structuring practical aquatic lessons so that students do not become panicked. For each student the lines between zones can be quite different for a given situation. Further, some students may learn best when crossing the edge of panic zone whereas others learn best at the edges of comfort zone, but staying within it.

Teachers need to be cognisant of their students' confidence and avoid panic situations in the teaching and learning process. Panic can put some students' progress backwards, and those students will need to be taken back into their comfort zone with a lot of reassurance before they regain confidence to begin learning again.

Role plays, wet or dry, that involve panic

- Caught in a rip.
- Capsized boat and not wearing a lifejacket.
- Falling into very deep cold water.
- Getting blown out away from the beach while hanging on to a ball.
- Coping with an incident during informal water play.

Lost at sea?

Use the **STAR** system:

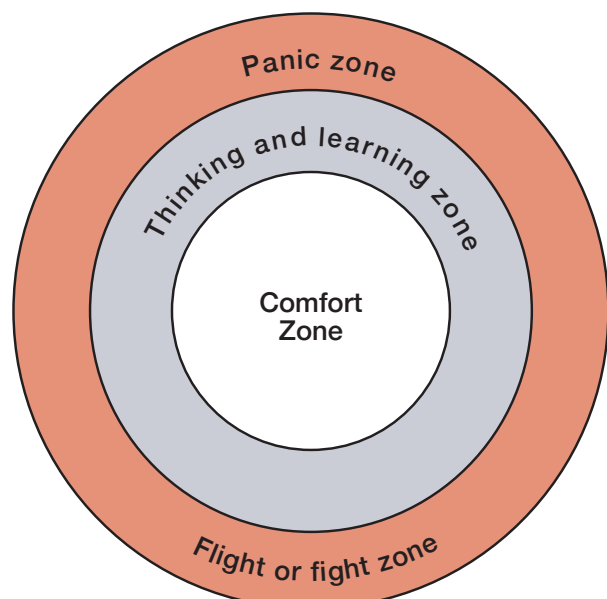
Stop and float in HELP. position, remain calm.

Think. Look around you. Listen and brainstorm options.

Assess. Evaluate the options and their potential consequences.

Respond. Take the best alternative.

The Learning Zone Model - experiential learning happens between comfort and panic zones. Adapted from Senninger (2000)





Emergency procedures – Suggested learning experiences

Even well planned trips can go wrong. The unexpected may happen, causing accidental injury or putting pressure on participants. Knowing what to do in these situations is paramount. Successful outcomes are a result of applying knowledge and skills in a calm and responsible way, whether it be helping you to get out of trouble or helping others.

Students need to learn and practise procedures that are appropriate to their skill level, so they can act with a clear head in pressure situations.

A range of skill learning around emergency procedures is suggested and this can be linked to a range of environments. Teachers should select those activities that best meet their students' learning needs.



Assistance
required
signal

CHECKLIST – Emergency procedures, teaching content

- Helping you to get out of trouble
 - Recognition of predicament
 - Assessment of predicament
 - Action - without panic
 - Critical reflection
- Communication with rescue and emergency services
- Hypothermia
- Helping others in distress
 - Awareness and recognition
 - Assessment
 - Action
 - Rescuer looking after self, first
 - Flotation aids
 - After care including CPR
- Practising rescue skills dry

Emergency procedures – Suggested teaching activities

- Students read a selection of newspaper articles about rescues and report back to the class. Commonalities are sought for rescues that went wrong. Compare these with successful rescues. See <https://watersafe.org.nz/lessons/bystander-rescue/> and refer to page 42 in this resource.
- Once you are caught in a rip what do you do to get back to safety? Explain why panic affects decision making and why it is wrong to swim against the rip. See Teacher Guide **Rip Currents**, available at Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.
- Students investigate personal survival stories, e.g. Robert Hewitt who was lost at sea for over 70 hours. What position in the water did he adopt? How did he keep alive so long and keep his spirits up? What can we learn from his experience? What would you do and think of if you found yourself in a similar situation?
- In pairs, demonstrate HELP position and assistance required signal on dry land. Explain why it may be important **not to** try and swim into the shore if it is a reasonable distance – say more than 1km swim away. Collate reasons. Explain the effects of exercise (increased cooling rate) on an already cold or mildly hypothermic person. See Teacher Guide **Cold Water Immersion and Hypothermia**, available at Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.
- In groups in the gymnasium, students could practise putting on a lifejacket as if in deep water, reach rescues, rope throw rescues, huddle position and discuss what to do if they fell in wearing jeans, hoodie and shoes (what

clothes does one remove or leave on, why and what improvised flotation techniques can be used). See Guided Discovery Teacher Guide, available at Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>

- Watch an episode of Piha Rescue. What can we learn from the surf life guards when rescuing others? Create a flow chart of the rescue (of others) process. What improvised flotation gear can be used if you were fishing off a wharf or at the beach? How do you check to see the victim is breathing? What is the recovery position and why is it important?
- Discuss ways of communicating when in an emergency situation, in a range of environments and activities. When calling 111 why should we not hang up until we are told to?
- Research aquatic emergency organisations such as Surf Life Saving, Coastguard, Maritime Police, Rescue Helicopter, and describe their roles in society.

Final assessment activity

1. Research the drowning statistics for the previous year from Water Safety New Zealand's DrownBase™, and look at the ages that people drown.
2. In pairs discuss the significance of the following statement and record your outcomes.

"It is widely recognised that the highly competent pool swimmer is not necessarily equally competent in open water or in heavy surf or in cold water. Nor is one's competency static over time. Developmentally, competency normally increases during childhood into adulthood where upon it gradually decreases as one's personal and physiological capacities decline".¹⁰
3. Explain the significance of this statement with regard to the New Zealand drowning statistics and discuss further reasons for the higher numbers in the middle/older age group.

References:

- Smith, G. S., & Brenner, R. A. (1995). The Changing Risks of Drowning for Adolescents in the U.S. and Effective Control Strategies. *Adolescent Medicine* 6(2), 153-170.
- Langley, J. D., Warner, M., Smith, G. S., & Wright, C. (2001). Drowning-related deaths in New Zealand, 1980–94. *Australian and New Zealand Journal of Public Health*, 25(5), 451-457.
- Gulliver, P., & Begg, D. (2005). Usual water-related behaviour and 'near-drowning' incidents in young adults. *Australian and New Zealand Journal of Public Health*, 29(3), 238-243. doi:10.1111/j.1467-842X.2005.tb00761.x
- Howland, J., Hingson, R., Mangione, T. W., Bell, N., & Bak, S. (1996). Why are most drowning victims men? Sex differences in aquatic skills and behaviors. *American Journal of Public Health*, 86(1), 93-96.
- Moran, K. (2009). Parents, pals, or pedagogues? How youth learn about water safety. *International Journal of Aquatic Research and Education*, 3(3), 121-134.
- Senninger, T. (2000). Abenteuer leiten – in Abenteuern lernen. Münster/Germany: Ökotopia.

¹⁰Langendorfer, S. J. (2013) What's in a name? *International Journal of Aquatic Education and Research*. 7(3),187-191



Assessing personal competency – Suggested learning experiences

See <https://www.watersafe.org.nz/lessons/personal-assessment/>

Overrepresentation of males in drowning statistics has been linked to an overestimation in competence (Smith & Brenner, 1995; Langley, Warner, Smith, & Wright, 2001; Gulliver & Begg, 2005; Howland, Hingson, Mangione, Bell, & Bak, 1996; Moran, 2009b).

Most adults (66%) think they can swim well. However, males think they can swim faster (further than 200m in 5 minutes, 27% males vs. 15% females) and longer (more than one hour, 25% males vs. 12% females) than females, and

float (79% vs. 70%) and swim (74% vs. 52%) longer in deep, open water (Stanley & Moran, 2017). Furthermore, indications suggest many adults don't have a realistic view of their own competencies in open water (Stanley and Moran, 2018).

Asking students how well they think they can perform tasks before and then again after they have completed them allows an opportunity for students to gain a realistic assessment of their competency.

Examples for rating some competencies are shown below.

Entry competency and personal assessment - (Before/After)

How would you score your competency about entering the water safely? Can you -

Score	Perception
0	No, I cannot enter the water safely using a feet or head first entry
1-2	Enter the water only with great difficulty. Extremely hesitant and takes a long time to execute the movement. Very poor/high risk technique
3-4	Enter the water with some difficulty. Hesitant and takes time to execute dive entry tasks. Some anxiety apparent. Poor technique with some risk of injury
5-6	Enter the water satisfactorily. No hesitancy and confident about feet first and head first entry task. Acceptable technique and slight risk of injury
7-8	Enter the water with ease. No hesitancy in performing the entry, very confident with most entry challenges. Good technique with minimal risk of injury
9-10	Enter the water with ease, very confident and comfortable with all entry challenges. Excellent technique with minimal risk of injury

How would you score your competency after trying to enter the water safely?

Score	Perception
0	No, I cannot enter the water safely using a feet or head first entry
1-2	Entered the water only with great difficulty. Extremely hesitant and takes a long time to execute the movement. Very poor/high risk technique
3-4	Entered the water with some difficulty. Hesitant and takes time to execute dive entry tasks. Some anxiety apparent. Poor technique with some risk of injury
5-6	Entered the water satisfactorily. No hesitancy and confident about feet first and head first entry task. Acceptable technique and slight risk of injury
7-8	Entered the water with ease. No hesitancy in performing the entry, very confident with most entry challenges. Good technique with minimal risk of injury



9-10	Entered the water great ease, very confident and comfortable with all entry challenges. Excellent technique with minimal risk of injury
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This could be altered for other practical competencies such as exiting the water, underwater swimming, or swimming in clothes.

Estimations of floating, treading water and swimming were asked before and after completing the tasks. Pre- and post- activity mean estimates increased for each flotation task with the greatest differences being reported in the more challenging treading water with weight and motionless float

(Moran, 2019a).

Another example below asked exertion estimates for swimming, floating and treading water. Ask students to estimate how difficult they expect the tasks to be using Borg's Rate of Perceived Exertion (RPE) scale. In this scale, use the following estimates from 6-20, with 6 = the easiest and 20 = most difficult (e.g. swim 25m fast sprint = 15).

	6 or less	7-8	9-10	11-12	13-14	15-16	17-18	19-20
Swim 25 metres fast sprint any stroke								
Swim 5 minutes non-stop any stroke								
Tread water in deep water for 2 mins								
Tread water without using legs for 2 mins								
Tread water without using arms for 2 mins								
Tread water holding rubber brick for 2 mins								
Motionless float in deep water for 2 mins								



Bystander Rescue

Keeping yourself safe at all times is the underlying principle that has to be followed if multiple drownings are to be avoided. It is imperative that swim and contact rescues are for competent rescuers ([Resource 13: Glossary on page 72](#)) and students doing RLSSNZ Bronze Medallion ([Resource 14: List of useful organisations and resources on page 73](#)), as open water conditions are more testing than swimming pool water. The risk sequence for rescuers is shown below.

<https://www.watersafe.org.nz/lessons/bystander-rescue/>

Principles of Rescue

The four Rs of Rescue

- **Recognise** notice someone in trouble
- **Respond** provide flotation
- **Rescue** think safe
- **Revive** provide care.

Most people drown close to safety.

Stallman (2008)⁵ has shown 90% drown within 10 metres of safety.

Learning Outcomes

The student will:

- Demonstrate basic water safety skills for personal survival and that of others – on dry land, in shallow, deep moving and cold water. AO Level 5 2b.
- Understand why these skills are needed, when they should and should not be used. AO Level 5 1c.

Success criteria

- I will learn to look after myself first when helping others.
- I will learn to respect the power of the water.
- I will always have a buddy, never swim or boat alone, as buddies can help in difficult situations.

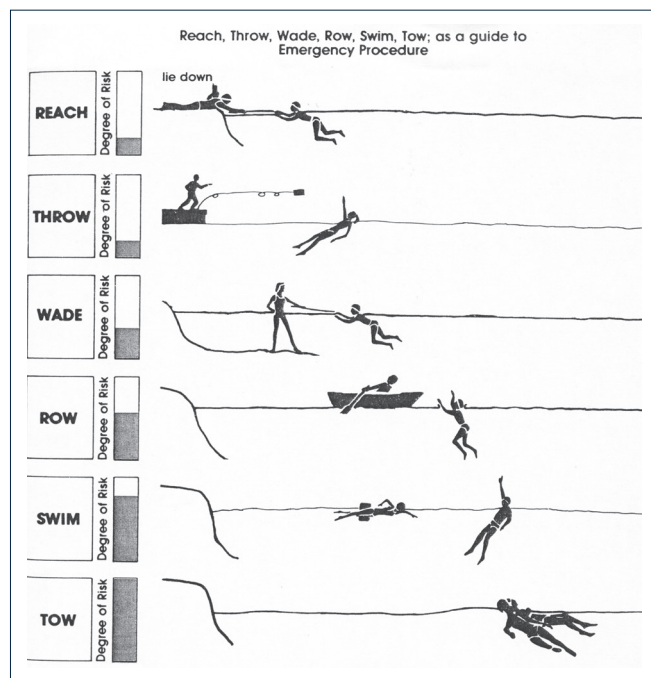


Diagram courtesy of Royal Life Saving New Zealand



Depictions of drowning.

Source: Jonathon Webber, Aquasafe New Zealand

⁵ Stallman, R., Junge, M., Blixt, T. (2009). Where do people drown?
International Journal of Aquatic Research and Education, Vol. 3 No. 3.

Suggested skill learning activities – Teaching points

Recognising someone in distress – The rescue process involves both physical and cognitive skills for it to be successful.

Lifejackets could be worn by rescuers and or victims.

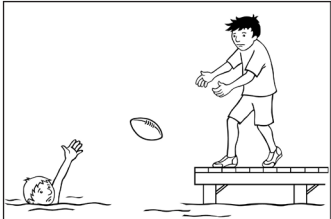
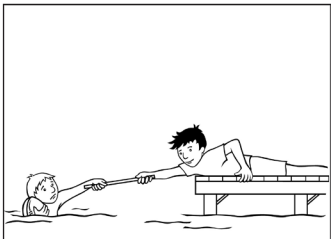
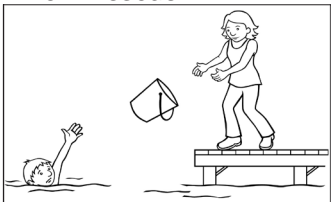
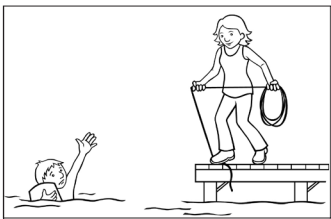
Skill	Student activities	Teaching points	Some questions to ask to develop thinking
Early signs of distress Role play	<ol style="list-style-type: none"> Asking for assistance, one hand raised. Splashing arms on the surface of the water. May be calling out for help. 	<ul style="list-style-type: none"> Have students act out signs of distress. 	<ul style="list-style-type: none"> Why is drowning silent? <i>The drowning victim will not call out for help as they are trying to gasp for air; they cannot wave for help as they are trying not to go under so they extend their arms to the side to push down on the water's surface to keep their head above water. This, the 'instinctive drowning response' described by Pia⁶ was described as an unnoticeable trauma.</i> Why is swim and contact the most dangerous rescue? <i>If the victim is conscious the rescuer could be grabbed if too close and be taken under the water as well. Panicking victims are very strong.</i> Why do some people drown when they go to rescue a person in trouble? <i>They do not spend time finding flotation – they go straight from recognition to rescue and forget to look after themselves. They also get too close to the victim and do not have flotation aids to hand over.</i>
Critical stage Role play	<ol style="list-style-type: none"> Clawing at the water trying to stay afloat. Submerging and resurfacing while clawing at the water. Disorientated not facing shore or potential help. Unresponsive, unable to call out for help. 	<ul style="list-style-type: none"> Have students act out the critical stage of distress. This is the greatest potential danger for the rescuer. Victim could grab potential rescuer if they got too close and push them down under the water as the victim tries to elevate themselves to assist breathing. 	
Unconscious victim Role play	<ol style="list-style-type: none"> Act out an unconscious patient. Floating on the water, face down in a starfish float (X). Shallow then deep water. 	<ul style="list-style-type: none"> Have students act out an unconscious patient scenario. Safe to make contact, hold in vice grip, top hand on head and arm down back, bottom hand on chin arm against chest. Squeeze arms together. Turn victim over on to back – rescuer goes under water to turn on to back, do ABC. 	
Injured person Role play	<ol style="list-style-type: none"> Holding on to injury. Trying to tread water or signal for assistance if possible. 	<ul style="list-style-type: none"> Have students act out an injured patient scenario. 	

6 Pia. F., (1974). Observations on the drowning no non swimmers. Journal of Physical Education, YMCA Society, USA.






Dry Rescues – Students need to understand the principles of rescue and the importance of keeping themselves safe as well as experiencing some basic rescue techniques that are compatible with their ability and training levels.

See <https://watersafe.org.nz/lessons/bystander-rescue/>.

Skill	Student activity	Teaching points	Some questions to ask to develop thinking
Dry rescues Reach rescue  	These can be taught on dry land first. Reassure at all stages. <ol style="list-style-type: none"> 1. Buddy is in water indicating they need assistance. 2. Throw a buoyancy aid to them with instructions to catch and hug it. 3. Reach out with pole, branch or paddle to buddy. Tell them to hold on to it. 4. If they do not react, then place the pole or flotation aid on or under their shoulder; they may grab it. 5. Pull them in. 6. To secure buddy - place their hands on top of each other on pool side with your hands and weight on top. 	Relevant for both types of dry rescues: <ul style="list-style-type: none"> • Give simple instructions and reassure to reduce panic e.g. hug ball. • If windy throw the buoyancy aid upwind of the person. • If in a river throw downstream side of the person. If using a rope or throw bag throw 'to and through'. Use a throw bag if you have one. • Look after yourself by lowering your centre of gravity when pulling buddy in. • Secure the patient. Keep your centre of gravity low when putting your weight on their arms. 	<ul style="list-style-type: none"> • Why are dry rescues the safest method of rescue? <i>Because the rescuer stays dry and cannot be grabbed by the victim and taken under water.</i> • Why do we throw a buoyancy aid to help a victim before rescue? <i>It buys time for the rescuer and helps the victim to stay afloat and reduces panic.</i> • Why do we coil the rope into our preferred hand? <i>It is quicker and easier to throw- as there is no need to swap hands.</i> • Why do we throw the rope upstream in a river or up wind on a windy day? <i>So the rope does not fly away from the victim.</i> • Why do we lower centre of gravity when pulling a victim in? <i>To increase stability and make sure the rescuer does not get pulled in.</i> • Why pull them in on their backs with a rope? <i>So they do not get mouthfuls of water.</i> • How could we modify the rope for windy conditions? <i>Add weight to it by attaching partially filled drink bottle.</i> • What else could be used if we did not carry a rope? <i>Towels, shirts, belts all tied together.</i>
Throw Rescue  	<ol style="list-style-type: none"> 1. Buddy is in water indicating they need assistance. 2. Throw buoyancy aid to them. 3. Find rope, coil into throwing hand while standing side on (in throwing position) to buddy. 4. Underarm throw to within arm's reach (hold on to rope with non-preferred hand). 5. Instruct buddy to turn onto back, hold rope over one shoulder. 6. Lower centre of gravity, to pull them in and secure them. 	<ul style="list-style-type: none"> • Pulling the patient out - use a two person arm lift or arm lift by one person. • Pulling into a boat - roll over side with rescuer keeping centre of gravity low and boat balanced. • Look after yourself by lowering your centre of gravity when pulling buddy in. 	

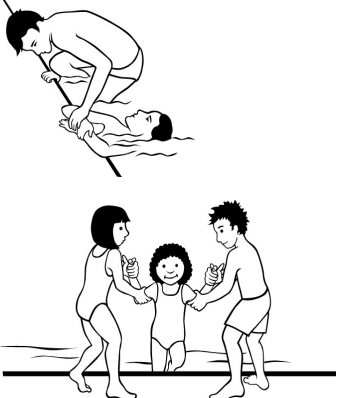
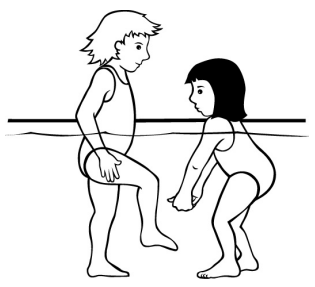


Water rescues – Entering the water to rescue increases the level of danger for the rescuer.

Skill	Student activity	Teaching points	Some questions to ask to develop thinking
Wade rescue (in shallow water when reach and throw rescues have been unsuccessful or the victim is too far away) 	<ol style="list-style-type: none"> 1. Buddy signals for assistance, rescuer acknowledges. 2. Rescuer shuffles into water with gear, watching victim, to a point where they can make the reach or throw rescue. 3. Rescuer tows the victim to safety while maintaining a good distance from the victim. 4. Removal from water. 5. Revive, after care. 	<ul style="list-style-type: none"> • The rescuer should not get near the patient (non-contact) so they cannot be grabbed, as they are looking after themselves first. • Victim cooperates. • Reassurance given. • After care – keep warm, observe and reassure. 	<ul style="list-style-type: none"> • Why should the rescuer shuffle towards the victim? <i>The rescuer cannot see the bottom surface (so maintains stability as shuffling checks for submerged objects) while they are watching the victim.</i> • Why is it important to reassure the victim? <i>They cannot help themselves or the rescuer when they are panicking.</i> • Why is a wade rescue classified as a non-contact rescue? <i>The rescuer never gets very close to the victim and no contact is made.</i>
Accompanied rescue is a deep water rescue for a tired swimmer 	<ol style="list-style-type: none"> 1. Buddy indicates they need assistance. Rescuer acknowledges. 2. Rescuer finds and takes flotation and throws it to them – victim to try to grab rescuer. If grabbed start again. 3. Ask victim to hold flotation and kick. Swim along beside at least 1 metre apart. 	<ul style="list-style-type: none"> • Keep at a safe distance from the victim at all times so you cannot be grabbed. • Reassurance at all times. • When at pool edge rescuer anchors victim or helps the victim to climb out of the water. 	<ul style="list-style-type: none"> • Why is swim and contact the most dangerous rescue? <i>If the victim is conscious you could be grabbed if you get too close. They could take you under the water as well. When panicking they are very strong.</i>
Non-contact tube rescue by trained lifeguards (advanced group)  Harness	<ol style="list-style-type: none"> 1. Identify a person in distress. 2. Rescuer puts on harness, swims out with tube floating behind. 3. Stop about 2m in front of victim 4. Throw the tube with instructions to put arms over it. 5. When victim is calmer, swim to the victim's back and clip up the tube. 6. Swim to safety with victim towed on back. 	<ul style="list-style-type: none"> • Surf lifeguards would wear fins during this rescue. • When approaching keep victim in sight at all times. • Stay out grabbing distance of the victim to keep you safer. • Check the victim is cooperative. • Get the victim to kick a bit if they can. • Help victim out of water. 	<ul style="list-style-type: none"> • What two methods do you see the surf lifeguards using? <i>Boat/board and swim with aid.</i> • Where do you see rescue tubes? <i>At a surf beach and in community swimming pools.</i> • How long is the rope connecting the tube to the harness? <i>About 2m; long enough to stay out of trouble when giving the tube to the victim.</i>



Removal from the water – This should be as quick as possible so that the Revive process (after care) can start. The following techniques are from pool side. The rescuer climbs out of the water still securing the victim's arms and prepares to pull them out.

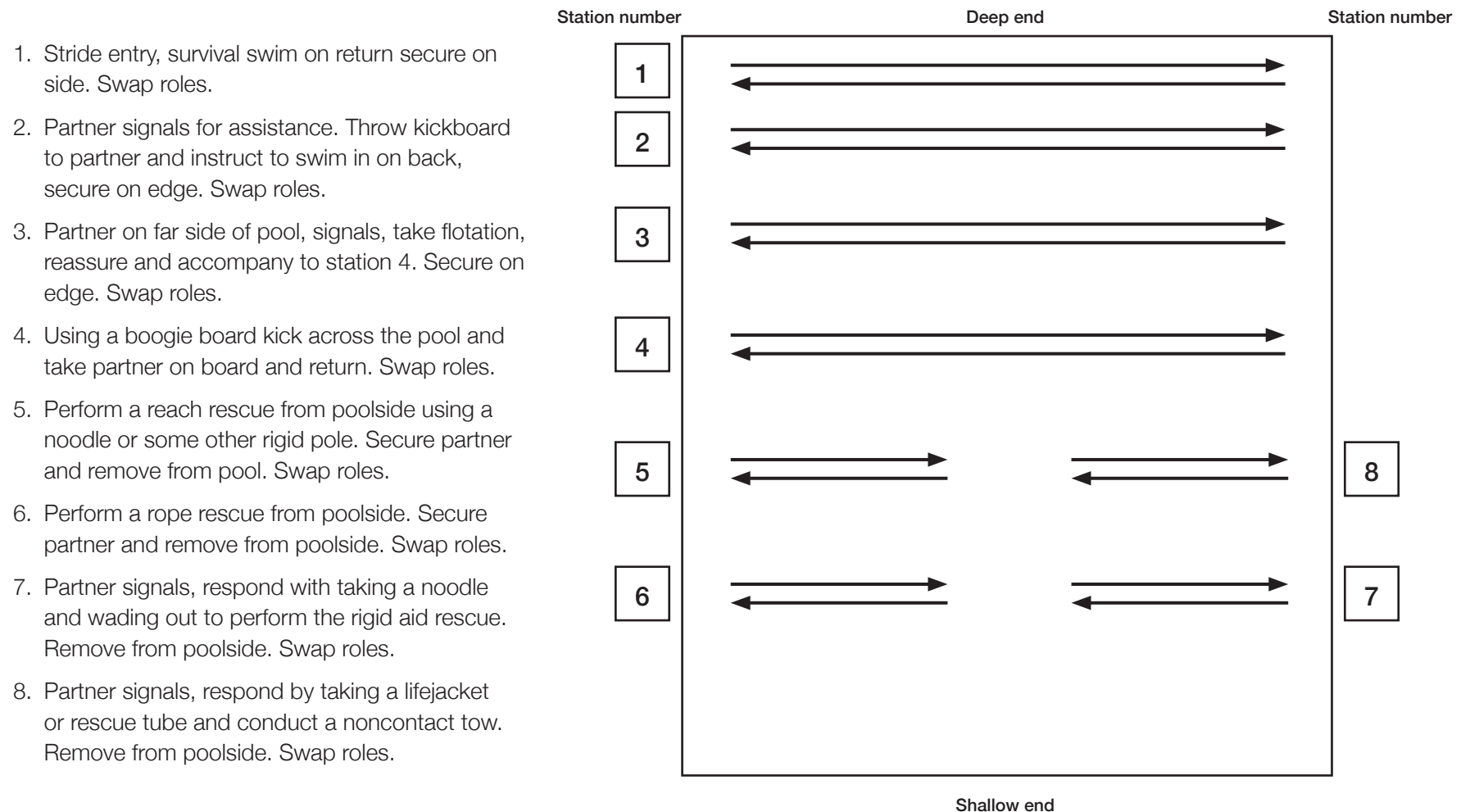
Skill	Student activity	Teaching points	Some questions to ask to develop thinking
<p>Straight arm lift out of the water (after rescue)</p> 	<ol style="list-style-type: none"> 1. Rescuer to pull buddy from water by arms. 2. Crouching on the pool side, hold the wrists and biceps (as per the diagram) of the buddy and raise the trunk out of the water to lie on the pool side. 3. Keeping contact with the victim the rescuer pulls out one leg then the other. 4. Remove from water and put in recovery position. 	<ul style="list-style-type: none"> • On getting out of the pool the rescuer must keep their buddy secure at all times. • Start with two people pulling the victim out progress to one person. • Rescuer must not use their back as a crane. • Could use armpits /upper arm as a grip point. • Gently lower the victim onto the pool side, reassure. 	<ul style="list-style-type: none"> • What is the advantage of using an armpit lift? <i>Better leverage.</i> • What is the disadvantage of using an armpit lift? <i>Potential to injure back if the lifting technique is faulty.</i> • What are the advantages of pulling a person out on their front or out onto their back? <i>Pulling out on to their front is done quickly as they do not need turning around and they can go into the recovery position. Pulling them out onto their back needs a rotation before pulling but they can be pulled into a sitting position.</i> • If you are removing a victim from the water into a boat how should it be done? <i>The quickest and most stable way possible, grab the lifejacket and pull them in over the side, or stern.</i>
<p>Stirrup lift from shallow water (after rescue)</p> 	<ol style="list-style-type: none"> 1. The rescuer and buddy stand in shallow water. 2. The rescuer cups their hands (the stirrup) and holds them under the water. 3. The buddy places their heel into the cupped hands. 4. The rescuer lifts the buddy out of the water so they can hook a leg on to the side. 	<ul style="list-style-type: none"> • Stirrup exit – used when the rescuer helps the victim out of the water e.g. after an accompanied/ wade tow. • Buddy steps on rescuer's cupped hands and is lifted up. • Buddy twists and sits on the side. • If holding onto the side of a boat the rescuer could use the thigh as the stirrup or stepping stone. 	



Rescue skills circuit – to practise in water non-contact rescue skills.

Gear needed: A variety of buoyant aids, noodles, ropes, kayak paddles (optional), boogie board/surf board, lifejacket or rescue tube. Students to wear long sleeved shirt and long pants throughout.

Instructions: Students in pairs move from station to station in numerical order. Change on whistle, leaving gear at station. Depending on student numbers, use the full width of the pool, or work to the middle and back. Students should always reassure the victim and must demonstrate their ability to look after themselves first in every action they take.





Learning Experiences

Knowing the aquatic environments that students frequent and the potential dangers that could exist at these locations, students need to abide by the safety guidelines if their aquatic experiences are to remain positive and fun.

The increasing independence of this age group can be associated with peer groups' experimental and risk taking behaviours and for some this could include alcohol and drugs. Risk taking, alcohol and drug consumption do not mix with water activities. Students have to learn to cope with peer pressure and take ownership of the rules for safer decision making and participation when in, on and around water.

As Year 10 students approach their 14th birthday, and being the accepted age for babysitting duties, students could learn about looking after others around water especially in the home. A range of skill learning around following the rules is suggested and this can be applied to different environments. Teachers should select those activities that best meet their students' learning needs.

COMPETENCE 15: Water Safety Attitudes and Values

See <https://www.watersafe.org.nz/lessons/attitudes-values-and-behaviours/>

- Risk taking behaviour
- Decision making and consequences
- Peer pressure
- The effects of alcohol on the body
- Alcohol and water safety
- Water safety signage
- Supervision and the young
- Generic safety guidelines around water for
 - public swimming pools
 - home swimming pools
 - patrolled beaches
 - non patrolled beaches
 - rivers, creeks, water holes

Follow the safety guidelines – Suggested teaching activities

- In groups sort key message cards see [Resource 3: Key safety message cards on page 55](#), into the four generic (bold print) message groups. Discuss why there is a need for rules. The rules can be unpacked, e.g. why is it safer to enter water feet first? What does know your limits mean? Why is it important to “know before you go”?
- In groups, students could discuss risk taking activities in a range of aquatic locations such as: jumping into water off cliffs/wharfs, rock fishing or retrieving nets alone, drinking while on a small boat, gathering kaimoana in the dark, or watching a tsunami. Consequences of such action could be included in the reporting back summaries. What could healthy risk taking look like? Why is gaining experience important for safety?
- Identify your personal risk taking pattern by asking questions such as:
 - Do you feel pressured to make risky choices by friends?
 - Do you rush into making decisions?
 - Do you think it is not cool to try things in a safe manner?
 - Are dangerous risks more exciting? Do they feel more like you?
 - Do you make dangerous choices to show off to others?
 - Does it feel as though it's happening “in a dream” when you make dangerous choices? (From *The Romance of Risk: Why Teenagers Do the Things They Do* by Lynn E. Ponton, M.D. [Basic Books, 1997]).



Signage at Muriwai



- Or complete the questionnaire in **Resource 1: Attitudes, Values and Risk Taking on page 51**, and discuss the results with a buddy.
- Peer pressure role plays e.g. jumping off a wharf into tidal water, boating and not taking lifejackets that fit every one, swimming fully clothed, fishing off rocks during a storm or going to the beach to watch for the tsunami wave. Discussion – e.g. how hard was it to tell the group you did not have the skills to do the activity or it was good to wear a lifejacket at all times? Did your peers respect you for this decision? If not why not? Did your decision influence their behaviour?
- Create a consequence wheel see **Resource 2: Graphic organisers on page 52** for breaking the rules during aquatic activities in a range of environments. See **Using Graphic Organisers Teacher Guide**, available at Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.
- Create a PMI and W (p = plus, m = minus, I = interesting, and w = what next) on the negative effects of drinking alcohol while youth as well as adults are participating in a variety of aquatic activities. See **Alcohol and Water Safety Teacher Guide**, available from the Teacher Toolbox on our website.
- Unpack the New Zealand Water Safety Code. Describe what it looks like/means for two different aquatic environments such as a pool and the beach.
- Brainstorm the location of signage around local water hazards. Are there places that should have signage but do not? Write to the council. See **Water Safety Signage Teacher Guide**, available at Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.
- Design a supervision pamphlet (for baby sitters) detailing the need for supervision within sight and reach of young children when they are around water in a variety of environments including the home. See **Water Safety At Home Teacher Guide**, available at Teaching and Learning Toolbox <https://www.watersafe.org.nz/education/teaching-learning-toolbox/>.
- Create a group poster/PowerPoint of potential hazards around the home and garden or lifestyle block for young children. Present this to the class indicating ways of reducing or eliminating these hazards.
- Create a summer holiday water safety pamphlet or video for visitors to New Zealand.
- Read 'Male and female differences in water safety behaviours and beliefs' and discuss. See **Resource 10: Male and female differences in water safety behaviours and beliefs on page 66**.

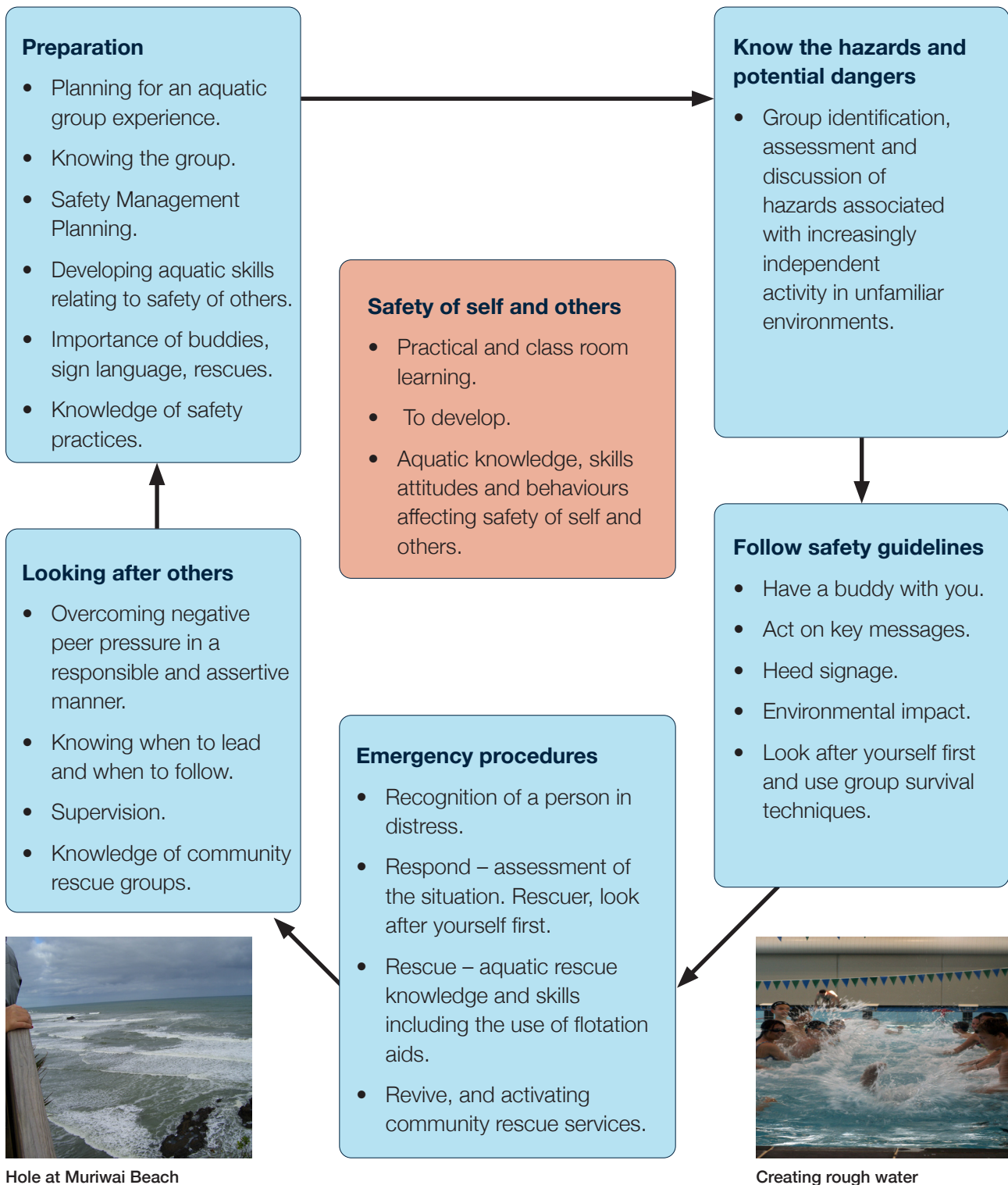


Water Safety Code courtesy of AdventureSmart.
Download the code from www.adventuresmart.org.nz
or copies available from WaterSafe Auckland.



Safety of self and others in unfamiliar aquatic environments

It is anticipated that Stage 2 should not be taught in isolation. It is building on the learning in Stage 1.



Learning outcomes and success criteria

should be developed and shared with the students each lesson (see page 9). The rest of this section gives ideas that teachers can develop for classroom learning.

The ideas are based on the two stages illustrated above, however, there is no differentiation between the two stages. Work can be determined by the learning intentions set by the teacher to meet the needs of their students.

Section 3: Resources for teaching and learning

Resource 1: Attitudes, Values and Risk Taking

When you were young your parents decided the level of your risk taking. They watched carefully and advised you of any potential hazards and prevented risky behaviour. As a teenager you are gradually given the responsibility to decide if you can do these activities safely or if it is best to stay out or away from the water when the conditions are not right for your own experience and ability.

“Healthy risk-taking is a positive tool in a teenager’s life for discovering, developing and consolidating his or her own identity.

Adolescent risk taking only becomes negative when the risks taken are dangerous.”

Lynn E Ponton.

Unhealthy risk taking refers to a tendency to engage in activities that have the potential to cause loss, injury or be dangerous; however at the same time these activities could provide the opportunity for some kind of outcome that can be seen as positive. What sort of risk taker are you? Complete the self-assessment see below. Compare scores with the rest of your group and discuss the outcomes.

Risk taking questionnaire

CIRCLE THE ANSWER THAT APPLIES TO YOU
(adapted from a survey by Dr K. Moran)

- Have you ever swum alone? YES / NO
- Have you ever swum outside the flags at the beach? YES / NO
- Have you ever jumped in to water of an unknown depth? YES / NO
- Have you ever gone boating without wearing a lifejacket? YES / NO
- Has a friend/s ever tried to force you in to doing a water activity/task that you felt you were incapable of doing? YES / NO
- What sort of risk taker do you think you are when doing things physical?
 - A cautious risk taker, i.e. someone who is careful when trying a new activity YES / NO
 - A middle of the road type YES / NO
 - An adventurer or high-end risk taker YES / NO
 - A teenager whose risk taking increases when he or she is with friends YES / NO
 - Why? _____

- Have you ever pressurised a friend/s in to doing a water activity/task that they did not want to do? YES / NO
- Have you swum or taken part in any other water activity after taking drugs or alcohol? YES / NO
- Have you ever experienced a life threatening water incident? YES / NO
- Do you feel pressured to make risky choices by friends, for example follow your peers when you know your skills are not really good enough? YES / NO
- Do you think it is too hard to say no when you are with friends and you are unsure of the safety of the activity? YES / NO
- Do you rush into decisions without thinking of the consequences? YES / NO
- Do you think it is not cool to try safe, tame activities? YES / NO
- Do you find dangerous risks more exciting? YES / NO
- Do you make dangerous choices to impress others? YES / NO

Reflect on these results. This increase of awareness could help you to make decisions in a variety of environments and activities. Assess the consequences of risk and remember.

Resource 2: Graphic organisers

Consequence wheel

A consequence wheel is a diagrammatic tool to help students think reflectively and creatively about the relationship between action (cause) and its effects. Both positive and negative outcomes (consequences) of their behaviours are considered. Often students are asked to place positive consequences on the top and the negative ones on the bottom sections of the wheel.

This exercise highlights the key competency of managing yourself. Once the teacher has worked through a whole class example it can be used by the whole class, a small group or individuals working independently.

The wheel is started by filling in the central hub with an action, issue or decision. Students are encouraged to make a list of consequences and then these are grouped. The next layer out is the immediate consequence of that action/decision. Subsequent layers are the consequences raised by the previous level of the wheel. When children know the consequences of particular actions this knowledge can affect their decision making which

can result in behavioural change. Once the wheel is complete students can start to make decisions. Do the positives outweigh the negatives? Is the risk worth taking? Why? Why not? This then could be used to guide action.

Topics for the central hub of the wheel could include:

- What if there were no pool rules?
- Alcohol and aquatics - do they mix?
- Swimming outside the flags.
- Swimming alone is safe.
- Swimming in calm water is always safer (than swimming in the waves). Calm looking water could be a rip current.
- Can I do this activity safely?
- Why wear a lifejacket on a boat when I can swim?
- It is OK to swim in jeans? I will take my shoes off.

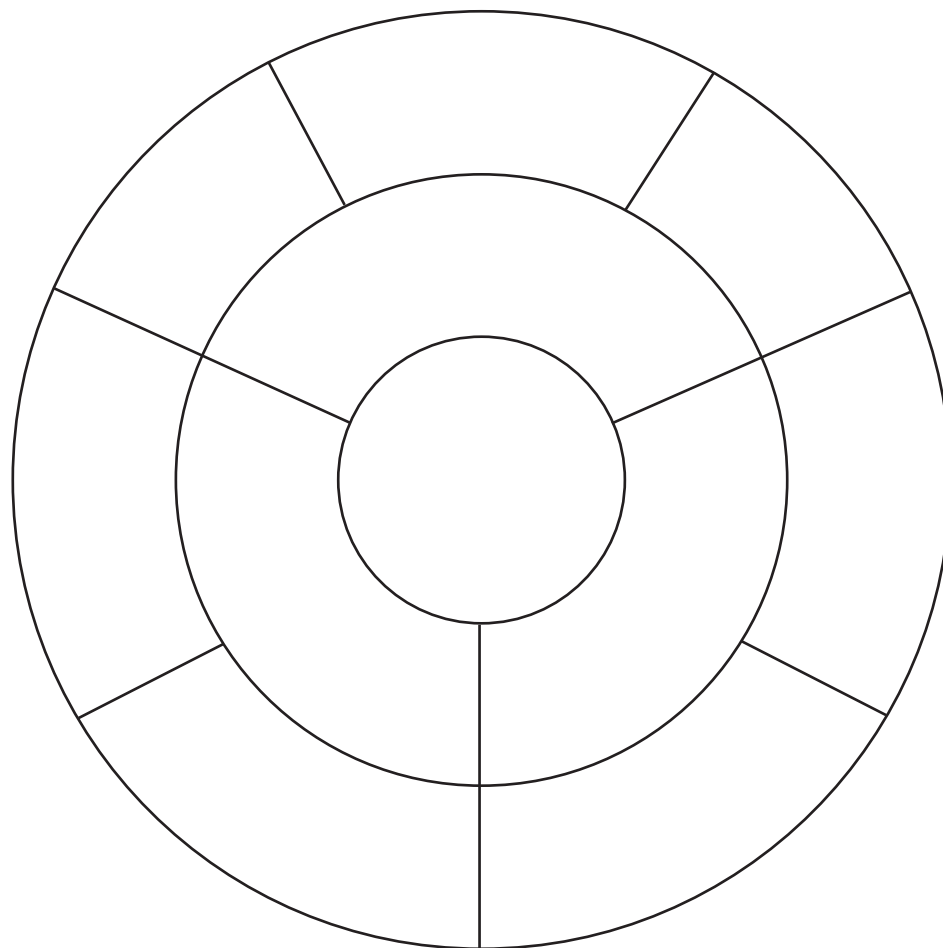


Calm looking water could be a rip current.

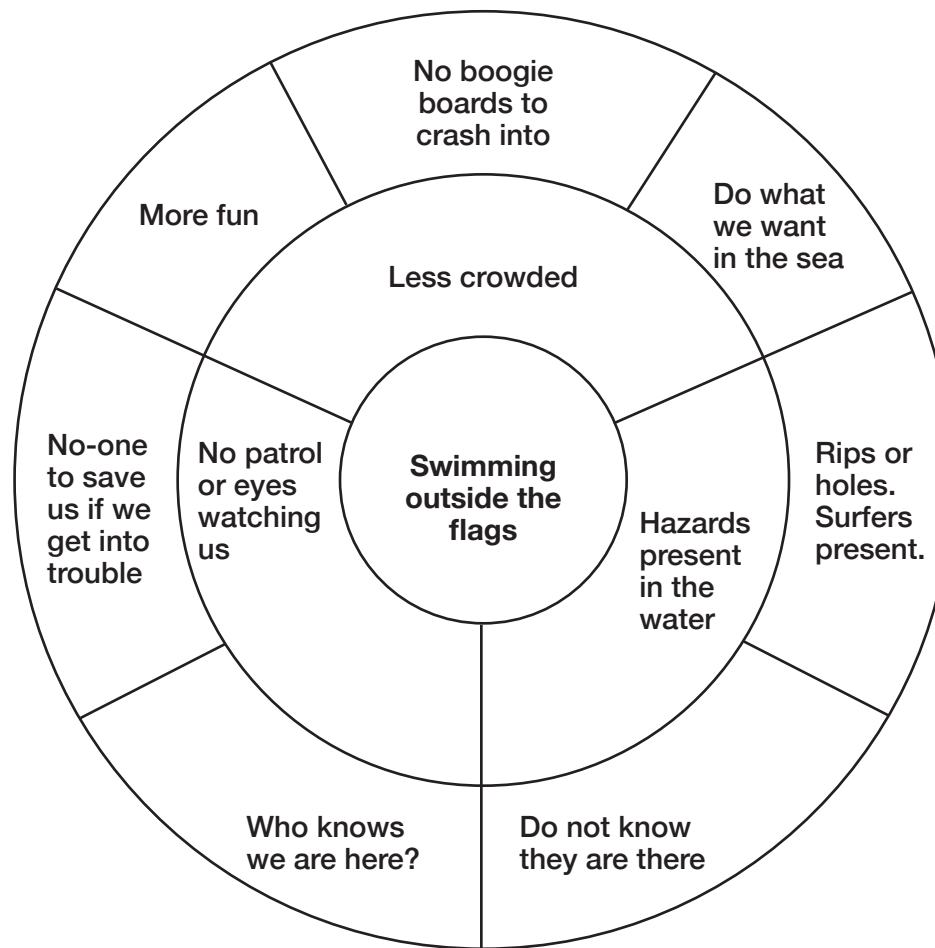


Why wear a lifejacket on a boat when I can swim?

A consequence wheel template



Example of completed consequence wheel



Decision making matrix

Students complete matrix

Decision making template

	Choices	Consequence Pro / Con	How important is the consequence to me?	
Activity	Option 1	→	<div>Value</div> <div> <div></div> <div></div> <div></div> </div> <div>1 5 10</div> <div>Low High</div>	My choice for the activity is Option Because
	Option 2	→	<div>Value</div> <div> <div></div> <div></div> <div></div> </div> <div>1 5 10</div> <div>Low High</div>	
	Option 3	→	<div>Value</div> <div> <div></div> <div></div> <div></div> </div> <div>1 5 10</div> <div>Low High</div>	
	Option 4	→	<div>Value</div> <div> <div></div> <div></div> <div></div> </div> <div>1 5 10</div> <div>Low High</div>	

Resource 3: Key safety message cards

Cut these cards and shuffle them. Let student groups sort them under the four appropriate heading cards (bold print). Students have to justify why they have placed each card in each list.

Key messages adapted from New Zealand's Water Safety Code, [page 40](#).

Be prepared

WAI SURVIVAL Drowning Prevention

Know the conditions before you get in

WAI SURVIVAL Drowning Prevention

Learn to swim

WAI SURVIVAL Drowning Prevention

Be aware of dangers

WAI SURVIVAL Drowning Prevention

Set rules for safe water play

WAI SURVIVAL Drowning Prevention

Enter water feet first

WAI SURVIVAL Drowning Prevention

Know the weather

WAI SURVIVAL Drowning Prevention

Obey all water safety signs and warning flags

WAI SURVIVAL Drowning Prevention

***Do not swim after
drinking alcohol***

WAI SURVIVAL Drowning
Prevention

***Watch out for yourself
and others***

WAI SURVIVAL Drowning
Prevention

Supervise children

WAI SURVIVAL Drowning
Prevention

Swim with others

WAI SURVIVAL Drowning
Prevention

Know your limits

WAI SURVIVAL Drowning
Prevention

***Learn safe ways of rescuing
others and keeping yourself
safe***

WAI SURVIVAL Drowning
Prevention

***Enjoy the water within
your physical limits***

WAI SURVIVAL Drowning
Prevention

Resource 4: Water safety assessment matrix

This matrix has been developed to help with the assessment of water safety skill learning for looking after yourself in water. The matrix is in 2 sections, one with a lifejacket on and then without a lifejacket. This is only an example and can be modified to suit the needs of your unit of work. Students have a buddy

who count the lengths, time the flotation and HELP. position, then they swap roles. This introduces NCEA type of assessment at years 9 and 10. Buddy checks lifejacket fit before activity starts.

A continuous sequence without touching the wall or pool floor	With a lifejacket on			Without a lifejacket on		
	Beginning	Consolidating	Proficient	Wearing togs Short sleeved t-shirt, shorts	Wearing long sleeved t-shirt, shorts	Wearing long clothes and shoes
Skills	N/A	Achieve		Merit		Excellence
Jump/ fall/roll into deep water, swim 200m survival swimming on front non stop	Enter water Survival swim 25m	Enter water Survival swim 100m	Enter water Survival swim 200m	200m	200m	200m
Rotate onto back						
Float* on back unaided, signal for assistance (calming and thinking time)	20 seconds	45 Seconds	60 seconds	60 seconds	60 seconds	60 seconds
HELP. position (no rotation)	30 seconds	45 seconds	60 seconds			
Vertical float/scull/tread water and turn 360° slowly to look around						
Swim 50m any survival stroke nonstop **	25m	36.5m	50m	50m	50m	50m

* Energy saving, limited movement, signal for assistance occasionally.

** If students ground a foot/feet then repeat from beginning of the 50m part of the sequence. To help students turn, cones or ropes could be used. Swim between cones placed on poolside and away from the ends, or tie two ropes across four lanes of a pool 12.5 metres apart. Students then will have to swim down the middle two lanes, duck dive and swim under the rope to change direction to get across to lane one or four to return in the outside lanes. This may be easier than turning sharply in shallow water.

Resource 5: Risk Assessment and Supervision – A Group Planning Exercise

See Teacher Guide Risk Assessment and Supervision – A Group Planning Exercise, available at Teaching and Learning Toolbox download the full instructions and more useable A3 template from here.

Planning for safety in any risky activity involves a comprehensive process that can take some time to master. This planning exercise is designed to

- facilitate the thinking process in a less formal and engaging way
- be used in small groups (3-4 people) to encourage contribution and collaboration of ideas
- be a pre-cursor to students completing a more formal Risk Assessment and Supervision plan (RAS) (See GPG Inland Waterway Swimming Activities for an example https://www.supportadventure.co.nz/assets/GPGs/GPG-Inland-Waterway-Swimming-Activities-050618.docx_.pdf)

It is recommended to refer to Managing Risk Guidance to help understand the process, in particular risk rating.

Instructions

1. Either print out the template below in A3 size from the DPA toolkit <https://www.dpanz.org.nz/wp-content/uploads/2022/06/EONZ-Risk-Assessment-A3-Planning-Exercise.pdf> (or have students reconstruct on large sheets of butcher's paper with a marker pen), one sheet per group
2. Organise the class into small groups (of 3 is best). Teacher facilitates the process.

Part 1 – Risk assessment

3. For a chosen activity begin by completing the top row and the first column. (What are we doing and why are we doing it when it puts people at risk?) Discuss
4. "Pass it On". The next steps are to complete some of the columns in a fun way that increases sharing of ideas. You will need a stopwatch. Students brainstorm their ideas in a limited time. (It is the thinking process that is important, so they shouldn't expect to think of

everything – the short timeframe is deliberate).

- a. Column (Harm). Brainstorm – e.g. drowning, injuries, , getting separated (2 minutes)
- b. Teacher calls "Time" and "Pass it On" (Each sheet of paper is passed to the next group e.g. clockwise, so that each group has someone else's sheet)
- c. Column (Hazards). Read what the previous group has written. Brainstorm what things may cause the harm – e.g. rocks in the water, swimmer out of depth, fatigue (3 minutes)
- d. Teacher calls "Time" and "Pass it On" (as in b) above)
- e. Column (Controls). Brainstorm the things that could be done to stop the hazards causing the harm. E.g. all swimmers wear a life jacket properly (3 minutes)
- f. Teacher calls "Time" and "Pass it Back". Each group finds and returns sheets to the original owner.
- g. Read what others have written. Now go to the bottom right row. Choose ONE of the "harms". Write down what would be done to respond if this happened. (3 minutes)
- h. Having shared ideas with some groups, teacher facilitates a discussion on commonalities, interesting ideas etc.
- i. Risk Rating. Risk is the chance of harm being caused by a hazard. Complete Column (Risk Rating). How likely is it that the harm will occur and how bad might the harm (consequence) be IF NONE OF THE CONTROLS WERE IN PLACE? E.g. drowning, out of depth – HIGH
- j. Column (Residual Risk Rating). Do the same once controls are in place e.g. drowning, out of depth, wearing a life jacket – LOW
- k. Risk rating helps us focus on the highest risks. Any risks that have a residual risk of HIGH or MEDIUM are at the forefront of everyone's attention throughout the activity.



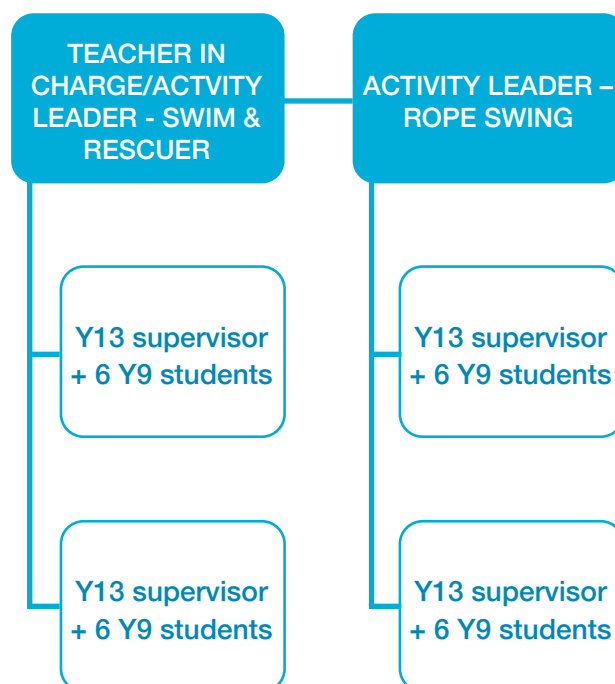
(NB. Accepting any residual risk that is HIGH and going ahead with the activity needs to be considered very carefully. Usually you would not proceed)

Part 2 – Supervision (This part can be useful if the activity has multiple leaders and supervisors)

Having sufficient and capable leaders and supervisors is critical when learning in a risky environment. They should all have clear roles and responsibilities and be allocated in an effective structure. E.g. there may be one person designated as ‘rescuer’, there may be 3 people each allocated 4 students to watch at all times

5. On page two of the template. Brainstorm the things a leader of this activity would need to know and be able to do. Then brainstorm for a supervisor. (You could swap with another group, tick those that are the same and add any more. Hand back and discuss)
6. Identify the specific roles of leaders and supervisors and their responsibilities. E.g. Rescuer. Skilled in bystander and water rescues. Oversees all swimmers and responds to anyone needing help
7. Describe or draw a diagram of what the supervision structure looks like. Show how students are allocated to leaders and supervisors and how supervisors and leaders are allocated to each other and a person in charge. E.g. waterhole swimming with a rope swing. 24 Y9 students in two groups; two teachers (activity leaders); four Y13 student supervisors each allocated six students.

Risk Assessment and Supervision - A group Planning Exercise®. Download template [here](#).



D

Dangers?

R

Responsive?

S

Send for help

A

Open Airway

B

Normal Breathing?

C

Start CPR

30 compressions : 2 breaths

D

Attach Defibrillator (AED)

as soon as available, follow prompts

**Continue CPR until responsiveness or
normal breathing return**

Resource 7: Aquatic First Aid

Condition	Symptoms	Action
Asthma	<ul style="list-style-type: none"> • Tight chest. • Shortness of breath/wheezing. • Coughing. • No energy. 	<ul style="list-style-type: none"> • Help patient to use own medication. • Encourage slow deep breathing. • Reassure. • If no change after 10 mins, seek help.
Blue bottle jelly fish stings	<ul style="list-style-type: none"> • Stinging pain, rash, itching of raised welts. • Anaphylactic shock: <ul style="list-style-type: none"> – red face, puffy swollen tongue/lips – difficulty in swallowing/breathing – itchy skin – signs of shock, collapse. 	<ul style="list-style-type: none"> • Wash sting off with warm freshwater water or sea water immediately. • Monitor for signs of anaphylactic shock. • Give own medication – Epi Pen or adrenalin. • Treat for shock. • Urgent evacuation.
Dehydration	<ul style="list-style-type: none"> • Reduced urine output. • Urine strong and dark. • Dry lips. • Very thirsty. • Poor concentration and decision making. 	<ul style="list-style-type: none"> • Ask about liquid intake. • Give liquids, e.g. 1 cup water plus one teaspoon of sugar. • Sip slowly. • Continue drinking regularly. • Do not drink: <ul style="list-style-type: none"> – tea, coffee or coke as all contain caffeine which increases excretion – pure fruit juices or soft drinks high in sugar as this sucks fluids from body.
Hyperthermia	Core body temperature is between 37°C and 39°C – heat exhaustion: <ul style="list-style-type: none"> – dizzy with headaches – nausea and very thirsty – pale skin increased pulse. 	<ul style="list-style-type: none"> • Sit in shade, if dizzy lie, elevate feet. • Sip water. • Remove excess clothing. • Wash head and neck with damp cloth. • Rest.
	Heat stroke, body temp over 39°C: <ul style="list-style-type: none"> – confused irrational behaviour – hot dry skin – lack of coordination – rapid pulse. 	<ul style="list-style-type: none"> • As above but dampen whole torso. • Recovery position if unconscious. • Monitor vital signs. • Call for help – urgent.

Condition	Symptoms	Action
Hypothermia	<ul style="list-style-type: none"> Lowering of core body temperature 	<ul style="list-style-type: none"> Remove from water
	<ul style="list-style-type: none"> Mild: <ul style="list-style-type: none"> vaso-constriction shivering, clumsy movement slurred speech increased urination. 	<ul style="list-style-type: none"> put in dry clothes keep moving huddle together for warmth dry sip warm sweet drinks.
	<ul style="list-style-type: none"> Moderate <ul style="list-style-type: none"> muscle stiffness, shivering stops collapse, semi-conscious. 	<ul style="list-style-type: none"> dry clothes limit exercise huddle together warm sweet drinks.
	<ul style="list-style-type: none"> Severe <ul style="list-style-type: none"> unconscious slow breathing cardiac arrest. 	<ul style="list-style-type: none"> send for help rewarm slowly no drinks recovery position, elevate feet.
Sea bather's eruption	<ul style="list-style-type: none"> This is a reaction to the microscopic jellyfish lava trapped in togs or hair. Itchy red rash under togs – looks like hundreds of red dots. Can last up to a week. 	<ul style="list-style-type: none"> Remove togs. Shower as soon as possible. Apply Calamine or antihistamine lotion. Do not put togs back on until after a thorough washing.
Shock	<p>Lack of circulation to vital organs:</p> <ul style="list-style-type: none"> pale skin fast weak pulse rapid breathing and dizziness anxious feeling collapse. 	<ul style="list-style-type: none"> Lie down raise feet above heart level, support under thighs. Keep warm. Check and monitor ABCs. Do not give food or drink.
Spinal injury	<ul style="list-style-type: none"> Most aquatic spinal injuries occur in neck - compression of vertebrae. Unconscious and floating near rocks. Neck pain/soreness tingling in limbs. 	<ul style="list-style-type: none"> Immobilise. Airway management. Get immediate help of passers-by to stabilise whole body in water. Most experienced stay by victim's head. Get medical help, evacuation.
Sunburn	<p>Inflammation of skin from UV rays:</p> <ul style="list-style-type: none"> skin red and sore blistering dehydration and shock. 	<ul style="list-style-type: none"> Prevention – Slip, slop, slap and wrap Treatment: <ul style="list-style-type: none"> apply cool damp cloth 15-20 mins apply skin moisturiser stay out of sun.

Resource 8: Snorkelling sign language

Courtesy of NZUA



Resource 9: Scenarios

There are two ways of using scenarios in class.

1. Using a pre-written role play that highlights the potential problems, e.g. poor planning or potentially hazardous behaviour and attitudes. The students' work through this in their groups and then the teacher scaffolds their learning through a series of open questions that lead the class to the desired conclusions.
2. Scenarios can be used to reinforce previous work, ideas and to build positive attitudes. The success of this type of role play depends on

setting the brief or context and an end point for the role play, e.g. until help comes. The role play instructions should include reference to the desired content for this applied setting/context and a time limit. The role plays can then be developed by students and used as a group assessment. We have created some example role play cards for your use or to stimulate ideas for creating your own. Students could create these as a task. These are on the next page.

This style of teaching can be used in the pool or classroom. Ideas for pool scenario work are highlighted in the practical section.

HYPOTHERMIA ROLE PLAY

Three people fishing in a boat, no one is wearing lifejackets but they are on board and one person is drinking.

The boat is submerged by a huge rogue wave. It remains floating upright but is submerged (or it sinks, breaks up turns upside down and you cannot right it).

You are too far out to swim to shore. How do you increase your chances of survival as well as preventing hypothermia from setting in?

One person may show the early signs of hypothermia. What options are available for you to try to keep this person safe until help comes?

During the role play illustrate the symptoms of mild hypothermia.

WAI SURVIVAL Drowning Prevention

Teacher notes

Everyone puts on their lifejacket in the water while trying to subdue panic, shallow breathing and cold. The group gets together on top of the boat out of the water or huddles in the water, gives reassurance, swaps cold people into the middle. Those without a lifejacket or those who have been drinking get very cold quickly.

BEACH RESCUE ROLE PLAY

Four friends are playing ball by the water on a patrolled beach. The ball ends up in the water and a couple chase it and get caught in a rip current. They are not strong swimmers.

One of the group is a surfer and has his board strapped to the car's roof and decides to go and help. The other person alerts the lifeguards.

Role play this situation and have the 5th member of the group as the lifeguard. What does he do as there are potentially three people in trouble?

Once they have been brought back to safety, what after care is needed? What is the advice that the lifeguard gives to the group?

WAI SURVIVAL Drowning Prevention

Teacher notes

The rip will take you out to the end of the waves at speeds of up to 4m/second. If panic sets in then you believe you can swim against the rip – the shortest way back to the beach and you very quickly run out of energy.

On a wavy beach, stay away from the calm looking water – that is the rip current – and swim between the flags. The board rider should be OK if he stays with the board and the safety strap is tight.

RIVER, LAKE OR SEA INCIDENT ROLE PLAY

Jumping/diving in off a bank/ cliff/wharf/ jetty or platform into tidal or lake water (4-5 in the group).

A group of friends visit a structure and do not check the conditions. They have fun but try and pressure a friend who is passing by to join them. The friend does not have suitable gear and so refuses.

As the activity progresses they take greater risks and eventually a couple of them injure themselves diving in head first. They have to be helped by their buddies and be taken out of the water. What aftercare would be needed?

WAI SURVIVAL Drowning Prevention

Teacher notes

State your context – rivers and sea, both having varying depths of water; a lake may be in very cold or/and very deep water.

Check depth and tides, and that there are no hidden obstacles each visit, be aware of tides and of others. Never dive head first into unknown water or have jumps with the whole group at the same time as spinal injuries can result.

POOL ROLE PLAY

Swimming under water and one suffers a black out (group of 3-4).

The challenge is on for a group of friends - who can swim more than one length underwater? They go to the pool and practise hard, breathing in deeply, blowing out hard before they practise. This is repeated many times until one has a black out half way down the length.

It is several seconds after that the lifeguard notices the limp submerged person. What actions should he take and what after care is given to the victim? What advice should be given to the underwater swimmers?

WAI SURVIVAL Drowning Prevention

Teacher notes

Do not hyperventilate before swimming under water. The stimulus for breathing is the build-up of carbon dioxide in the blood and blowing out hard blows off the CO² delaying the need to breathe. This can lead to feeling light headed and in extreme cases leads to fainting.

This happens as you use up all of your oxygen before the build-up of CO² in your blood stimulates breathing. This is shallow water black out. The lifeguards need to remove the victim from the water and commence CPR.

Resource 10: Male and female differences in water safety behaviours and beliefs



Building a water safety culture



Male and female differences in water safety behaviours and beliefs

BACKGROUND

Some authorities¹ have suggested a higher incidence of drowning among males is the consequence of greater participation in aquatic recreation, although Fact Sheet 1² indicated that, for 15-19 year-old youth that took part in the New Zealand Youth Water Safety Survey 2003³, levels of participation in aquatic recreation for both sexes were similar. Others⁴ have argued that higher male drowning may be the consequence of a male tendency to overestimate swimming ability and underestimate aquatic risk. While the impact of gender on drowning incidence has been well reported, the impact of gender differences in water safety behaviour and beliefs on drowning risk have not. Such evidence may help explain why males appear to be at greater risk than females in the aquatic environment.

PURPOSE

The purpose of this Fact Sheet is to ascertain differences in male and female water safety behaviours and beliefs related to swimming and other aquatic recreation, as well as report on gender differences of the observed risky behaviours of their friends.

Fact File

- In New Zealand, young males in the 15-19 year age group had one of the highest age-specific rates of drowning-related deaths (7.9 per 100,000 person years) from 1989-1998.⁴
- The drowning incidence for males dramatically rises in 15-22 year olds, whereas female deaths by drowning peak in the pre-school years.⁵
- Six times more young males than females (males 18, females 3) aged 15-19 years drowned while swimming between 1992-2001 (Source: WSNZ Drownbase™, 2004)
- Twice as many males (males 63%, females 37%) in the 16-19 year age group were involved in surf incidents necessitating rescue between 1995-2000 (Source: SLSNZ Rescue Statistics, 2004).
- Even though more males engaged in boating activity,³ it is unlikely that differences in exposure to risk fully accounts for the seven-fold difference in boating fatalities (males 14, females 2) between 1992-2001 among youth (Source: WSNZ Drownbase™, 2004)

New Zealand Youth Water Safety Survey³

The subjects of this study were part of a nationwide sample of 2,202 youth, 4% of a target population of approximately 50,000 Year 11 (5th Form) students. Male students (n = 1171) made up slightly more than half (53%) of the respondents who completed a written questionnaire under the direction of survey administrators during school hours in the second term (May-June), 2003.

Full details of the New Zealand youth water safety survey 2003 are available in PDF format at:
<http://www.watersafe.org.nz/page.asp?page=422>

Key Findings

1 - MALE/FEMALE RISKY SWIMMING BEHAVIOURS

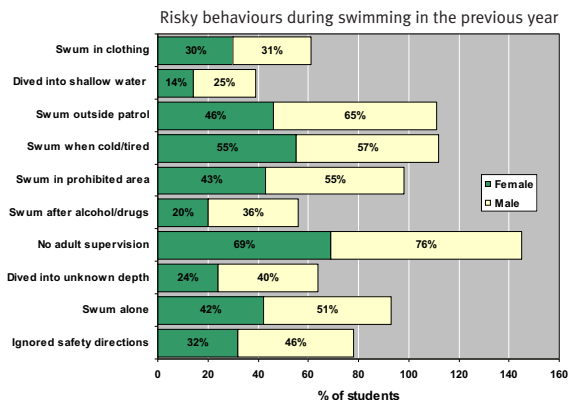
Students were asked whether they had performed any of 10 risky behaviours when swimming during the previous year. Males were more likely than females to have performed any of these at-risk behaviours when swimming (refer graph).

In addition to this indication of male risky behaviour, males were twice as likely to OFTEN have:

- Swum alone (males 12%, females 6%)
- Swum in a prohibited area (males 11%, females 6%)
- Swum outside a patrolled area at a surf beach (males 24%, females 12%)

In contrast, more females reported NEVER having:

- Swum alone (females 58%, males 47%)
- Swum in prohibited areas (females 57%, males 44%)
- Swum outside patrol areas (females 43%, males 34%)



2 - MALE/FEMALE RISKY BEHAVIOURS IN OTHER AQUATIC ACTIVITIES

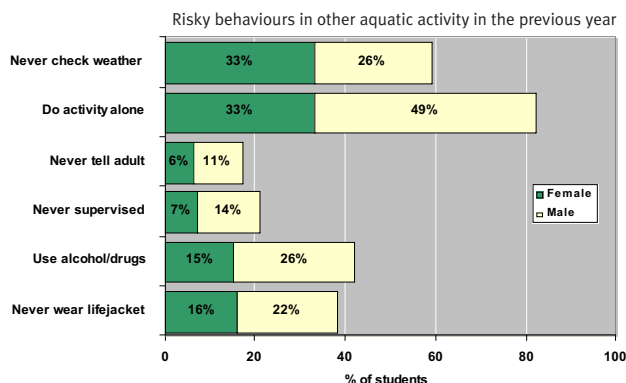
Students were asked if they had ever performed any of six risky behaviours when doing other non-swimming aquatic activity. Males were more likely than females in all instances to report risky behaviour.

Of special note in the graph, fewer females than males had NEVER:

- Told an adult beforehand of their intentions (females 6%, males 11%)
- Worn lifejackets when in a craft (females 16%, males 22%)

In addition, fewer males than females had ALWAYS:

- Told an adult of their intentions beforehand (males 32%, females 45%)
- Worn lifejackets (males 28%, females 35%)
- Had adult supervision (males 17%, females 22%)

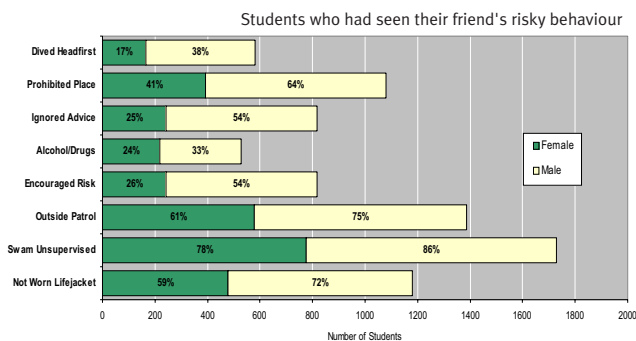


3 - OBSERVING FRIEND'S RISKY BEHAVIOURS

To find out how widespread risk behaviours were in peer group activity, students were asked if they had ever seen friends of the same sex perform risky behaviours when doing aquatic activity. More males than females reported seeing their friends performing risky behaviours in every instance

Of special note in the graph, males were more likely to report seeing their friends:

- Not wearing lifejackets (males 72%, females 59%)
- Swimming outside of patrolled areas at a surf beach (males 75%, females 61%)
- Encouraging others to take risks in the aquatic environment (males 54%, females 26%)
- Ignoring water safety advice and directions (males 54%, females 25%)
- Swimming in prohibited places (males 64%, females 41%)



4 - MALE/FEMALE BELIEFS ABOUT WATER SAFETY

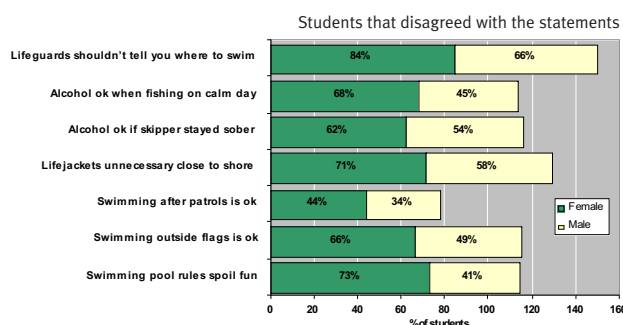
Students were asked whether they agreed/disagreed with a series of statements related to water safety issues. Female students were more likely than males to give safe/positive response to all statements.

In addition, more females DISAGREED that:

- Homeowners should not have to fence their pools (females 76%, males 61%)
- Swimming in clothes was okay if you did not have swimming gear (females 65%, males 58%)
- Swimming in clothes was okay if you did not go out too deep (females 51%, males 45%)

And more females AGREED that:

- Crossing a river alone should be avoided (females 65%, males 57%)
- Swimming alone was risky even for good swimmers (females 71%, males 64%)



CONCLUSIONS

These findings indicate that some youth possess a poor understanding of water safety. When analysed by gender, the prevalence of unsafe attitudes, and the engagement in at-risk behaviours among males during aquatic activity were consistent and pronounced.⁶ The prevalence of these risk-enhancing dispositions among males provides compelling evidence as to why so many more young males than females drown when participating in aquatic recreation.

Differences in attitudes and behaviours were particularly acute between males and females, with males expressing unsafe attitudes and risky behaviours across a wide range of water safety issues relating to alcohol consumption and boating, swimming in the surf, ignoring safety directions, swimming unsupervised or alone, and the wearing of lifejackets. Taken separately, any one of these dispositions is capable of heightening risk of drowning during aquatic activity. Taken collectively, they offer a strong explanation of why male youth are at greater risk of drowning than others.

RECOMMENDATIONS

- Present efforts to change the mindset of male youth towards their water safety through water safety education, should not only be persisted with, but intensified if further loss of life among young males is to be addressed.
- The development of water-based survival skills should be supported by development of an understanding of water safety principles especially those relating to the identification and management of risk, as outlined in the *Health and Physical Education in the New Zealand Curriculum* document.
- The widespread acceptance of alcohol consumption during aquatic activity especially among young males suggests that early intervention is not only desirable but also essential so as to prevent future drowning fatalities among the adult male population.

REFERENCES

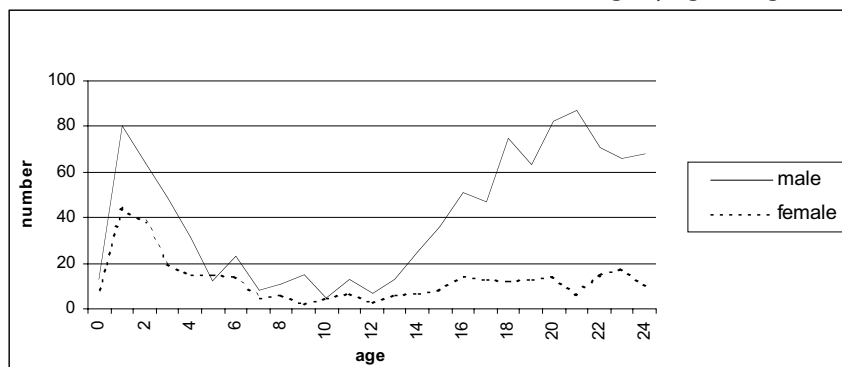
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MALE AND FEMALE DIFFERENCES IN WATER SAFETY BEHAVIOUR

By Siobhan Harrod and Jan Taylor, WaterSafe Auckland Inc.

As indicated in this fact sheet, males are more likely to engage in at-risk behaviour and make unsafe decisions around water.

Number of drownings by age and gender¹



A key finding of the Child and Youth Mortality Review Committee highlights males are over represented in the drowning statistics¹. In the under-25 age group 76% of all drownings in New Zealand (1980-2002) were males. “The male to female ratio of drowning is greater in young adolescents, rising to a ratio of 6:1 in the 20 to 24 year age group. The 5 to 12 year age group drowning rate is the lowest. The most common activity prior to drowning was accidental immersion, for example a child falling into a swimming pool, or a youth falling of a bridge into a river. The leading recreational cause of drowning was swimming with 242 deaths (18%).”

So what does this mean for us as educators?

From the above graph the drowning rate is the lowest from the 5 to 12 year age group. If we were to use these statistics to determine the needs of this age group we would eliminate education around swimming and water safety in its various contexts. However to do this would be extremely dangerous as our youth drown in alarming numbers. Schools provide the prime setting to educate our young people about making safe decisions and developing safe behaviours in, on and around water.

How can we make A DIFFERENCE?

Schools should have an aquatics programme. We need to do more than a stroke development programme for swimming to enhance the ability to survive in the water. Teaching needs to provide students with the opportunity to develop water confidence skills (<http://www.watersafe.org.nz/page.asp?page=442>) in a controlled, safe environment, such as a swimming pool. The learning then needs to be transferred to a range of environments, both simulated and real. These could include activities in cold, deep, moving, fresh or salty water. As the majority of drownings are accidental, students should experience a range of activities fully clothed.

These practical activities should be supported by classroom programmes, which develop thinking skills to enable safe decision making in, on and around water. For schools that do not have access to a pool, a classroom programme that develops safe decision making in a variety of aquatic contexts is essential. This can be reinforced through EOTC experiences. If scaffolding of learning continues throughout students' schooling this may reduce some of the poor decisions that youth, especially males, make.

1. Child and Youth Mortality Review Committee [CYMR] (2005). *Circumstances surrounding drowning in those under 25 in New Zealand (1980-2002)*. A report to Water Safety New Zealand June 2005. Wellington: WSNZ.



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www.watersafe.org.nz

Resource 11: Useful video clips

Some clips may need to be edited or fast tracked to suit your needs.

View YouTube clips.

Beaches Rips

- How to survive beach rip currents. Dr Rob Brander. (5.04 mins, Australian)
<http://www.youtube.com/watch?v=8EpDCRBmCP8>
- USLA and NOAA Rip Current PSA
<http://www.youtube.com/watch?v=ytyLMkV2iu0&awid=7199628462731960223-1008>

Boating

- New Zealand Safer Boating Tips
<https://www.youtube.com/watch?v=Q5TDNW7kfgE>

Drowning

- The instinctive drowning response. Frank Pia (5.03 mins)
<http://mariovittone.com/2011/07/video-of-instinctive-drowning-response/>

Lifejackets

- Old lifejackets TVNZ
<https://www.tvnz.co.nz/one-news/new-zealand/dangers-old-life-jackets-highlighted-coastguard>

Rescue

- Keep Calm and Carry On. Amohia Afeaki. There Will Be Another Day, Pacific Stories of Survival DVD, available free of charge from Drowning Prevention Auckland.
- 4Rs of Bystander Rescue - Drowning Prevention Auckland
<https://www.youtube.com/watch?v=adGarp04qlA>

Rivers

- Be River Safe – See Water Safety New Zealand video at
<https://www.youtube.com/watch?v=LOQu48fkJ8M>
- Mountain Safety Council video clip Get Outdoors - Expedition - #20 Cross a River Safely
https://www.youtube.com/watch?v=nImWxsaG_Ns&t=44s

Safety code

- River and lake swimming association safety code (5.26 mins) UK
<http://www.youtube.com/watch?v=QBGp-q9oEoQ>

Water safety skills; Surviving cold water

- Cold Water Shock
<https://www.youtube.com/watch?v=srgMCFXNsKE&t=5s>
- Cold water boot camp (3.59 mins HELP., huddle, signal USA)
<http://www.youtube.com/watch?v=zzo0hLfymSU>
- Cold Water Boot Camp USA: The first 60 seconds (2.36 mins temperatures cited in 45°F USA)
<http://www.youtube.com/watch?v=Sf3O1CcloN0>

Resource 12: Aquatic career ideas

The following is a list of career ideas stemming from aquatic/marine interests. It is not an exhaustive list and students could explore some job or associated higher education opportunities of interest.

Swimming	Surf	Boats	Police	Fishing
<ul style="list-style-type: none"> Swim teacher Swim school operator Pool lifeguard Aquarobics instructor Pool valet - water quality testing technician Sport management 	<ul style="list-style-type: none"> Surf life guard Surf Life Saving NZ Club development officers First aid trainer Sport management 	<ul style="list-style-type: none"> Boat building – wood, aluminium, steel Rigger Marine engineering Marine technician Marine painter Marine interior fitter Shipwright Sail maker Super yacht crew 	<ul style="list-style-type: none"> Maritime Police Police diver 	<ul style="list-style-type: none"> Commercial fishing crew Ministry for Primary Industries <ul style="list-style-type: none"> Fisheries officer Fisheries observer Aquaculture
Shipping	Council	Navy	Maritime	Recreational
<ul style="list-style-type: none"> Ferry operator Cruise ship work Shipping logistics & management Shipping administrator/clerk Marina operations & management Port operations & management Cargo specialist 	<ul style="list-style-type: none"> Harbourmaster River maintenance Coastal structures (jetty, moorings and wharfs) Water testing Injury prevention Pool lifeguard 	<ul style="list-style-type: none"> Officers and management Operational/technical trades Hospitality/logistics and administration Merchant navy Deck officer and rating 	<ul style="list-style-type: none"> Coastguard Pilot Rescue co-ordination centre Administration Marine pollution response service 	<ul style="list-style-type: none"> Kayak, yachting, paddleboard instructor Camp outdoor instructor Dive instructor Rowing coach Spirit of Adventure instructor Adventure tourism
Aquatic organisations	Coastguard	DOC	NIWA	Marine energy development
<ul style="list-style-type: none"> Administrator Project manager Programme manager Support officer Communication officer 	<ul style="list-style-type: none"> Tutors Search and rescue Communication centre 	<ul style="list-style-type: none"> Water quality testing Ranger biodiversity and community Recreation manager Administrator 	<ul style="list-style-type: none"> Water testing Freshwater and marine research Nautical science 	<ul style="list-style-type: none"> Project manager Ecologist Trade person
Watercare Services	Retail	Engineering	School teaching	Off shore oil exploration
<ul style="list-style-type: none"> Reservoir care Water treatment Waste water Administration Conservation 	<ul style="list-style-type: none"> Dive shops Marine store Boat yards Sports gear manufacture Launch and yacht broker 	<ul style="list-style-type: none"> Civil engineering water contractor Marine engineering Yacht engineering 	<ul style="list-style-type: none"> HPE teaching 	<ul style="list-style-type: none"> Oil rig worker Mechanical technician Tanker man Mechanic

Resource 13: Glossary

Aquatic environments range from artificial to natural bodies of water, still to moving and high energy water, fresh to saline, safer to more hazardous, polluted and unpolluted waters.

Aquatic skill development is the process of practising and acquiring appropriate skills and routines to ensure safer participation in a range of aquatic environments.

Basic aquatic skills is more than developing water confidence. It is the development of practical and cognitive skills involved in the acquisition of swimming and water competencies that meet the needs of students.

Critical thinking is the decision making process based on the knowledge, skills, attitudes and behaviours in line with personal developmental stages.

Cold shock is a gasp reflex that reduces the ability to hold one's breath when entering very cold water for 3-5 minutes.

Drowning is the process of experiencing respiratory impairment from submersion / immersion in a liquid. Drowning can be fatal or non-fatal.

Hypothermia is the lowering of core body temperature to below 35°C.

Non-fatal drowning – may result in hospitalisation after a drowning incidence.

Supervision – there are four components of supervision:

1. Constant visual contact by a competent adult
2. Proximity – adults staying within arm's reach of a non-swimmer and an under-5-year-old
3. Not being distracted by anything
4. Being ready to respond quickly.

Sculling is a basic swimming skill using only the hands to remain stationary or to move head or feet first. With the hands at an angle of 45°, they sweep out and back from the side of the body.

Survival skills are energy saving skills that are used to prolong life when immersed in water often for an extended period of time.

Survival swimming strokes are low energy strokes where the arms recover in the water, such as breaststroke, sidestroke, dogpaddle, survival backstroke and sculling.

Swimming is the ability to move through, under or across the water using limbs.

Swimming ability, anecdotally, is usually determined by the distance swum, e.g. 200m.

Swimming efficiency is using correct technique to maximise propulsion and minimise resistance, to swim at maximum speed.

Swimming competence is the ability to modify one's swimming strokes to suit the environment and unexpected changes thereof.

Swimming in a water safety context is broadly defined as "a person should be able to know how to and actually move in water using any mode of propulsion that maintains the head above water"¹³.

Rescue skills are the skills that are used to help people in distress with their recovery and removal from the water while keeping the rescuer safe.

Water competence is the sum of all personal aquatic movements that help prevent drowning, as well as the associated water safety knowledge, attitudes and behaviours that facilitate safety in, on and around water.

Water safety is more than swimming a set distance. It is about gaining experience, local knowledge and the combined development of physical skills and critical thinking to ensure safer participation in a range of aquatic environments.

Water safety skills are a range of skills that help individuals be safer in the water, help to save energy and calm a person in difficulty so they can make informed decisions. They include swimming, thinking, decision making and survival skills and are based on knowledge of safety rules, conditions and local hazards.

¹³ International Lifesaving Federation (ILS), (2007). Position Statement for Swimming and Water Safety Education, Leuven, Belgium: ILS.

Resource 14: List of useful organisations and resources

Coastguard Boating Education

www.boatingeducation.org.nz

- Safe boating courses
- Unit standards for Day Skipper

Drowning Prevention Auckland

<https://www.watersafe.org.nz/e-learning/>
www.dpanz.org.nz

- Rainbow System of Supervision
- Teaching and Learning Toolbox; Teacher Guides
- Research and Evaluations – water safety research
- Lifejacket loan scheme
- Pacific Water Safety DVD, *There Will Be Another Day*

Education Outdoors New Zealand

www.eonz.org.nz

- EOTC management <https://www.eonz.org.nz/resourcespublications/eotc-management/>
- EOTC Research and Resources

FYFOD

<http://www.fieldofdreams.org.nz/>

Maritime NZ

www.maritimenz.govt.nz

- Waka Ama DVD
- Safe boating DVD

Ministry of Education TKI page for EOTC management

<http://eotc.tki.org.nz/EOTC-home/EOTC-Guidelines>

- EOTC guidelines
- Appendix 4 Tool Kit for EOTC management

National Centre for Cold Water safety

www.coldwatersafety.org

NZ Underwater Association

www.nzunderwater.org.nz

Royal Life Saving Society NZ

www.lifesaver.org.nz

- Lifesaving awards

Support Adventure Website

<https://www.supportadventure.co.nz/good-practice/good-practice-guidelines/>

- Overarching Risk Management Guidance
- Good Practice Guidelines
- Planning templates

Surf Life Saving New Zealand

www.slsnz.org.nz

Swimming New Zealand

www.swimmingnz.org.nz

Waka Ama NZ

<https://www.wakaama.co.nz/>

Water Safety New Zealand

www.watersafety.org.nz

- Be River Safe DVD
- Drowning statistics

Yachting NZ

www.yachtingnz.org.nz

- Have a go – sailing
- Learn to sail

Vector Wero Whitewater Park

<https://wero.org.nz/>





www.dpanz.org.nz