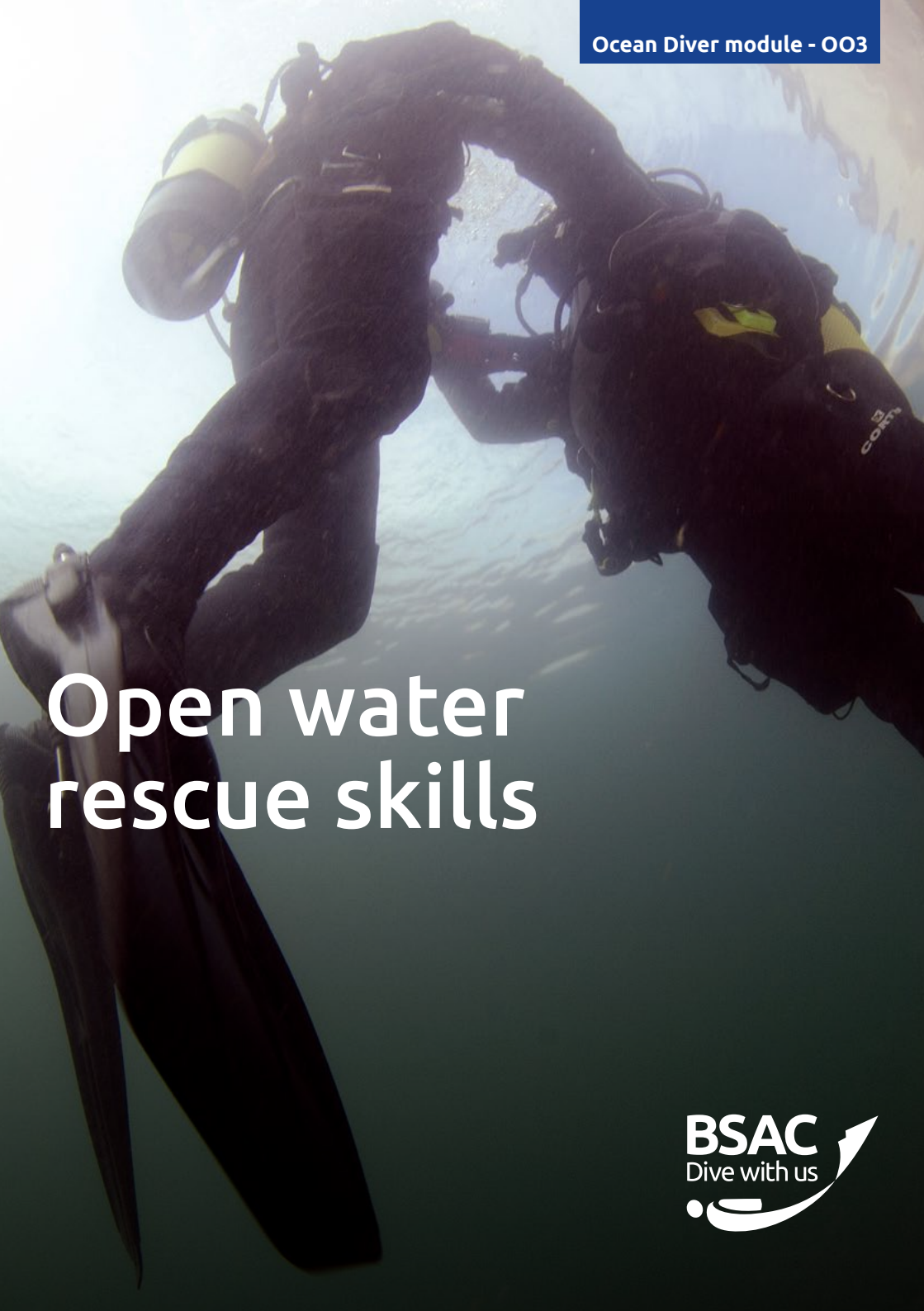

Open water rescue skills

BSAC
Dive with us

Contents

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Open water rescue skills

Module objectives

This module takes a closer look at dive-leading skills and nitrox is introduced as an alternative breathing gas. Students develop their rescue skills by learning how to lift an incapacitated diver to the surface in a controlled way. They continue to extend their depth experience, consolidate their buoyancy control and develop their awareness of the underwater environment. A weight check and further reinforcement of weight/weight-belt jettison as a rescue skill are included.

Achievement targets

At the end of this module students should:

- **Understand how to use an oxygen analyser and record diving-cylinder contents**
- **Be able to safely carry out a near-vertical descent, and maintain good control of their buoyancy throughout the whole dive**
- **Have extended their depth experience to 12-15m, and further increased their awareness of the underwater environment and their impact on it**
- **Be able to recover an incapacitated diver to the**

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surface and summon help

- Be able to jettison an incapacitated diver's weights/ weight belt
- Have been introduced to dive-leading skills
- Have performed an exit as if into a boat or onto a jetty
- Be able to use an AS as both donor and recipient, in shallow water
- Know the 'out of gas' signal

This module should also offer the student the opportunity to experience one or more of the following diving conditions:

- Sea dive – a dive conducted in salt water
- Low-visibility dive – a dive in visibility of 2-4m
- Wall dive – a dive along a vertical or near vertical wall with at least 4m of water between the divers and the bottom
- Nitrox dive – a dive using a nitrox mix of up to 36% oxygen
- Small-boat dive – a dive from a boat of less than 8m overall length, using a backward roll entry, and where exit requires removal of equipment in the water
- Large-boat dive – a dive from a boat of greater than 8m overall length, using a stride entry, and where exit does not require removal of equipment in the water.

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Equipment needed

For this module the instructor and each student will need:

- **Basic equipment (mask, fins and snorkel)**
- **A scuba set comprising a single cylinder containing air or nitrox up to 36%, buoyancy compensator (BC) (ensure that a student's BC is a good fit) and regulator fitted with an alternative supply (AS) configured to comfortably provide an effective gas supply to an out-of-gas recipient**
- **Weight belt, weight harness or BC integrated-weight system and weights**
- **Appropriate protective clothing, such as a wetsuit or drysuit complete with boots, hood and gloves**
- **Ancillary equipment including a knife or net cutter, and a dive computer or watch and depth gauge**

Note: the breathing gas to be used is nitrox up to 36%, or air. The instructor will therefore require access to an oxygen analyser.

Initial training is best completed with simple, standard equipment, so it is best practice to avoid the use of specialised or unusual equipment for Ocean Diver modules if possible.

Venue

This module requires a site that has a deep-water entry and exit, a level area at a depth of approximately 6m for skills development, and a maximum depth of between

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12 and 15m.

For students' early open-water experiences you should consider the comfort of the water conditions likely to be encountered at the chosen site on the day. Cold water (less than 10ºC), low visibility (less than 5m), and any noticeable water movement (more than 0.2 knots) will all make the experience more challenging and potentially less enjoyable. Such conditions should be avoided if practical to do so.

Module content

This module gives students the opportunity to carry out a nitrox dive and practice dive-leading skills. Students' open-water rescue skills are extended to recovering an incapacitated diver to the surface using a controlled buoyant lift (CBL) from a depth of 6m. It is essential that students have met the OO2 skill performance standard for a vertical ascent before participating in this exercise.

Because of their nature, rescue lifts are likely to exceed the normal ascent rate, so these ascents should be carried out before any other diving activity below a depth of 6m. Careful consideration should be given to the decompression implications of these repeat ascents on the subsequent dive profile and any subsequent dives.

Students' should be monitored throughout this module to ensure they are fully in control of their buoyancy at all stages of the dive.

The module contents that follow assume that students are using drysuits. For advice on adapting this module, see the section 'Adapting

this module' at the end of these module notes.

All practical Ocean Diver modules can either be delivered as a single session or broken down into two or more separate sessions, depending on students' progress and the time available.

The following sections are intended as a guide on how to deliver the skills. The sequence can be varied to suit local conditions and the needs of individual students. However, each session should begin with a briefing and a buddy check, and end with a debrief.

Using the principle of teaching by demonstrating a practical skill and then asking students to do it (demo/do), you will demonstrate each element of a skill first before asking students to copy your demo. Correct any errors by repeating the demo-do sequence emphasising the correct action.

Briefing

The briefing for open-water modules should start in advance of the diving.

- **Advance briefing**
  In advance, make sure that students have access to all the necessary equipment they will require and are fully prepared for the experience. This includes protective clothing and all the smaller items that can easily be overlooked by divers at this stage of training – hoods, gloves, additional weights plus spares, drysuit inflation hoses, dry change of clothing, wind-proof clothing, cold/hot drinks as appropriate.

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SEEDS brief

On the day, cover all elements of a SEEDS brief in a logical sequence appropriate to the local conditions. Reassure students that less haste at this point in training will mean more speed overall. Choose a location where the students are comfortable so that they are able to fully focus on the briefing.

- **Safety**

  Emphasise the basics including: confirming fitness to dive (students are free from colds); the importance of ear clearing, mask equalisation; checking gas consumption; and breathing normally at all times when using scuba, taking particular care on ascent. Point out any relevant hazards of the site, including slippery or uneven surfaces and a silty seabed.

  Emphasise consideration of breathing-gas consumption and ensure that appropriate turn-around and reserve values are established. Although no-stop times will not be exceeded on this dive, students should be shown why not, emphasising that decompression planning has not been ignored.

Note: this dive can be conducted on a nitrox mix of up to 36% to improve safety.

- **Equipment**
  List the equipment required for the lesson: basic equipment, scuba and weight system, suit with hood and gloves, depth gauge and timer/dive computer, knife/line cutter. Brief students on the use of shot lines, if appropriate.
- **Exercise**
  Briefly explain the main exercises to be undertaken as given in the lesson objectives: including practise of dive-leading skills, vertical descents, CBLs from 6m and surface towing, jettisoning another diver's weights in shallow water.

  Stress that in a real rescue, getting the casualty to the surface is crucial and would involve a rather more rapid, but controlled, ascent than normal. In training, the risks involved are unacceptable, and consequently a more normal rate of ascent will be used. Because getting the casualty to the surface is so vital, if a controlled ascent cannot be achieved, an uncontrolled ascent is preferable to failure. For this reason, practice in jettisoning a casualty's weights/weight belt in shallow water is included.
- **Discipline**
  Remind students of the importance of watching each of your demonstrations and only attempting to repeat a skill when prompted by you. Remind students of the importance of staying close together and the need to always ascend as a group (one up, all up).
- **Signals**
  Remind students of the basic diving ('OK', 'stop', 'up', 'down') and teaching signals ('you watch me' and 'you do'). Introduce any special signals that will be used for specific skills, such as 'you rescuer', 'you casualty'.
- **Report dive plan to Dive Manager**
  Ensure that your dive plan is reported to the Dive Manager. Seeing you as a role model, students will adopt this as standard procedure.

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Kit up and buddy check, dry run and entry

Alternative wording: This module introduces the use of nitrox as a breathing gas and provides students with an opportunity to conduct an analysis of a nitrox mix (to 36%). Ideally the process of gas analysis should be done on site before the dive. If this is not possible then the instructor should accompany the students to the gas supplier to ensure correct procedures are followed and the mix is properly analysed and recorded.

Note: If Nitrox is not available locally, then air can be used as a substitute breathing gas. Check cylinder contents with gas analyser (if nitrox is used)

- Calibrate oxygen analyser with air (21% oxygen) as directed in the instrument's instruction manual.
- Analyse cylinder contents, by very slowly opening cylinder valve and allowing a gentle flow of gas to pass through the inlet of the analyser, allow the reading to settle before reading the display.

- Label cylinder with percentage of oxygen and the maximum operating depth (MOD) for the mix.

Note: Point out any key warnings for the device such as for battery and sensor life.

- **Assemble scuba**
  - » Students to assemble their scuba kit.
  - » Check to ensure that this has been done correctly.
  - » Ensure that any further adjustments to the positioning of students' cylinders, identified to improve trim, have been adopted by the student.
- **Carry out functionality checks**

  Students to carry out functionality checks. Check to ensure that this has been done correctly.
  - » **Physical check:** Check that all hoses are free from damage. Check that the mouthpieces of both main and AS demand valves are firmly attached and are free from splits or tears that could allow water in.
  - » **Contents check:** Turn cylinder valve on slowly, holding the contents gauge facing the cylinder. Check gauge to ensure cylinder has adequate contents.
  - » **Operational check:** Take several breaths from both main and AS demand valves, while observing the contents gauge. Ensure valves breathe smoothly and contents gauge operates correctly (no fluctuations).
  - » **Leak check:** Turn cylinder valve off and check for leaks by both listening and observing the contents gauge (leave for a few minutes).
  - » **Breathe down:** Purge the air pressure, while cylinder valve is closed, and attempt to breathe from both main and AS demand valves to check for inward leaks. Before use, open cylinder valve, slowly as usual.

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- **Prepare weights**
  - » Ensure that any adjustments to students' weights, identified to improve buoyancy in previous modules, have been adopted by the student.
- **Fit suit**
  - » Help students to put on their suits.
  - » Ensure students help each other to close drysuit zips.
- **Kit-up, in buddy pairs**

  Students should, by this time, require minimal supervision during kitting up.
  - » Fit weight belt/weights, ensuring they are secure but can be ditched in an emergency.
  - » Put on scuba.

Note: Bend at the knees and keep back straight when lifting weights and scuba to protect against back injury.

  - » Fit hood and gloves.
- **Conduct buddy check**

  Students should by this stage be competent and confident in helping each other kit up and conducting a buddy check. Monitor and only intervene if necessary.
  - » Listen for the use of BAR or another appropriate acronym.
  - » Once students have completed their own buddy checks, you should perform a check of your equipment for the benefit of all students.




- **Dry run, CBL wearing gloves**
  - » Ensure students can establish suitable holds on each other to maintain contact and on each other's BC controls to achieve positive buoyancy during the CBL.
  - » Ensure students understand the concept of simplifying the technique by minimising the number of gas spaces to be controlled, and that these considerations include control of their own, as well as the casualty's buoyancy.
  - » Due to the variation (location and type) of buoyancy controls on dry suits and BCs there is no universal technique, a point that can be used to stress the importance of these considerations during the buddy check.

Note: The dry run is a helpful tool for showing students what's required once in the water, but should be kept brief to avoid unnecessary discomfort to fully kitted divers.

- **Fit mask and check seal**
  - » Remind students that masks should always be fitted before entering the water, and should stay in place until after exiting the water.
- **Deep-water entry, stride or backward roll**
  - » Prepare for entry by partly inflating BC, press mask and regulator against head with one hand, collect up other hoses and gauges with other hand, to secure.
  - » For stride entry (from shore or large boat): stand at edge of entry point breathing from demand valve. Take large step forward into the water, looking straight ahead.
  - » For backward roll entry (from small boat, if used): sit on side of boat breathing from demand valve. Roll/sit backward into the water, looking straight ahead.
  - » Once on surface, turn to face other divers, and signal 'OK' (or 'not OK').

Go back

- **Confirm weighting and surface buoyancy**
  - » Students' weighting should be correct at this stage, but check that they can initiate a descent.
  - » Also check that students understand the need for adequate surface buoyancy, their demand valve should be comfortably clear of the water when their BC is fully inflated.



- **Controlled vertical/near-vertical descent to 6m, using datum**
  - » Exchange 'OK' and then 'down' signals.
  - » Vent gas from BC and then from drysuit until just negatively buoyant.
  - » Monitor rate of descent by visual reference and increasing pressure on the ears and mask.
  - » Control descent by introducing gas into drysuit in short bursts.
  - » Arrest descent just clear of bottom, using gas in drysuit.
  - » Re-adjust for neutral buoyancy, hover just clear of bottom to confirm.



Skills practice in 4-6m

These exercises build on the CBL technique introduced in the sheltered-water modules and adapt it to the equipment worn in open water. The principles used are the same, although the means of achieving buoyancy/buoyancy control may differ.

- **Self-lift**
  Using the same technique as in the sheltered-water modules, this provides another check that the students are in good control of their buoyancy prior to conducting a CBL.
  - » From kneeling position, hold BC controls above shoulder.
  - » Introduce gas in short bursts until slight positive buoyancy achieved.
  - » Once knees are clear of bottom, vent in bursts to stop ascent.
  - » Vent further to start descent.
  - » Gently lower back onto knees, using a short burst of inflation to cushion landing if necessary.

Note: Students should be directed to watch each other perform this exercise, particularly the use of the BC controls, as this will reinforce the dry run carried out earlier. It will also enable students to appreciate that not all BCs inflate at the same rate.

- **Mini CBL**
  This should be initiated from a normal diving state, that is neutral buoyancy, for both divers. Failure to initiate a lift is a significant factor in failed rescue attempts, so students should understand the need to begin a lift promptly. Techniques taught should not involve emptying air from one space (drysuit), with its attendant increase in negative buoyancy, before attempting to lift using an alternative.
  - » From kneeling position, establish positive hold on ‘casualty’ (avoid harness quick release buckles).

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- Raise casualty's BC controls sufficiently to enable venting when required and introduce gas in short bursts until slight positive buoyancy achieved.
- Continue lift until casualty's knees are clear of the bottom, vent BC in bursts to gently lower casualty back onto knees.



- **Mini CBL with initial underwater contact**
  - Start with casualty lying face down on the bottom, simulating unconsciousness.
  - Approach casualty, check for consciousness.
  - Take firm hold of casualty and lift them into a kneeling position.
  - Rescuer conducts a mini CBL as above.



- **Intermediate CBL from 6m**

  This exercise further develops the control of another diver's buoyancy into a complete lift, needing control of student's and casualty's buoyancy during the ascent.
  - Repeat mini CBL with initial underwater contact
  - Continue to ascend for 2-3m, venting the BC in small bursts to

maintain a controlled rate of ascent.

» Stop and make controlled descent.

Note: Vent the casualty's dry suit in small bursts to further slow rate of ascent, if required. Take care to avoid over deflation.

- **Full CBL from 6m**
  - » Repeat intermediate CBL exercise above, but continue to surface.
  - » Vent BC in bursts to maintain controlled rate of ascent, this will need to be more frequent as the surface is approached.
  - » Rescuer controls own buoyancy during ascent.

Note: If performance standard is not achieved for this skill, then an additional dive with further repetitions and appropriate correction should be carried out. Be aware of the decompression implications of multiple ascents and keep the number of ascents to the minimum necessary.

- **Surface actions, following a CBL**
  - » Start with buddy pair positioned on surface as if they have just completed a CBL.
  - » Rescuer provides surface support by gripping casualty's BC strap, face to face and fully inflates casualty's BC to secure casualty at the surface.
  - » While keeping a firm grip, the rescuer makes him/herself buoyant.

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- » Rescuer rolls casualty onto back, removes their mask, removes their demand valve and ensures casualty's face is clear of water.
- » Maintain positive grip on casualty throughout.

- **Signal for help**
  - » Signal to surface cover/boat using distress signal, whistle or shouting.

Note: A suitable training signal should be substituted for the emergency signal to avoid misunderstandings by other groups of divers. Ensure however that students know the real emergency signal and why another is being substituted.

- **Tow casualty to safe exit**
  - » Repeat surface actions following a CBL, as above.
  - » Find a suitable item of equipment by which to hold onto the casualty behind the head.
  - » Keep towing arm straight to take the load, ensure casualty positioned directly behind the rescuer so that the drag of the casualty is minimised.
  - » Rescuer swims slightly on one side, towing-hold arm uppermost, so that their finning action is side to side, not up and down, underneath the casualty and the rescuer can look over their shoulder to see where they are going.

  - » Progressively increase distance of tow to 10-20m.

- **Check student comfort**

  At this stage, check students have sufficient gas, and are warm and comfortable enough to complete the next element. If students are cold, uncomfortable or just need further time in the water before doing skills practice; then exit the water (go to exit section p.15). The exploratory dive can be completed in a subsequent dive.

Exploratory dive in 12-15m, maximum

As in previous modules, the objective of this lesson element is to provide time for students to enjoy being underwater while giving further opportunity to consolidate buoyancy control, finning action and swimming attitude.

The following tasks should be integrated into the dive rather than being performed as formal exercises.

- **Finning action and trim**
  - » Continually monitor students finning action to ensure efficiency and that students are not overly disturbing the sediment.
  - » Check general attitude (trim) in the water and correct students if they are using hands as a means of propulsion or adjustment of attitude.
- **Maintain neutral buoyancy**
  - » Buoyancy should now be well controlled, but continue to monitor and correct errors as necessary.
  - » Watch for constant adjustments or constant gripping of controls and correct if necessary.
  - » To develop the students' buoyancy control skills throughout the dive, introduce opportunities to practice making changes in attitude or trim (swim up or swim down) and by holding a hover clear of the bottom.

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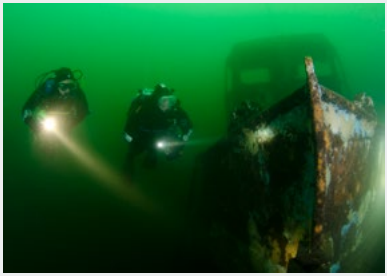
- **Awareness of environment, impact of finning**
  - » Highlight poor finning that stirs up sediment and reduces underwater visibility.
  - » Highlight potential for damage to underwater life by careless finning.
- **Dive-leading demonstration and practise**

  Ensure that students are given an opportunity to practice (mimic) these dive-leading skills.
  - » Develop students' underwater communication skills by frequent exchange of signals. Include signals to indicate direction of travel and positioning of buddy.
  - » Ensure the distance and relative positioning of the buddy maintains visual contact, to enable buddy to provide assistance if required.
  - » Conduct gas and time checks regularly to demonstrate the importance of routine instrument monitoring.
  - » Ensure divers observe agreed depth limits, dive time and profile including agreed turn-around and reserve breathing gas contents.
  - » Demonstrate pilotage throughout the dive, by pointing out features that can be used for navigation and how to recognise them when returning in the opposite direction. At this stage, this should be kept simple, for example using reef, wall or pier on left shoulder on outward journey, and right hand shoulder on return.



- » Monitor students' performance throughout the dive and their general awareness of the underwater environment, taking corrective action where necessary.

- **Controlled vertical ascent**

  Now that students are progressing to deeper water, they need to be introduced to controlled vertical ascents. These can be quite intimidating for new divers especially in poor visibility. Ensure that a good visual datum is available to provide security for the students. This could be a rock face, wall or shot line.

  - » Ensure students are neutrally buoyant, initiate ascent with 'OK' followed by 'up' signal.
  - » Start to ascend by swimming up, or inflating drysuit with a small quantity of gas.
  - » Control rate of ascent by venting gas from drysuit (or BC if using a wetsuit).
  - » Ensure that students use visual references to judge their rate of ascent, and that they maintain visual contact with all members of the group.
  - » Briefly pause the ascent at the 6m check depth, check maximum depth and time against plan before continuing with final slow ascent to surface.
  - » Continue at the slower ascent rate advised by your dive-planning tool.
  - » Closely monitor students' buoyancy control during the ascent.
  - » Guide students to vent their drysuits (or BC if used) during the ascent.

Note: Consider the inclusion of a safety stop of 1 to 3 minutes duration at the 6m ascent check depth if safe to do so.

- **Carry out surfacing drill**
  - » Look up towards surface above/behind buddy's head.

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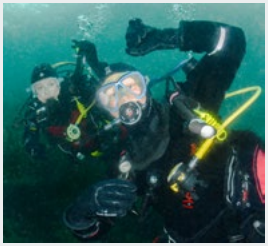
- » Raise free hand above head when nearing surface.

- **Actions at the surface**
  - » Fully inflate BC at surface.
  - » Exchange ‘OK’ signals.
  - » Discourage the often natural instinct to remove their mask or demand valve.


Exit from deep water, onto jetty or small boat, and de-kit

- **Weight belt/weight jettison from casualty, in shallow water**

  While a controlled ascent from a dive is always preferable, if other options fail, a diver must be able to jettison an incapacitated diver’s weights/weight belt to regain the surface. The skill is introduced and practised before leaving the water.
  - » With casualty lying face down on bottom, rescuer approaches, rolls casualty onto back and takes secure grip of casualty.
  - » Repeat the above and add release casualty’s weight-belt buckle/ weight releases and immediately refasten.
  - » Repeat the above and add pull weight-belt/weights clear of body and release. Breathe out while floating to surface.

Note: Because this exercise will result in a major increase in positive buoyancy, it must not be carried out in water deeper than chest deep.

- **Deep-water exit using ladder**
  Exit should be onto a jetty where the exit is from greater than standing-depth water, (unless the dive is from a small boat, see alternative small boat exit, below).
  - » Inflate BC to achieve positive buoyancy, take secure hold of ladder with one hand and remove fins with other.
  - » Hand-up fins to surface cover, if possible.
  - » Climb ladder, using the principle of three-point contact.
  - » Ensure you and other students stay well back in case a student falls from ladder.

Note: Masks should be kept on face, demand valves should be kept in mouth, until safely clear of the water.

- **De-kit**
  - » Lead the de-kitting exercise.
  - » Buddies help each other to remove scuba kit.
  - » If the dive was conducted from a boat, supervise students in packing away loose items of equipment and safely securing cylinders.
- **Alternative small boat exit**
  This exit should be taught if the module is conducted from a small boat.
  - » Take secure hold of boat, and maintain throughout.
  - » Ensure BC is inflated and dry suit has sufficient air to support the diver.
  - » Release weights/weight belt and hand up to boat crew. Take care to avoid dropping weights. If a traditional belt is used hold it by the free end of the belt to avoid weights sliding off.
  - » Release BC waist and chest connections, disconnect drysuit direct feed.
  - » Break BC shoulder connection on opposite side to demand-

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valve hose, swing BC around for crew to take hold, release BC and demand valve.

» Help crew to lift your scuba kit into the boat (push from below).

» Enter boat by gripping suitable handholds using both hands, duck down in water, pull with hands/fin hard to lift torso out of water and over edge, swing legs round and remove fins.

- **Report back to Dive Manager**
  - » Following the dive, students should check in with dive manager to confirm their safe return and to report their gas out, maximum depth, dive time and other points of interest.

- **Equipment care**
  - » Remind students to clean and dry their equipment on their return home.

REAP debrief

Conduct a brief but thorough debrief using the REAP format, making sure that everyone has enjoyed their dive and highlighting the areas of progress that they have made. Offer constructive feedback and explain how they will further develop their skills in the next dive.

Although it is better to debrief the dive while it is still fresh in students' minds, if students have got cold during the dive, decide whether it is

better to remove protective clothing before or after the debrief.

- **Review**
  - » Briefly playback the skills covered in the lesson and remind students of the lesson objectives.
  - » Check that all students have enjoyed the dive and specifically remind them of the dive-leading aspects including the features used for pilotage.
- **Encourage**
  - » Praise good performance both for the skills exercises and the exploratory dive.
  - » Provide support and comfort if things haven't gone so well.
- **Assess**
  - » Offer constructive feedback to enable students to identify areas for improvement.
  - » Provide guidance on how these improvements can be achieved.
- **Preview**
  - » Explain how students will further develop their skills in the next module.
  - » Give them something fun to look forward to and encourage them to come back for more.
- **Answer any questions that the students have.**

Adapting this module

This module extends all students' skills to depths beyond their previous experience. While the detail of how buoyancy is controlled (via drysuit or BC) will vary depending on the type of protective clothing used, and the lesson should be adapted accordingly, the overall content remains valid for all students.

Go back

If nitrox is not available, then the module can be conducted using air as the breathing gas. Students must be shown how to use the gas analyser with a nitrox mix.

Skills performance standards

At the end of this module, students should be sufficiently competent to achieve the following skill performance standards without supervision, in the water conditions that they have experienced.

Check cylinder contents with oxygen analyser (if nitrox used) With reference to the analyser manual, students should be able to successfully measure the oxygen content of the gas in their cylinder.

Controlled vertical descent/ascent While maintaining visual contact with a fixed reference (a rock face, shot-line etc) students should be able to control their rate of descent/ascent, arrest the descent/ascent at any time without contact with any fixed reference (for example for clearing ears) and arrest their descent/ascent at the target depth, without contacting the bottom or shooting to the surface.

Finning action and swimming attitude (trim) Students should have developed an efficient finning action, from the hip rather than the knees, with no excessive cycling. Students should be aware of the impact of their finning on the environment and should not overly disturb the sediment as they move along. Horizontal trim should be maintained and hands should not be used as a means of propulsion or adjustment of attitude.

CBL Student should be able to carry out a CBL from 6m on an incapacitated diver, taking a secure hold of the casualty, inflating the casualty's buoyancy device to produce adequate positive buoyancy to lift the casualty, managing the casualty's and their own buoyancy to achieve a controlled ascent to the surface, where they should fully

inflate the casualty's buoyancy device before their own. After signaling for help the student should be able to clear the casualty's mouthpiece/mask from face and stabilize them on their back, face clear of the water.

Surface tow of 10-20m to safe exit Students should be able to take a secure grip of an incapacitated diver and tow them for 10-20m, keeping face clear of water and maintaining control of direction.

Casualty weights/weight-belt jettison (in shallow water) Students should be able to take a secure grip of an incapacitated diver, locate and operate their weights/weight-belt release quickly and without fumbling, pulling weights/weight belt clear of casualty before releasing. A secure grip should be maintained throughout, and the released weight must fall cleanly away from casualty without snagging on any equipment.

Dive conditions Students should have gained experience one or more of the following conditions:

- **Low-visibility dive – a dive in visibility ranging between 2m and 4m**
- **Wall dive – a dive along a vertical or near vertical wall with no solid bottom a minimum of 4m below the divers**
- **Nitrox dive – a dive using a breathing gas mix containing up to 36% oxygen**
- **Small-boat dive – a dive from a boat of less than 8m overall length, using a backward roll entry, and where exit requires removal of equipment in the water**
- **Large-boat dive – a dive from a boat of greater than 8m overall length, and where exit does not require removal of equipment in the water**

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