

## BEYOND THE BASICS

### Lesson Objectives

This lesson consolidates SCUBA skills learned in previous lessons to achieve finesse in buoyancy control and to build confidence. It extends mobility skills to include unusual attitudes and introduces techniques relevant to diving from small boats. It also expands the range of non-SCUBA skills by introducing surface dives.

### Achievement Targets

At the end of this lesson students should:

- Be able to assemble and check their equipment with minimal supervision
- Be able to perform a backward roll entry
- Be able to swim without a mask while breathing from a demand valve
- Have developed the ability to manoeuvre in unusual attitudes
- Be able to remove the SCUBA unit at the surface and exit the water as for diving from a small boat
- Be able to perform a forward roll entry in snorkelling equipment
- Be competent and confident in their ability to perform surface dives using snorkelling equipment
- Be competent and confident in their ability to wash/dismantle their equipment

## Lesson Contents

This lesson contains both SCUBA and snorkelling skills and therefore is arranged in two distinct parts.

### 1. Briefing

Explain the above objectives and the relevance of the exercises to real diving. Ensure that all aspects of a 'SEEDS' brief are covered for the SCUBA exercises including those safety aspects common to the snorkelling activities (ear clearing, mask equalisation etc.). While forward rolls underwater are not encountered during normal diving, they will be used as a means of introducing mobility in unusual attitudes.

Only outline the snorkelling exercises to be covered at this stage, the ability to talk to the students during that part of the lesson enables any other relevant aspects to be covered at the time.

### 2. Prepare SCUBA unit

By this stage students should be competent to assemble and check their own equipment with minimal supervision.

- Assembly  
Fit BC to cylinder, fit regulator to cylinder, connect BC direct feed, secure contents gauges, AS etc
- Functional check  
Slowly turn cylinder valve on, check contents, breathe from main and AS demand valves, turn off, check for leaks, 'breathe down' check, turn cylinder valve back on

### 3. Kit up and buddy check

As with preparing the SCUBA unit, students should by this stage be competent to help each other kit up with minimal supervision. The buddy check, however, is a vital precursor to all diving and this message should be reinforced by drawing the elements of the buddy check from the students and then closely monitoring their performance as they check each other and you.

### 4. Entry into deep water using backward roll

This teaches the entry from a small boat which, where necessary, can be simulated by rolling backwards from a pool side or jetty.

- Backward roll entry  
Partially inflate BC, sit/crouch/stand at edge of entry point breathing from demand valve, hold mask to face with one hand, strap to back of head with other hand, roll/sit backwards into water, once surface regained turn to face other divers, give 'OK' signal (unless not OK)

### 5. Make a controlled descent in deep water

Although a positioning exercise, this exercise gives additional practice in judging how much air to vent to initiate a descent and then how much to re-inflate to control the descent. The aim is for students to achieve a gentle touch-down on the bottom. Rapid descents and heavy landings should be corrected.

### 6. Mask clearing in deeper water

This exercise provides not only further consolidation of this skill but also provides a lead in to the following exercise of finning without a mask.

- Remove & replace  
Flood mask completely, remove mask, identify nose pocket to check mask is correct way up, place strap out of way over front of mask, hold hair etc. clear of face, place mask on face, check skirt clear of entrapped hair, replace strap over head, hold top of mask against forehead, breathe out steadily through nose, tilt head backwards

The above technique may need adapting depending upon the style of mask used although the progressive sequence will remain the same. Masks fitted with drain valves will require the head to be tilted forward rather than back.

### 7. Finning without mask

This exercise is very much a confidence booster so that, in the very rare event that a mask be lost underwater, the student will be able to continue breathing while swimming to the surface. It also enables buddy responsibilities to be developed.

- Finning without a mask  
Flood and then remove completely, hold securely in one hand, establish breathing rhythm, when ready to begin finning student signals 'OK', buddy takes other hand, student starts swimming at a relaxed pace, concentrates on maintaining breathing rhythm, buddy guides student on a swim of approximately 25m, buddy signals 'stop' by gentle squeeze of the hand, student replaces and clears mask

## 8. Forward rolls - deeper water

This exercise teaches students to control their movements when in unusual attitudes. Prior to commencing check that students have correctly adjusted themselves for neutral buoyancy.

Starting from a kneeling position, straighten legs to move upwards and forwards, controlling buoyancy by breathing out. Keeping both arms straight sweep them around to rotate the body forward, bending at the waist at the same time. Keep the arms rotating to continue the roll, breathing in on the 'downward' side of the roll to control buoyancy.

## 9. Ascent in buddy pairs

This exercise provides further consolidation of maintaining buddy pair contact during the ascent and surfacing drill.

- Buddy pairs face each other, hold BC controls above shoulder, inflate in short bursts until slight positive buoyancy achieved, vent in bursts to maintain controlled rate of ascent, look up towards surface above/behind buddy's head, free hand above head, fully inflate BC at surface, exchange 'OK' signals

## 10. Remove SCUBA unit (and weights/belt) at surface and exit from deeper water

This teaches the exit into a small boat. Where necessary the boat can be simulated by a pool side or jetty. An assistant to act as boat crew will be needed.

- Exit into small boat  
Breathing from demand valve swim to boat/simulated boat, secure hold of boat throughout, release weights/weightbelt, hand up to boat crew, release BC waist and chest connections, release BC shoulder connection on opposite side to demand valve hose, swing BC around for crew to establish hold, release BC and demand valve, crew removes SCUBA unit from water. Maintain secure hold of boat throughout  
Grip suitable handholds with both hands, duck down in water, pull with hands/fin hard to lift torso out of water and over edge, swing legs round, remove fins

## 11. Kit up in snorkelling equipment

Monitor students but minimal supervision should be required at this stage.

## 12. Enter deep water by forward roll

This entry (useful when carrying something such as a camera) expands the range of techniques that the students experience and leads in to the subsequent lesson where this will be repeated in full SCUBA equipment.

- Forward roll entry  
Stand at edge of entry point, fins together, bend forward to place hands behind knees, look down at knees (not where you are going), roll forward into water, complete roll in water to regain upright position, clear snorkel, give 'OK' signal

## 13. Surface dives in deeper water

This lesson not only teaches a means of getting underwater but also should be used to teach a method of surfacing drill appropriate to a solo ascent. As snorkel divers should dive on the 'one up, one down' principle, the buddy will not be able to check behind them during surfacing and hence this technique is included. An alternative method of clearing the snorkel to that introduced in the earlier lesson is also included.

Remind the students about ear clearing, mask equalisation and not to take more than three breaths before diving to avoid hyperventilation.

- Surface dive/surfacing drill  
Starting from swimming gently at the surface, straighten the legs, bend at the waist reaching down for the knees, swing legs upwards while swinging arms downwards, pull arms back to sides and allow weight of legs to initiate descent, once fins are submerged swim on downwards/along bottom for a few metres, look up to surface, swim upwards rotating to check through 360°, slow ascent as surface neared, clear snorkel as soon top clear of surface, give 'OK' signal  
Repeat several times
- Snorkel clearing - displacement method  
Surface dive and initiate surfacing drill as above, slow as surface approached, keep head back to angle snorkel back and downwards, gently exhale through snorkel to clear water just before reaching the surface, continue gentle exhalation as head is brought forward to bring snorkel upright on reaching the surface. Give 'OK' signal

*(Note: this technique requires less effort but may not work with some types of snorkel which include*

*drain valves at the mouthpiece end).*

- Consolidation

To enable the above techniques to become second nature, further practice should be performed by swimming a distance of approximately 200 metres, surface diving every 25 m or so and gradually extending the underwater distance from a few metres to 10-15 metres

At the end of this lesson the students should be **competent and confident** in their abilities to perform surface dives and surfacing drill. Where these skills are not performed competently or confidently, then further repetitions, with appropriate correction, should be carried out until this standard is achieved.

#### **14. Exit**

Exit from the water as for a small boat as in the latter part of the previous exercise.

#### **15. Debriefing**

Using the 'REAP' format, praise good performance and offer constructive criticism where necessary. Explain how they will further develop their skills in the next lesson. Answer any questions that the students have.

#### **16. Equipment care**

At the end of this lesson the students should be **competent and confident** in their abilities to wash and dismantle their equipment. Where this is not demonstrated, give appropriate correction so that this is achieved by the end of the next (and final sheltered water) lesson.

- Equipment washed in fresh water, pressure dissipated from regulator, equipment disassembled, regulator dustcaps dried and fitted, and all items stowed away

### **Skills Performance Standards**

At the end of this lesson, the students should be sufficiently competent to achieve the following skill performance standard(s) without supervision, in the water conditions experienced:

**Surface Dives** – student bends at waist, brings body to vertical, swings legs upward cleanly, uses weight of legs/downward pull of arms to submerge, fin only once fins are fully submerged.

**Surfacing drill** – student looks up towards surface on ascent, rotates through 360° to check all around before reaching the surface, clears snorkel cleanly once at surface, gives 'OK' signal.

**Equipment disassembly** – students should wash, vent pressure from their SCUBA unit and disassemble it correctly.