

## THE FIRST OPEN WATER DIVE

### Lesson Objectives

Sheltered water lessons concentrated on teaching students the basic skills that they need to be safe underwater. As they progress to open water lessons, the emphasis now changes to teach them how to enjoy the underwater environment while continuing to develop their skills to match the expanding range of conditions that they will encounter.

### Achievement Targets

At the end of this lesson students should:

- Have had an enjoyable dive
- Have extended their depth experience to approximately 6m
- Have been introduced to an awareness of the underwater environment and their potential impact on it
- Have, where appropriate, established the correct amount of weight required for the conditions and the protective clothing worn
- Have developed buoyancy control skills appropriate to their standard of protective clothing
- Have been introduced to weight/weightbelt jettison as an emergency means of achieving positive buoyancy

## Lesson Contents

The lesson contents assume that the students are using dry suits for the first time. For advice on adapting the lesson content to conditions where other standards of protective clothing are necessary, or where a dry suit familiarisation session has been conducted in sheltered water conditions, see the section 'Adapting this Lesson' at the end of this lesson's notes.

Remember that many of the differences from their sheltered water training, while being taken for granted by experienced divers, will be significant to the students (eg. water temperature, visibility, protective clothing, etc.), it is important that this dive is not rushed. The prime objective of this dive is that they enjoy it!

### 1. Briefing

The briefing for this lesson should commence in advance of the day of the lesson. This 'advance briefing' should ensure that the students have all the necessary equipment for the dive, including all the smaller items that can easily be overlooked by divers at their stage of training - eg. hoods, gloves, additional weights plus spares, dry suit inflation hoses, dry change of clothing, windproofs, cold/hot drinks as appropriate etc.

The on-site briefing should outline the topography of the site, the route the dive will take and any significant things the students are likely to see. It should also include the exercises such as buoyancy checks that form a more 'formal' part of the learning process. Explain how buoyancy control is not just for their own comfort, but is also an essential element of avoiding damage to the underwater environment. Correct weighting is vital to good buoyancy control so time will be spent determining the correct amount of weight for each student. Ensure that students understand the relevance of the end of dive check. As this is the first time that many students will have worn any significant amount of weight, re-emphasise the importance of being able to jettison it quickly, and why this exercise will be done in very shallow water.

Ensure that the briefing includes breathing gas consumption considerations and that appropriate 'turn round' and reserve values are established. Although decompression will not be an issue for this dive, the subject should be addressed so that students are aware why it is not an issue, and that it has not just been ignored.

Ensure all the elements of a 'SEEDS' brief are covered, including any additional signals that will be used to point out items of interest.

### 2. Fit protective clothing

Depending upon the environmental conditions, it may be more comfortable to put on the suit before assembling the SCUBA unit, or it may be more comfortable to do the reverse. Instructors should advise students on the appropriate sequence for the weather conditions.

- Put on suit

Show students the appropriate technique for putting on their suit, particularly with respect to wrist and neck seals. Assist students where necessary as they put on their suits, and then show how they should assist each other to close the zip without trapping the undersuit

- Fit additional weight to belt/pouches

Instructors should make an initial estimate of the amount of weight likely to be needed by each student, and have this set on the student's belt or purpose designed weight pouches. This will act as a starting point and will, if necessary, be refined later

### 3. Prepare SCUBA unit

Students assemble their own SCUBA units and carry out functional checks, as this should have been fully mastered in the Sheltered Water lessons. Analyse gas if using Nitrox.

**Report dive plan to Dive Manager.**

### 4. Kit up and buddy check

Students should have already demonstrated proficiency at conducting a buddy check during the sheltered water lessons, but will require guidance on any new aspects to be included, eg. dry suit controls.

- Fit weightbelt/weights, then SCUBA unit

With the unfamiliar encumbrance of the dry suit, students will require even more assistance from each other to fit their SCUBA unit. Fit hood and gloves

- Locating and operating critical items wearing gloves

Once wearing gloves, have the students practice locating and operating critical items (eg. demand valves, BC/dry suit inflators and deflators, dump valves, weight releases etc.) on both their own, and the other divers equipment, as this will now feel very different. This will also be the first time that the students have worn any appreciable amount of weight. It is important therefore that they understand not only how to jettison this, but also are able to do so quickly when wearing gloves

## 5. Enter water

Enter the water by either ladder or wading into standing depth water. Fit fins, leaning on buddy or other suitable fixed object for support.

## 6. Equipment fit and buoyancy checks - standing depth

Although both mask fitting and buoyancy checks are not new exercises, they are both impacted by the protective clothing. With the reduced feel and dexterity when wearing gloves, students will find fitting the mask more difficult, and there will now be a need to ensure that the mask seal is not affected by the hood. Buoyancy will not only be changed with respect to the amount of weight required, but its distribution around the body is also changed. Students will need time to acclimatise to this.

- Mask fit

Slacken mask strap slightly to allow for the hood thickness. Defog mask. Fit mask to face, check hood is clear of mask seal, fit strap over back of head. *(Note: students struggling to fit the strap over the head is usually an indication that it is too tight)*

- Check mask seals

Breathing from the demand valve, bend forward to submerge face to check mask for leaks.

- Buoyancy check - fin pivot

Vent all gas from BC and dry suit, breathe out to lie flat on bottom, breathe in to pivot on fin tips. Adjust weight until fin pivot can be achieved with no gas in the BC or dry suit. Add 1 to 2 kg to allow for change of buoyancy due to breathing gas consumption during the dive dependent upon size of cylinder

*(Note: Any weight adjustment should be done by adding weight to the weightbelt or purpose designed weight pouches, not by putting weight in BC pockets. For some individuals a fin pivot may not be possible. Their buoyancy distribution may cause them to rise and fall in a level attitude)*

## 7. Dive to a maximum of 6m

This is the main objective of this lesson should be a leisurely and enjoyable swim with a descent/ascent along a gently sloping bottom to a maximum of about 6m. Throughout the dive, indicate points of interest to the students and the features used for pilotage to return to the exit point.

While the prime objective is fun, in order that students get the most enjoyment from the dive, instructors should allow the students time to familiarise themselves with the different attitudes that they will adopt in the water, due to the effect on their buoyancy distribution of the protective clothing. The following should therefore be integrated into the dive rather than being performed as 'formal' exercises.

- Buoyancy control with changing depth

Check for buoyancy control at approximately two metre depth increments by fin pivots. Adjust buoyancy as depth changes using dry suit inflation/venting in small bursts, using both the direct feed control and shoulder/wrist dump valve to be able to swim just clear of bottom. Demonstrate the most effective technique for venting gas from the suit for the type of dump valves fitted. Allow the student adequate time to become comfortable with the inflation/deflation techniques

- Finning action and swimming attitude

Good finning action and level attitude to be maintained. If problems are experienced with swimming attitude control (often indicated by excessive arm movements) subsequent adjustments to the disposition of weights, or how high the cylinder is carried on the student's back, may be required

- Impact on the underwater environment

Encourage the students to be aware of the potential damage that they can do to underwater life, not only by carelessly placed hands but also by the impact of their fins behind them. Buoyancy control and finning attitude is crucial to this, so with the use of the dry suit being so new, perfection should not be expected at this stage. The planned route should therefore take this into account

## 8. Mouthpiece and mask clearing - standing depth

The dive should end in chest deep water with sufficient breathing gas to carry out the following exercises. These exercises are intended to enable the students to develop familiarity with the encumbrance of protective clothing while performing skills with which they are very familiar.

- Mouthpiece retrieval and clear

Breathe in, remove demand valve from mouth, hold demand valve out to side and drop, lean forward and then roll demand valve side down, sweep arm back as close to side as possible and then outwards and forwards to encircle demand valve hose, replace demand valve, exhale to clear

- Partial mask clear

Lift lower skirt of mask from face to allow a small amount of water to enter, hold top edge of mask against forehead, breathe out steadily (but not forcibly) through nose, tilt head backwards

## 9. Weight and jettison checks - standing depth

By the end of the dive many students' breathing will have settled down which will have an impact on their buoyancy. This check will establish the correct weight for each student before progressing to future dives which will involve vertical ascents, for which carrying excess weight will be as detrimental to good buoyancy control as too little.

- Weight check with low breathing gas contents

After fin pivot buoyancy check, students completely vent suit. Assess amount of gas vented from suit to determine whether any further adjustment is needed to weighting for future lessons

While a controlled ascent is preferable, if other options fail, a diver must be able to jettison weights/weightbelt to regain the surface. Because this exercise will result in a major increase in positive buoyancy, it must not be carried out in water deeper than chest deep.

- weightbelt/weight jettison

Kneeling on the bottom, operate weightbelt buckle/weight releases, pull weightbelt/weights clear of body and release

## 10. Exit

Remove fins and masks in standing depth leaning on buddy or other suitable fixed object for support. Exit water by wading or steps

**Report back to Dive Manager.**

## 11. Dektit

As with kitting up, students should assist each other to remove the SCUBA unit.

Although it is better to debrief the dive while it is still fresh in students' minds, depending upon weather conditions, and whether the students have got cold on the dive, the instructor should decide whether it is better to remove protective clothing before or after the debrief.

Show students the appropriate techniques for removing items of protective clothing and then assist them to remove theirs.

## 12. Debrief

Check that all students have enjoyed the dive and remind them of what they saw. Review their performances, both generally during the dive and of the specific exercises at the end, highlighting areas of good performance and offering constructive criticism where necessary. Ensure that all students record how much weight they have used, and any adjustment needed for the next dive.

## 13. Equipment care

As equipment care will be carried out after returning home, instructors should ensure that their students are fully briefed about post dive care for any items of equipment being used for the first time, eg. protective clothing, weightbelts etc.

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## Adapting this Lesson

Where standards of protective clothing/water conditions other than those assumed for the above notes are encountered, the lesson content will need to be adapted appropriately. The following paragraphs, while not exhaustive, give guidance on how this should be achieved. Where other circumstances are encountered, instructors should use the following guidance as a basis on how to adapt the lesson contents.

### Protective clothing/water conditions same as for Sheltered Water training

Under these circumstances, the above contents include some unnecessary duplication. Consequently the object of the lesson becomes the extension of the students' depth experience, and their awareness and enjoyment of the underwater environment. Only items 1, 3, 4 (normal buddy check), 5, 7, 9, 10, 11, 12 and 13 need therefore be included. As the students will already have demonstrated proficiency at controlled vertical descents and ascents in the same standard of protective clothing, water entry and exit from a boat into approximately 6m of water may be substituted.

**Protective clothing/water conditions differ from Sheltered Water training**

- Buoyancy change only

Buoyancy changes may be due to changes in water salinity or to the need for a thicker wet suit (but not to the extent of requiring gloves and hood). Adjustment to the students' weights, and consequent confirmatory buoyancy checks, will therefore be required. As any change in protective clothing will not impact mask clearing, mouthpiece clearing or how the students will adjust their buoyancy, the relevant aspects of items 2 (if no protective clothing change), 4 (suit controls, impact of gloves), 6 (mask fit and seals), and 8 (mouthpiece and mask clearing) can therefore be deleted

- Full wet suit/changed water conditions

Where water conditions require a full wet suit (including hood and gloves) the students will need to adapt to the same factors of encumbrance and changed buoyancy as for students wearing dry suits. The only adaptation to the lesson content is that buoyancy control will, of necessity, be by the use of a BC rather than by dry suit inflation. While the technique will therefore be the same as for Sheltered Water training, the difference due to the encumbrance of gloves will still apply. The above lesson contents will therefore apply

