

SPORTS DIVER REFRESHER/ORIENTATION

Lesson Objectives

Many divers continue to dive regularly after qualifying as Ocean Divers, and hence are adequately prepared to continue with their Sports Diver training.

For a variety of reasons, not all divers are able to do this. Under these circumstances the performance of basic skills learned during Ocean Diver training will deteriorate. Due to a change in location, the water conditions in which they will undertake their Sports Diver training may be very different from those in which they did their Ocean Diver training. This may result in the need to use unfamiliar equipment, particularly protective clothing.

This optional lesson therefore addresses, for those students for which it is appropriate, the dual needs of refresher training of basic skills, and/or orientation to the different water environment and unfamiliar equipment.

Achievement Targets

At the end of this lesson the student should:

- Have had an enjoyable dive
- Have established the correct weighting for their standard of equipment and the water conditions
- Have again become competent and confident in their abilities to perform the following basic skills
 - Buoyancy control
 - Mask clearing
 - Direct feed rapid disconnect
 - Buddy awareness
 - Weight/weightbelt jettison
- Have developed sufficient familiarity with any new equipment that it does not adversely impact their performance of the above skills
- Have been reminded of their potential impact on the underwater environment

Lesson Contents

The lesson contents assume a situation where a student has learned to dive in tropical waters while on holiday, and has subsequently had a lengthy break from diving before deciding to continue with Sports Diver training back at home in a more temperate climate. The lesson content is therefore deliberately comprehensive.

Many situations will be less extreme than this. At the opposite end of the spectrum for example, for an Ocean Diver in regular practice, the transition could be purely that from fresh to salt water, and all that will be necessary will be an adjustment to the weight carried, and an introduction to the more varied marine life. Between the two will be a range of periods of inactivity and differences in diving conditions. Instructors should therefore use their judgement to decide whether a refresher/orientation is needed, and if so, exactly what elements of the contents below are appropriate to the individual students' circumstances.

Remember that many of the differences from their previous training, while being taken for granted by divers experienced in the local conditions, could 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 to ensure that the students have all the necessary equipment for the dive, including all the smaller items that can easily be overlooked by divers unfamiliar with these circumstances - eg. hoods, gloves, additional weights plus spares, dry suit inflation hoses, dry change of clothing, windproofs, hot drinks as appropriate etc.

The on-site briefing should ensure that the students fully understand the objectives of the dive and how they are appropriate to their particular circumstances. Remember that the students are qualified divers, and brief appropriate to their level of knowledge and skill using the SEEDS format. Due to the significant break from diving, some tact will need to be exercised where reminders of some of the more basic aspects (signals, ear clearing etc.) need to be broached. Ensure that the briefing includes breathing gas consumption ('turn round' and reserve values) as well as decompression considerations, both as a refresher and to emphasise their importance.

2. Fit protective clothing

Depending upon the environmental conditions, it may be more comfortable to put the suit on 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.

- Fit suit
Show students the appropriate technique for putting their suit on, particularly with respect to wrist and neck seals. Assist students where necessary with 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

Although the students should be fully competent at assembling their equipment, because of the time away from diving, instructors should discreetly monitor their performance.

4. Kit up and buddy check

As Ocean Divers, students should be competent at kitting up and conducting a buddy check. Because of the new equipment however, a demonstration will provide guidance on the relevant new aspects to be included (eg. dry suit controls), as well as providing a tactful refresher.

- Fit weightbelt/weights, then SCUBA unit
With the unfamiliar encumbrance of the drysuit, students will require more assistance from each other to fit their SCUBA unit than previously. Fit hood and gloves
- Locating and operating critical items while wearing gloves
Once wearing gloves, have the students practice locating and operating critical items (eg. demand valves, BC inflators/deflators, dump valves etc.) on both their own, and the other divers' equipment, as this will now feel very different
While wearing both gloves and masks, include a practice rapid disconnect of the dry suit direct feed hose as a dry run for the stuck inflator drill. Reconnect the hoses and check operation
As this may also be the first time that the students have worn any appreciable amount of weight, it is

important that they understand not only how to jettison this, but also are able to do so quickly when wearing gloves.

5. Enter water

Enter into standing depth water. Fit fins, leaning on buddy or other suitable fixed object for support.

6. Skills practice - standing depth water

These exercises act as both a refresher of previously learned basic skills, and adaptation to the impact of unfamiliar equipment on those skills. They also establish the appropriate weighting for the change in equipment.

- 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 2kg to allow for change of buoyancy due to gas consumption during the dive dependant upon size of cylinder. Any weight adjustment should be done by adding weight to the weightbelt or purpose designed weight pouches, not by putting weight in BC pockets

Note that with some individuals a fin pivot may not be possible. Their buoyancy distribution may cause them to rise and fall in a level attitude.

- 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

- Full flood

As for partial flood but lifting mask skirt off face to completely flood the mask

- Remove & replace

Flood mask completely as above, remove mask, identify nose pocket to check mask is correct way up, place strap out of way over front of mask, place mask on face, run finger round edge of hood to check clear of mask skirt, replace strap over head, hold top of mask against forehead, breathe out steadily through nose, tilt head backwards

7. Skills practice at 3m

These exercises provide further refresher practice to consolidate the basic skills, and introduce the new equipment related skill of quickly disconnecting the dry suit inflator.

- Mask clearing

Repeat the mask clearing exercises at a depth of 3m. Where students performed these exercises confidently in standing depth water, the partial flood may be omitted at the instructor's discretion

- Dry suit inflator stuck open

Assuming the dry suit hose comes under the right shoulder, the right hand grips the direct feed hose, thumb and forefinger of right hand operate disconnect collar (Note: initially the direct feed hose may need to be pressed towards the valve to enable the collar to be moved), direct feed hose separated from valve. Where necessary the left hand is used to steady the valve

The above sequence is then reversed to reconnect the hose. Once connected the inflator should be briefly operated to check that the connection has been correctly made.

- Buoyancy check - mid water hover

From a kneeling position inflate dry suit in short bursts to lift clear of the bottom. Vent/re-inflate in short bursts to achieve a hover in mid water (ie completely clear of the bottom and below the surface), adjust dry suit inflation so that no further inflation/deflation is required while gently ascending/descending with breathing cycle, remain clear of the bottom and the surface throughout breathing cycle

8. Buoyancy control with changing depth - from 6m

These exercises provide a refresher of buoyancy control during the ascent and descent, and introduce the impact of the new equipment on buoyancy control.

- Ascent and descent

When ready to ascend, exchange 'OK' signals and then the 'ascend' signal. Initiate ascent by finning upwards and then control buoyancy by venting from dry suit, frequency of venting increasing as depth decreases

Ensure that the students use visual references to judge their rate of ascent, and that they maintain visual contact with all members of the group

Once at the surface and ready to descend, exchange 'OK' signals and then 'descend' signals. Vent from BC and then from dry suit until just negatively buoyant. Control descent by introducing gas into dry suit in short bursts. Monitor rate of descent by visual reference and increasing pressure on the ears. Arrest descent just clear of bottom

9. Exploratory dive to a maximum of 15m

This part of the lesson should give the students an enjoyable dive while also acting as a refresher of more general diving skills.

- Buoyancy control and swimming attitude

Closely monitor the students' buoyancy control during the dive. Guide the students' inflation of their dry suits throughout, with the object of demonstrating not only good buoyancy control, but also maintaining a good swimming attitude and depth control

- Buddy awareness

Frequent exchange of 'OK' signals, periodic checks of breathing gas consumption, distance from buddy appropriate to both underwater visibility and the need to be able to render assistance if required.

- Awareness of and impact on, the underwater environment

Draw the students attention to as many features of the topography or underwater life as possible during the dive

Draw attention to the potential damage that divers can do to underwater life, not only by carelessly placed hands but with their fins contacting the bottom as they swim along

10. Vertical/near vertical ascent

Controlled ascent, with visual contact being maintained and judging rate of ascent using a visual datum such as a rock face or shot line. Briefly pause at the 6m check depth to ensure buoyancy is fully under control, before continuing with final slow ascent to surface. At surface inflate BC.

11. Weight check with low cylinder contents - 2m depth

As overweighting is potentially dangerous, a confirmatory check should be carried out at this stage

- In approximately 2m of water all the gas should be vented from the dry suit and a 'mid water hover' buoyancy check should be carried out with low cylinder contents (approx 50 bar). Any necessary adjustments to the students' weight (not suit inflation) should be made until a controlled hover can be achieved. To compensate for the reserve of breathing gas remaining, and to ensure that, should the need arise, a controlled ascent could be achieved with lower gas contents, approximately an additional half a kilo of weight should then be added

12. Weight/weightbelt jettison - standing depth

This exercise is a refresher of this important self rescue skill, but also introduces the impact of the unfamiliar equipment.

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

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

13. Exit

Exit suitable for local conditions

14. De-kit

Students should by this time be fully competent to remove their equipment with their buddy's assistance

15. Debrief

Check that all students have enjoyed the dive. Review their performance, highlighting areas of good performance and offering constructive criticism where necessary

Adapting this lesson

Irrespective of the standard of protective clothing worn relative to that assumed in the above notes, the overall content of the lesson remains valid, although the detail of how buoyancy is controlled (eg via BC rather than dry suit) will vary.