Australian Government

Department of Education, Employment and Workplace Relations

SISOSCB304A Navigate prescribed routes underwater

Release: 2

INDUSTRY SKILLS COUNCILS

Creating Australia's Future

SISOSCB304A Navigate prescribed routes underwater

Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to measure distance, determine direction and navigate underwater along prescribed routes.

Application of the Unit

This unit applies to current or aspiring SCUBA dive guides or instructors working in controlled open water environments to a maximum depth of 18 metres. This may include those working for private dive schools or companies operating at coastal sites or through holiday resorts.

Licensing/Regulatory Information

No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the Evidence Guide.
1. Plan prescribed routes.	1.1. Identify ***standard methods for measuring distance*** and determining ***direction***. 1.2. Assess ***hazards*** associated with navigating underwater and implement procedures to minimise ***risks*** according to ***industry technical and safety criteria***, ***relevant legislation*** and ***organisational policies and procedures***. 1.3. Select ***navigation equipment***, set compass bearing and determine ***roles*** with buddy.
2. Navigate underwater.	2.1. Determine direction underwater by using a compass and or ***natural phenomena***. 2.2. Navigate a straight line and its reciprocal using standard methods for measuring distance and ***direction indicators*** according to industry technical and safety criteria, relevant legislation and organisational policies and procedures. 2.3. Follow a prescribed route with changes of direction and record measurement on slate.
3. Evaluate navigation techniques.	3.1. Evaluate ***relevant aspects*** of the underwater navigation activity. 3.2. Identify improvements for future underwater navigation experiences.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- communication and teamwork skills to inform progress with buddy and determine roles throughout underwater navigation activity
- problem-solving skills to:
  - determine direction using a compass and or natural phenomena
  - measure and calculate distance using standard methods
  - follow a prescribed route in open water
- numeracy skills to set compass bearings, measure distance and record information to support safe underwater navigation
- first aid and emergency response skills appropriate to the site to enable initial response to emergencies and personal health care.

Required knowledge

- legislation, organisational policies and procedures and industry technical and safety criteria to enable safe conduct of all underwater navigation activities
- features, operation and usage of navigation equipment to measure distance and direction
- weather and environmental information to interpret forecast and conditions and their effect on the activity
- hazards and risks associated with navigating in open water to a depth of 18 metres
- underwater communication systems such as signs and signals used to communicate with buddy
- emergency, first aid and rescue procedures appropriate to the location to ensure risk minimisation to self and group
- minimal impact interactions and techniques to minimise negative impact on aquatic animal and plant life.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- measures distances and determines and maintains direction underwater using both compass and natural phenomena to navigate a straight line
- negotiates hazards and risks associated with underwater navigation, and minimises negative impact on aquatic animal and plant life
- evaluates and reflects on navigation performance to identify strengths, weaknesses and areas that need improvement.

Context of and specific resources for assessment

Assessment must ensure participation in multiple underwater navigation activities to demonstrate competency and consistency of performance

Assessment must also ensure access to:

- an open water SCUBA dive site
- a suitable buddy to participate in underwater navigation activity
- a suitable diving boat, if required
- SCUBA, navigation and recovery equipment.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the planning and review process
- oral or written questioning to assess knowledge of a range of standard methods for measuring distance and processes to determine and maintain direction throughout underwater navigation
- observation of safe participation and communication with buddy during activity
- third-party reports from a supervisor detailing performance.

Industry has determined that this unit must be assessed with the following unit or units:

- SISOSCB301A SCUBA dive in open water to a maximum depth of 18 metres.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Standard methods for measuring distance may include:	• kick cycles • time • arm spans • diver line reel or rope.
Direction may include:	• straight line • turn • square • triangle.
Hazards may include:	• temperature extremes • depth • currents • visibility • time • air depletion • entanglement • disorientation.
Risks may include:	• hypothermia • heat exhaustion • injuries • exhaustion • lost part or party member • equipment failure • loosing track of visual references • diving deeper than intending • barotrauma • nitrogen narcosis • contaminated SCUBA air • stings or bites • Decompression Illness (DCI).
Industry technical and safety criteria may include:	• British Sub-Aqua Club (BSAC) • Professional Association of Diving Instructors (PADI) • SCUBA Schools International (SSI).
Relevant legislation may include:	• occupational health and safety

	• permits or permission for access • environmental regulations • marine regulations.
Organisational policies and procedures may include:	• occupational health and safety • communication protocols • code of ethics • manufacturer's recommendations • minimal impact codes.
Navigation equipment may include:	• underwater compass and watch • slate • land compass to plot route before dive • GPS to use from boat to get to site • buoys to map location.
Roles may include:	• monitoring bearing and direction, using compass • monitoring air consumption, depth and hazards • monitors navigation, air consumption, depth and hazards while diving together.
Natural phenomena may include:	• wrecks • cliffs • pinnacles • reefs • sand bars • current • waves.
Direction indicators may include:	• using a compass • using natural phenomena.
Relevant aspects may include:	• objectives • planning process • activity site • weather • equipment selection • clothing selection • food selection • instructional content • instructional technique • assessment technique • group feedback • directing techniques • rescue techniques employed.

Unit Sector(s)

Outdoor Recreation

Competency Field

SCUBA