Module # 2 Snorkel Supervision and risk management outline

Why do people want to snorkel?

1. People snorkel because they want to see and interact with the underwater world.

2. Snorkeling is easy and safe. Because most people who snorkel do so without formal training, potential snorkelers may not be interested in seeking professional instruction.

What is the role of the Snorkel Guide?

-The role of the Snorkel Guide is to be able:
1. To safely organize and execute snorkel excursions for participants.
2. To supervise snorkeling activities.
3. To be able to assist in the event of an emergency.
4. To provide local environmental information (e.g. tides and currents)
5. To provide advice to participants on their interaction with the environment.
6. To provide information on the local marine life.

What are the duties of the Snorkel Guide?

As a guide you may be called on to:
1. Lead a tour, pointing out interesting features of the environment.
2. Assist snorkelers with equipment selection and fit.
3. Brief snorkelers on safety and environmental issues.
4. Assist snorkelers with entering and exiting the water.
5. Organize and supervise activities from the shore or boat, without leading a tour.
6. Respond appropriately in emergency situations.

What are the responsibilities of the Snorkel Guide?

As a Snorkel Guide, the safety, comfort and enjoyment of the snorkeling participants are your responsibility. You will need to be able to plan safe and appropriate tours to suit the abilities of the participants, who will look to you as a role model, leader and mentor. You are both an ambassador for the underwater environment and a professional associated member and as should adhere to a strict code of conduct. You must:

1. Maintain your associated membership.

2. Conduct yourself and your related activities in a professional manner.

3. Not wrongfully disparage the organization, as Members or any other dive industry professionals.

4. Exhibit common honesty in your related activities.

5. Cooperate during official investigations by responding fully and promptly to enquiries.

6. Abide by the requirements and intent of the Member Youth Leader’s commitment whenever supervising children.

7. Be a role model for other snorkelers when interacting with the environment.

What are the key elements of a snorkeling excursion?

1. **Preparation – adequate planning, risk assessment of the environmental** conditions, group size and logistics, having appropriate and sufficient equipment, and being ready to respond to problems.
   a. Ensure participants complete any paperwork.
   b. Perform a risk assessment of the snorkeling environment, and decide on the most appropriate method of supervision for the group.
   c. Ensure that all equipment is clean and fully assembled.

2. **Briefing – inform the snorkelers about procedures, the snorkel plan, and** any other relevant information.

3. **Supervision – put yourself in the most effective position to see and assist** snorkelers.

4. **Roll Call.**

5. **Debrief - Congratulate snorkelers and remind them of the highlights of the** tour. Make it clear to all participants when the supervised snorkel excursion is over.

6. **Equipment cleaning and storage.**

What equipment can assist in supervising snorkeling activities?

1. Management equipment – may be useful depending upon the environment.

   a. Clipboard/ roster.
   b. Binoculars / polarized sunglasses.
   c. Site maps.
   d. Slates.

2. Emergency response equipment

   a. Emergency oxygen.
   b. First aid kit with pocket mask and barriers.
   c. Rescue float or life ring with line.
   d. Marine radio/cellular telephone.
   e. Blanket.

3. Other useful equipment

   a. Tool kit with spare mask /fin straps.
   b. Surface marker buoy.
   c. Individual flotation devices / snorkel vests.
   d. Rescue float or life ring for tour.
   e. Torch.
   f. Identifiable clothing

What should be included in a Briefing?

The term “Briefing” relates specifically to the information you provide to snorkelers before they enter the water. It is usually delivered whilst onboard a boat or at the beach. Snorkel Guide briefings should cover:

1. Location (site name, any relevant local information, site map).

2. Points of interest (the local reef, particularly noticeable rock formations or coral heads).

3. Marine life typical of the local environment.

4. Information relating to potential hazards (strong currents, boat traffic, specific marine life that may inhabit the area).

5. Environmental considerations (a reminder not to touch anything, to stay clear of the reef and not to attempt to feed or chase fish).

6. Photography tips if applicable.

7. How to prepare and don equipment, including de-fogging and clearing of mask and snorkel.

8. Proper equalization techniques for snorkelers who will be taking part in breath-hold diving, including advice on avoiding hyperventilation and the risk of shallow water blackout.

9. Entry/exit techniques (including the use of ladders or small boats as applicable).

10. Organization:
    A. where they will snorkel to
    B. when they will turn back
    C. whether they will be in buddy teams or one group
    D. position of the snorkel guide
    E. use of buddy system for breath-hold diving
    F. hand signals or other means of communication as appropriate
    G. emergency procedures (recall signal, how to signal for help if required)
    H. A reminder to snorkel within their limitations, stay shallow, or stay close to the snorkel guide if the guide is in the water

11. Logistics (how snorkelers will be counted in/out of water, how long they will be in the water).

What is the primary purpose of snorkeler accounting procedures?

1. When supervising more than a handful of snorkelers, the primary concern is making sure each snorkeler is back aboard/ashore after an excursion.

2. Procedure – names are usually recorded on a roster as snorkelers arrive on board/at site, and as they enter and exit the water. Ensure snorkelers are visually present to confirm everyone is out of the water.

3. When practical, or if needed by local regulations, it may be useful to record additional information:
   A. time entered water
   B. time exited water

4. On larger vessels, counters may be used to count people on board, and before departing site. Although everyone on board may not be a snorkeler, this role may fall to the Snorkeling Guide to facilitate.

5. Ensure your roll call procedure includes a written record, which you should then verify.

How do you evaluate general site conditions, and how do conditions affect snorkeling?

1. Site conditions affect snorkeling, and therefore are an important element of excursion planning.

   a. Determining “acceptable” conditions may depend partly on the skill, fitness and experience of the snorkelers. Your briefings and recommendations help snorkelers determine whether the conditions are acceptable for them.

   b. It helps snorkelers plan their own activities when you tell them your observations and conclusions regarding the conditions. It also teaches them about evaluating conditions.

   c. There is a broad range of acceptable conditions. You advise snorkelers of the conditions, but snorkelers must accept the responsibility of assessing their own skills and deciding whether or not to enter the water. Ensure there is a contingency exit point available, and abort the trip if conditions are unsuitable for the group, or conditions deteriorate.

   d. Factors affecting the snorkeling conditions include:
      (1) Weather (wind, rain, sun).
      (2) Tides.
      (3) Currents.

What supervision options are available to the Snorkel Guide?

Depending on the size of the group, and the results of the initial risk assessment, the Snorkel Guide may enter the water to guide the participants, or take up an appropriate vantage point to supervise the activities.
You should consider fitness, and the abilities of the participants as well as environmental conditions when determining group logistics and choosing a site.

Other factors to consider are:
• Use of snorkel vests
• Keeping weaker snorkelers close to you
• Make up of buddy pairs
• Buddy system (one up / one down) for breath-hold divers
• Depth of site (choose shallower sites where possible)
• Ease of access.

Snorkeling Equipment

What equipment is needed for snorkeling?

1. Masks are used to create an air space in front of our eyes, which allow us to see properly. Snorkeling masks include a pocket for the nose, allowing snorkelers to equalize if breath-hold diving.

2. Snorkels allow us to breathe whilst our faces are under the water. Some types may include a purge, allowing us to clear water from the snorkel easily.

3. Fins allow us to swim quickly and easily through the water.

4. Exposure suits. Even in warm climates, snorkelers can quickly get cold. They also protect snorkelers from sunburn and minor scrapes.

4. Snorkeling vests (buoyancy aids) can be used to provide support at the surface if a snorkeler is tired or having difficulty.

5. Signaling device (e.g. whistle) can allow a snorkeler to indicate that they need assistance.

7. Accessories:
   a. Floats can be used to make snorkelers more visible in busy areas.

   b. Flotation devices or other rescue aids may be valuable for the snorkel guide to have to hand.

   c. Accessory bags can be used to hold equipment, or for collecting rubbish (however, not for collecting souvenirs!).

   d. Underwater cameras – there is a wide range of disposable cameras available which can be used for snorkeling.

   e. Torches can be used when snorkeling at night, or to bring out the colors while breath-hold diving.

Environmental Considerations

What are the different types of snorkeling environment?

1. Coral reefs – the most popular snorkeling environment, as they are shallow, warm, easily accessible and provide an abundance of aquatic life.

2. Wrecks – can be used as snorkeling sites if shallow.

3. Beaches.

4. Inland / artificial sites, including pools and aquariums.

5. Other shallow sites.

What are responsible snorkeling practices?

With particular regard to reefs, as the most popular snorkeling environment:

1. Coral is a living animal. Coral tissue is very thin and easily damaged, so should not be touched. Also, resist the temptation to touch other creatures. For this reason, many marine reserves require that snorkelers do not wear gloves, and then they are not tempted to grab the reef.

2. Passively observe organisms by floating in one spot and allowing fish to swim to you.

3. Remain at least an arm's length from the reef unless you're looking at something very carefully.

4. Avoid kicking up sand because this smothers corals when it settles and is stressful to other reef animals.

5. Always be aware of your body and equipment's position in relation to the reef, especially your fins, and never stand on coral.

6. Avoid feeding reef fish. This may introduce unhealthy food items and disrupt their natural behavior.

7. Do not chase, tease or harass underwater creatures.

Emergency Care and Safety Considerations

What are the Emergency Care and Safety considerations for snorkelers?

1. Emergency plans: The planning process should cover procedures for handling the following situations:

a. Emergency assistance plans

b. First aid / CPR.

c. Rescue.

d. Evacuation. (Local protocols including Search and Rescue (SAR) facilities, landing points and emergency services)

e. Missing persons.

2. First aid, CPR and oxygen

a. Timely and appropriate use of first aid is an important factor in the treatment of a snorkeling related injury. Oxygen administration may be an important part of resuscitation, or for use with any snorkeler who is breathing but who is in respiratory distress.

b. Remove patients from the water as quickly as possible in any emergency before commencing first aid / CPR.

Why Care About the Environment.

What is Coral Watch?

- Coral Reefs are the oldest, most productive and diverse ecosystems in the sea. They are nursery grounds to 25% of marine species and home to nearly 33% of all known fish species. Coral reefs are rapidly being destroyed worldwide. Up to 30% of the world's reefs have already died; another 30% are severely damaged.

- Climate change is having a dramatic effect on coral reefs. Increases in ocean temperatures contribute to coral bleaching episodes – a process whereby corals lose symbiotic algae living inside their tissue supplying coral with energy. This loss leaves coral transparent and reveals the white coral skeleton underneath.

- This potentially fatal process yields the "bleached" appearance. Project AWARE has partnered with Coral Watch, a nonprofit research organization from the University of Queensland, Australia, to monitor coral reefs worldwide. The Coral Watch monitoring chart uses a series of colors representing different stages of bleaching and recovery, and can be easily used by snorkelers. The data collected is analyzed by scientists to answer questions on coral bleaching and recovery patterns, to help conserve reefs in the future.

Why Snorkel in an environmentally responsible manner?

1. As a snorkeler who has encountered amazing aquatic organisms, you naturally develop a sense of responsibility for protecting those creatures and the ecosystems they depend on. So, you probably already snorkel in an environmentally responsible manner to avoid harming aquatic life.

2. As a role model, you set the example for other snorkeler, which is another reason to not just emphasize responsible, but to also practice it every time you are in or around the water.

3. A final reason to snorkel environmentally responsibly is that for snorklers to have an influential collective voice about conservation and protection issues, we must show that we are doing our part.

What are eight precautions to reduce the likelihood of being injured by an aquatic animal?

1. Along with understanding aquatic environmental threats and how you can act to protect our aquatic resources, you should know how to protect yourself and the divers you supervise from injury while interacting with the environment and aquatic animals.

2. Here are eight precautions a diver should take to reduce the likelihood of being injured by an aquatic animal:

a. Treat all animals with respect.

b. Be cautious in extremely murky water where you may have trouble watching where you put your hands.

c. Avoid wearing shiny, dangling jewelry.

d. Wear gloves and an exposure suit to avoid stings and cuts.

e. Move slowly and carefully.

f. Watch where you’re going and where you put your hands, feet and knees.

g. Avoid contact with unfamiliar animals.

Rescue and Environment for snorkel

Explain why an unconscious, non-breathing snorkeler should be resuscitated while being towed to shore even if no pulse is suspected

You can never be fully certain if a pulse does or doesn't exist if it is taken in the water. You might be wearing gloves, or have difficulty in getting to the carotid artery due to the diver's exposure suit.

Even if you can check the pulse, you might be unable to detect it due to the decreased sensitivity of your fingers from prolonged immersion in water.

Therefore, you shouldn't even bother checking for a pulse while in the water. Just assume an unconscious, non-breathing diver has a pulse and ventilate.

Concentrate on towing the victim to assistance while providing adequate ventilations.

If you determine that you are more than five minutes from the need shore or boat, you to evaluate whether the victim has any movement or other reactions to ventilations.

If the victim shows some response to ventilations, but doesn't completely resume self-sufficient breathing, it still indicates that ventilations are having a positive effect.

You should continue to ventilate during the tow because the person may be able to regain control through your efforts.

If the person regains complete breathing control, you should discontinue ventilations but continue to monitor the diver during the tow.

If you determine that you are more than five minutes from the shore or boat, and the victim has no reaction to ventilations- for example, has no movement and appears extremely pale or blue- you should stop ventilations and tow the victim to shore as quickly as possible.

In this case the victim is probably in cardiac arrest and needs advanced life support which is only available on the shore or boat. Ventilations only slow down the tow and do not assist the victim who has no heartbeat.

State the compression-to-ventilation ratio for administering one-rescuer CPR.

The rate of compressions must be sufficient to maintain artificial circulation for the victim regardless of what the rescuer is able to do.
This rate is 120 compressions per minute. While a rescuer might be able to sustain a faster rate at first, it's doubtful whether such a rate could be maintained.
Therefore, the rescuer should concentrate on maintaining the 120-compression rate. A good way of judging this is to compress slightly faster than once per second.

When administering one-rescuer CPR, the ratio of compressions to ventilations is **30 compressions followed by 2 ventilations.** You may see this procedure altered in two-person CPR. However, two-person CPR is considered an advanced life support

technique and is not commonly taught in basic first aid courses like Emergency First Response.

Explain what action should be taken with a victim of a near-drowning accident.

You get the victim to shore and he begins to breathe on his own, and shows signs of responsiveness.
Several minutes later he appears fully conscious and alert.
Embarrassed by the incident, he tells you he feels all right and wants to be taken home.
What action should you take? Often victims of near drowning appear to recover only to be found dead a few hours later.
This phenomenon has been termed “secondary drowning” and requires an understanding of the physiology of the lungs.
The lungs contain a substance referred to as a surfactant.
This surfactant keeps the tiny airways of the lungs from collapsing; if they do collapse, it keeps them from sticking together.
When a person is involved in a near-drowning accident, and they inhale even a slight amount of water, some of this surfactant can be diluted or washed away.
Once the surfactant is removed the tiny airways can collapse, remain closed and fill with fluid (edema).
This is a progressive disorder taking hours to manifest itself as a problem.
The only way to deal with this condition is under medical supervision.
As a result, anyone involved in a near-drowning accident must be hospitalized even if they apparently recover at the scene and “feel fine.”

Common signs/symptoms of marine life injuries.

a. Loss of consciousness, weakness and nausea
b. Mental confusion
c. Spreading numbness
d. Paralysis
e. Local swelling, inflammation or welts

What are the recommended first aid measures for wounds?

Resulting from venomous marine life? Often, even those trained in first aid will think in terms of applying ice in the event of an injury.

This is precisely what should not be done in the case of wounds resulting from venomous marine life.

In this case, after carefully removing any foreign matter, the area should be soaked in hot water (43° to 48°C/110° to 120° F) for at least 30 to90 minutes.

Try to keep the victim positioned so that the wound is below the level of his heart. Finally, treat the victim for shock.
