



Pathfinder Honour: Trainer's Notes

Snorkelling (Skin Diving)



Instructions to Trainers / Instructors of this Honour

Thankyou for being involved with this Honour. These notes have been developed to assist in teaching / instructing this honour. We recognise that there is much more information available and we are grateful that you should share your expertise.

Please remember that Honours are designed to develop our Pathfinders in many ways; their interests, their knowledge and their relationship with their Saviour and Creator. Your enthusiasm and creativity will have a huge impact on those doing the honour.

To complete an Honour, the following (where applicable) must be completed satisfactorily:

- Physical and Practical Requirements.
- Honour Workbook.
- Honour Assessment Sheet. (*On SPD Honour Website but Leader's level access is required*)

Additional Reference Material

Some information at:

http://en.wikibooks.org/wiki/Adventist_Youth_Honors_Answer_Book/Recreation/Skin_Diving

Note: A useful site, but be aware that material on any Wikibooks site is beyond the control of the SPD.

Acknowledgements

Please see above

Snorkelling (Skin Diving) Honour

REQUIREMENT 1: Have the Swimming 3 (Intermediate)] Honour

Participants wishing to obtain the snorkelling honour must already have the Swimming 3 (Intermediate) Honour. Participants must be comfortable in the water and have the swimming skills as required by this Honour.

REQUIREMENT 2 (a): Name three prerequisites for a person who wishes to engage in snorkelling.

1. Have good health. Chronic asthmatics should avoid strenuous activity in this sport.
2. Be a good swimmer.
3. Have a good general knowledge of sea life.
4. Have necessary equipment.

REQUIREMENT 2 (b): What two medical conditions would preclude a person from snorkelling?

1. Epilepsy
2. Heart Condition

REQUIREMENT 3: What equipment is essential for snorkelling.

The basic snorkelling equipment is a mask, snorkel and fins.

Each item has a specific purpose for snorkelling. There are many different styles of masks, snorkels and fins available to choose from and it may seem a bit daunting at first, but let's discuss each item and what you need to look for to make the task of choosing your equipment easier.

Mask:

A mask is your window to the underwater world and allows you to see underwater without distortion by restoring the air space in front of your eyes, allowing normal vision.

Masks consist of a faceplate or lens, a rubber or silicone skirt and a strap. They are made from different types of material, come in a variety of styles and may have a number of different features.

Snorkelling (Skin Diving) Honour

Essential features of a mask include:

1. The faceplate or lens must be made of “tempered” glass which resists breakage and helps avoid injury if it does break. The words “tempered glass” are usually notched or stencilled on the lens.
2. A solid frame to hold the lens in position.
3. An adjustable, split head-strap that covers a wide portion of the head to hold your mask in place.
4. The mask must cover your nose. Swimming goggles are no good.

Selecting the right mask for you is relatively easy. Proper fit is the primary consideration. A mask that doesn't fit properly may be uncomfortable, but worse, it will leak – both of which are constant distractions and nuisances during snorkelling.

To determine whether or not a mask fits, take the following steps:

1. Place the strap in front of the lens out of way.
2. Place the mask lightly in front of your face while looking up. The skirt should rest evenly along all of its edges.
3. Inhale slightly through your nose and hold your breath; the mask should now remain firmly in place despite gentle tugging or shaking your head. If you have to push the mask against your face or continually inhale to get it to stay in place, put that one back and keep looking for one that fits.

NB: New masks are covered with a thin film of lubricant which was used to get the mask out of the mould when it was manufactured. It is essential that this is removed before you use your mask for the first time. If you don't the lens will continually “fog” while you are snorkelling and you won't be able to see. To remove it, wash the lens vigorously with toothpaste and rinse with plenty of fresh water.

Snorkel:

Snorkels allow you to breathe at the surface without having to lift your head out of the water all the time. This would get very tiring even after only a few minutes. With a snorkel, you can swim along and watch the bottom continuously.

The typical snorkel is a curved tube with an opening at one end and a mouthpiece at the other. There are many different types of snorkels with a variety of features. Simple snorkels are “J” shaped while others have flexible hoses and special valves. Other snorkels may have mouthpieces that rotate and contoured designs.

The two most important considerations in selecting a snorkel are its length and the diameter of its barrel. A snorkel that is too long will make it difficult to breathe, while one that is too short will constantly fill with water. Snorkels that are too thin make breathing difficult, while those that are too thick are awkward to use. There must be no sharp bends or angles in the snorkel.

Snorkelling (Skin Diving) Honour

Snorkels come with some means of attaching them to your mask strap. This may be a simple rubber or silicone snorkel keeper which resembles a figure of eight with an elongated midsection or a clip of some sort.

Fins:

Fins allow you to move efficiently through the water.

While there is a wide variety of material, styles and features, the basic structure of fins is the same. All have foot pockets and blades attached to those pockets.

There are two basic foot pocket arrangements – “full-foot pocket” fins that enclose the whole foot and “open-heel adjustable” fins which incorporates a heel strap with the back of the foot exposed. “Open-heel” fins are best worn with dive boots.

If you are going to wear dive boots with your fins, you should purchase those first so you can try on the fins while you are wearing them. Advantages of dive boots are that they help to keep your feet warm and they protect against cuts, scrapes and bruises while walking to and from your entry/exit point. You can then just slip on your fins when you are ready to enter the water.

When choosing your fins, they shouldn't be so tight that they pinch or cramp, nor so loose that they wobble when you wiggle your feet.

* * * *

These three items are the essential pieces of equipment that you will need to go snorkelling.

Of course, if the water temperature where you snorkel is cold or you wish to continue snorkelling throughout the winter months, you may wish to wear a wetsuit.

A wetsuit is made of neoprene rubber. The aim of a wetsuit is to trap a layer of water between it and your body. This water will initially feel cold, but it will soon warm up to your body heat and the wet suit then acts as an insulator preventing further body heat loss. The wetsuit must be tight fitting or it will not work properly. If it is too big, water will continually flow through it and not have a chance to warm up.

Once again, the choices seem confusing. Wetsuits come in various styles and thicknesses, such as one piece with short arms and legs, one piece with long arms and legs, two piece with long legs and a long sleeve jacket, and they can be either 3mm or 5mm thick. It is important to go to a reputable store and have your wet suit fitted correctly.

You may also wish to purchase a hood to wear with your wetsuit, or gloves to protect your hands from the cold or abrasions.

Snorkelling (Skin Diving) Honour

REQUIREMENT 4: Explain how to care for and maintain snorkelling equipment.

Your snorkelling equipment needs to be looked after properly to ensure reliability and long life.

- Never leave your equipment lying around on the sand or in the sun.
- A thorough rinsing after use in clean fresh water is essential to remove dirt, sediments and salt. These substances not only make your equipment unpleasant to use again, they can impair performance and promote corrosion by trapping moisture. While rinsing check your equipment carefully for any damage or defects.
- Never leave your equipment to dry in direct sunlight.
- Store your equipment in a cool dry place, making sure it is completely dry before putting it away to prevent mould or mildew.
- Inspect your equipment carefully before each use for damage or worn parts.

REQUIREMENT 5: Discuss the effect of the following factors on snorkelling:

a. Types of beaches:

Beach access may be difficult in areas with steep cliffs or rocky shores.

Problems may be encountered by shoreline conditions. The shape of the bottom may affect currents and wave action. The bottom may slope gradually, drop off suddenly or have scattered holes and rocks. The bottom may be sandy, muddy or rocky. All of these conditions may affect the way you may need to enter and exit the water.

The rise and fall of the tide can affect entry and exit conditions. For example, you might enter the water at high tide, but by the time you are ready to come out, the tide has dropped and the receding water has left rocks that are now exposed which you will need to climb back over to return to the beach.

Underwater visibility can also be affected by the bottom terrain. If snorkelling in a muddy or silty area, care will need to be taken to not stir up sediments which can drastically reduce visibility.

b. Surf and currents:

Entries to the water through surf should be avoided if at all possible. However, if you need to enter through surf, extra care is required. Watch the approaching waves carefully and time your entry to coincide with a lull or low point in the wave action. Avoid stopping in the surf zone. You need to be careful that your equipment does not get washed off.

Snorkelling (Skin Diving) Honour

You must be aware of currents. Attempting to swim against a strong current can be exhausting and you could find yourself being carried away from shore.

Tidal currents, caused by the flow of water during the incoming or outgoing tide, can be quite strong, especially if they pass through constricted areas. Consult tide tables and be aware of the high and low tide times and plan your snorkelling for slack-water periods (ie at either “high” or “low” tide when there is no tidal current).

Rip currents occur near the shore and are formed when water is pushed up onto the shore by wave or wind action and then funnelled back out to sea through a narrow passage, such as a narrow opening in a reef or sandbar. They may appear suddenly and just as suddenly, disappear.

If you find yourself being carried away from shore or you are unable to make progress against a current when trying to return to the beach, don't exhaust yourself by endeavouring to swim against it. Let yourself go with the current, swimming towards the edge until you are out of the current. You can then make your way back to the shore.

c. Marine life:

Be aware of the type of marine life in the area you are snorkelling. There are thousands of different types of plants and animals in the aquatic environment to be discovered and capture your interest and amaze you.

Some marine animals are dangerous and can inflict injury, if disturbed or touched and it is only natural to be concerned about larger, more aggressive animals such as sharks and rays. However, in reality, the incidence of human injuries caused by these animals is very low. You may also injure yourself by accidentally coming into contact with an animal or disturbing it, such as sea urchins, jelly fish, stinging hydroids, fire coral etc. Learn to identify hazardous marine life and do not touch animals that you know can harm you or those you cannot identify.

Your presence is immediately sensed by fish, turtles, etc and they often leave the area before you would even know they were there. Human contact though can have serious consequences for those plants and animals that cannot move away, such as corals, sponges, and other marine invertebrates. A little care, forethought and awareness of the outcome of our interaction with them can reduce any injury we might inadvertently cause to them by brushing against them, standing on them, kicking them with our fins, even just touching them. Remember, we are a visitor to their territory.

Snorkelling (Skin Diving) Honour

REQUIREMENT 6: What safety precautions/rules should be followed while snorkelling?

1. Never snorkel alone – snorkel only with a partner (buddy).
2. Know where your buddy is at all times. Stay close together so you will be able to give assistance if necessary.
3. Be aware of your (and your buddies) limitations and experience and do not go beyond them.
4. Take turns to dive beneath the surface if you wish to inspect something closer. You should watch your buddy carefully until he/she comes back up to the surface. You can then have a turn at diving down while your buddy watches you.
5. If you are cold or tired, it is time to get out of the water – hypothermia is dangerous. If your buddy is cold or tired and ready to get out of the water but you are not, you must still leave the water with him/her.
6. Watch for sunburn. If you are not wearing a wetsuit or some other type of protective clothing, your back and the backs of your legs can become sunburnt very quickly.
7. Be aware at all times of where you are and how far you have come from shore or your entry point. Remember, you will need to be able to get back again.
8. Avoid strong currents and rips.
9. Avoid snorkelling in areas of heavy boat traffic – a snorkeller in the water can be very hard for a boat driver to see, especially at speed.

REQUIREMENT 7: Correctly interpret and respond to hand signals used to communicate at the surface and underwater.

You have probably already realised that it is not easy to talk underwater. Even on the surface, it may be difficult to hear what your buddy is saying to you if it is windy or noisy.

For this reason, standard hand signals have been developed for diving and snorkelling which are recognised in many countries. Below are some of the standard hand signals which you should know and be able to use when snorkelling.

When hand signals are given, they must be displayed distinctly and then acknowledged by either repeating the signal or responding with the “OK” sign.

Snorkelling (Skin Diving) Honour



Are you OK
I'm OK



Go UP



Go DOWN



STOP



DANGER (that way)



HELP (on the surface)



COME GET ME

REQUIREMENT 8: PRACTICAL 'POOL' TEST

The purpose of the practical pool test is to ensure that the person is comfortable in the water and competent in the use of their snorkelling equipment before venturing out into open water for the first time.

a. Demonstrate how to prepare, put on, adjust and remove all snorkelling equipment.

As discussed previously, your new mask needs some preparation before you can use it. (Refer Req 3).

The snorkel needs to be attached to your mask strap on the left side with the snorkel-keeper or clip that came with it when you purchased it. When properly attached, the snorkel should hang so that the mouthpiece reaches your mouth comfortably. (Once you have attached the snorkel to your mask, you do not need to take it off after you use it every time. It can be left on during storage.)

Even though you have removed the oily film from your new mask with toothpaste, it may still fog up when you are snorkelling due to condensation. You can buy commercial defoggers which you spray on and then rinse off before entering the water, but a cheaper, just as efficient alternative is readily available – saliva! Spit on

Snorkelling (Skin Diving) Honour

the inside lens of your mask, spread it around with your finger and then rinse it off in the water before you put it on.

When you are ready to get in the water, you put your gear on at the water's edge. Your fins are the first items to go on. It is preferable to sit down because you will be less likely to fall. If you have the open-heel adjustable fins, adjust the heel strap so the fins are held firmly.

Avoid walking while you are wearing fins because you can easily lose your balance and fall. If you must move short distances while wearing fins out of the water, shuffle your feet backwards or sideways rather than trying to walk forward. When entering the water, shuffle backwards until you are in water deep enough to get down and start floating.

Your mask and snorkel are put on last so you will not restrict your vision while you are out of the water. Once the mask is on your face, it is usually difficult to see downwards.

To fit your mask, place it on your forehead with the strap high on the back of your head. Slide the mask down onto your face and readjust the strap so it is across the middle of the back of your head, ensuring it is not twisted. Adjust the strap at the sides for comfort (so the mask is not too loose or not too tight).

Place the snorkel in your mouth and adjust its position so that the mouthpiece remains in your mouth even when your mouth is open. This way tension on your mouth is eliminated or minimized trying to keep it in place.

b. With face in the water and mask removed, demonstrate ability to breathe through snorkel only.

Normal breathing is through the nose. Snorkelling however, requires that you breathe in and out through your mouth. Some people find it difficult not to breathe in through their nose. If you try to breathe in through your nose while wearing a mask, obviously you are not going to get any air other than the little bit between the mask and your face. This could cause panic.

By mastering this skill, you are demonstrating your ability to breathe only through your mouth.

c. Take mask off in the water and refit without touching the side or bottom of the pool.

What if you are snorkelling in water too deep to stand up in and you have an enthusiastic snorkelling buddy who gets too close to you and accidentally kicks your mask off? You need to be able to retrieve your mask and put it back on without panicking and while treading water.

This skill demonstrates that you are able to do this.

Snorkelling (Skin Diving) Honour

d. Demonstrate the skills involved in equalising, mask clearing and snorkel clearing.

Equalising:

You may have already noticed that when you dive beneath the surface of the water, your ears might start to hurt. This is because you have air spaces inside your ears and when you dive down under the water, the water pressure will try to compress the air in it. If you continue to ignore that pain and don't equalise the pressure inside your ears, you can damage or rupture your eardrum. Your middle ear has an airway leading to it from the back of your throat called the "Eustachian Tube" and it allows air to move from your throat to your middle ear. To equalise the pressure in your ears, you need to move air into your middle ear space. To do this usually takes a deliberate effort to open the Eustachian Tubes and allow the air to flow through them.

The most common method of equalising pressure in the middle ear is known as the "Valsalva manoeuvre". In this technique, you close your mouth tightly, pinch your nostrils closed and attempt to "exhale" firmly but not forcefully. You should hear a gentle "pop" which signals that air has flowed into the Eustachian tube. The slight pain you may have felt in your ears should also have stopped. You must never force this technique. If it does not work, you will need to go back to the surface.

This method works well for most people. However, jutting your lower jaw forward or swallowing works just as well for some. Combining the Valsalva manoeuvre with these actions can also help if you are having trouble.

Mask Clearing:

It is not unusual for some water to enter your mask while you are snorkelling. Not fitting the mask properly in the first place, or having a few stray strands of hair caught under your mask, will allow water to enter it. Smiling or laughing might alter the shape of your face and create channels that allow water to find its way in. Of course, you could stop, take your mask off, drain the water out and then put it back on, but this takes energy. There is a much simpler method that you can use without even lifting your head out of the water.

To clear the water from your mask, you must replace it with air. Exhale air into your mask from your nose while tilting your head back slightly and holding the top of the mask against your forehead with your hand. The air you just exhaled into the mask will force the water out the bottom.

Performing this action takes considerable concentration. Obviously while you are snorkelling you are breathing in and out through your mouth. Because you need to alter your breathing pattern, you must concentrate on deliberately exhaling through your nose.

Snorkelling (Skin Diving) Honour

Snorkel Clearing:

Water can enter the open end of the snorkel as you breathe through it. This can result from a wave splashing over you or if you accidentally dip the end of the snorkel under the water.

Obviously, you could simply take the snorkel out of your mouth and tip the water out. However, the most efficient way to clear the water from your snorkel is the “blast method”. You don’t even have to lift your head out of the water. This technique involves exhaling a short forceful breath of air that blasts the water out. After blasting the water from the snorkel, it is a good idea to take your next breath cautiously. If any water happens to remain in the snorkel, you can usually breathe past it if you do so slowly. A second blast will clear what remains.

e. Swim at the surface maintaining control of direction.

While snorkelling you need to be able to control the direction you are going to prevent bumping into other people or brushing against or kicking fragile marine life.

Practice kicking with your fins – your legs extended with the blades of the fins pointed behind you, knees only slightly bent, creating movement from the hip and using your thigh muscles. Don’t break the surface of the water with your fins. Get into a rhythm of slow, comfortable, steady kicks.

Don’t use your arms like you do in swimming. Keep them by your side and let your legs do the work.

f. Dive under the surface, swim underwater, ascend safely, clear snorkel of water and resume breathing through snorkel without lifting face from the water (Repeat 3 times without stopping).

While snorkelling on the surface, you might see something on the bottom that you want to investigate closer. To do that, you are going to have to dive under the water to have a look.

To start a head-first dive, take a breath in through your snorkel, turn your body upside down so that your legs stick out of the water and your head points towards the bottom. The weight of your legs will help push you beneath the surface. Start kicking when your fins are under the surface of the water.

Before you ascend, look up to make sure nothing is above you. By tilting your head back, you can watch the water above you for obstructions as you come back up.

Obviously, your snorkel has filled up with water while you were under the surface and you will not be able to take another breath until you have cleared it.

Snorkelling (Skin Diving) Honour

The most efficient way of clearing your snorkel when you ascend from a breath-hold dive is to use the “displacement” method. To use the displacement method, you need to have your head tilted back (as you should have when ascending anyway so you can watch above you). With your head tilted back, your snorkel will be inverted. As you near the surface, exhale a small amount of air into the snorkel. This air will expand as you ascend and “displace” the water inside the tube. When you surface, quickly tilt your head forward, continue to exhale gently and your snorkel will be empty. If you have done this properly, you can inhale immediately without needing to further clear any water from your snorkel using the blast method as learned previously.

Repeat this three times in succession to show you have mastered this skill.