

## Unit 3: Diving Skills

### Unit 3- Diving Skills

- Snorkeling skills
- Assembling scuba equipment
- Donning scuba gear
- Entering and exiting the water
- Mask skills
- Regulator skills
- Buoyancy skills
- Safety skills
- Buddy system
- Communication
- Handling your scuba equipment in the water
- Removing and replacing your scuba unit
- Removing and replacing your weight belt
- Navigation skills
- Disassembling your scuba gear

**Instructor Materials:** Teaching notes, any training aids to help present diving skills.

### INTRODUCTION

**Attention Step:** Scuba diving depends on our ability to adapt to an alien environment with the help of specialized equipment.

**Importance of Value:** It is one thing to use your diving gear in a swimming pool or other confined water setting, but exploring open water is the purpose of scuba diving. To enjoy diving, you must be able to combine your knowledge of the underwater environment with the ability to handle your equipment under a variety of conditions.

**Statement of Student Performance:** See presentation slides.

**Main Points:** See presentation slides.

**Student Materials and Conduct:** Note taking material, Scuba Diver Education System, and your undivided attention.

**Body:** See presentation slides.

# ***Student Performance***

By the end of the lesson students will be able to:

Unit 3- Diving Skills

- List the snorkeling skills introduced in the course.
- Describe the steps for assembling and testing your scuba equipment.
- List the steps for donning your scuba gear.
- Describe some methods of entering and exiting the water.
- List the mask and regulator skills introduced in the course.
- Describe buoyancy control and list buoyancy skills introduced in the course.
- List the safety skills introduced in the course.

## **Performance Statement:**

Describe to the students what will be expected of them, by the end of this lesson, and to what degree.

# Snorkeling Skills

Developing good snorkeling skills is fundamental to being a good diver.

Unit 3- Diving Skills

- **Preparing your gear for use.**
- **The snorkel is usually attached to the left side of your mask strap.**
- **To prepare your fins.**



## **Preparing your gear for use.**

New masks are covered with a thin film.

Wash the lens with toothpaste.

Be sure to read the instructions enclosed with the product.

## **The snorkel is usually attached to the left side of your mask strap.**

Snorkels use a rubber snorkel keeper or plastic clip to attach to the mask strap.

## **To prepare your fins.**

If the straps are oily or slippery, wash straps in a mild soap and water.

Take any store inserts out of the foot pockets.

Adjust the straps around the heels for a snug comfortable fit.

## ***Donning Your Gear***

When you are ready to go diving, and have completed your site survey and dive plan your ready to don your gear.

Unit 3- Diving Skills

- **Your fins should be donned at the water's edge.**
- **Walking with fins on land.**



**Your fins should be donned at the waters edge.** The figure 4 method is a common way to don fins.

Avoid walking more than a short distance when wearing fins.

Be sure your mask strap is not too tight and your hair is out of the way of the seal.

Adjust your snorkel so it fits easily and comfortably in your mouth.

## ***Using Your Fins***

Your fins provide you with thrust and stability in the water.

Unit 3- Diving Skills

- **The most common kick is the flutterkick.**
- **You can also use a dolphin kick when diving.**
- **When replacing a fin in the water, use the same figure four position you use to don your fins.**

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### **The most common kick is the flutterkick.**

When kicking with fins, your kick must be slow, and deliberate.

If you want to move faster, simply kick harder with the emphasis on the downward stroke.

On the surface modify your kick so that you keep your fins in the water.

### **You can also use a dolphin kick when diving.**

When doing the dolphin kick, keep your legs together.

This movement causes your body to move through the water just like a dolphin.

### **When replacing a fin in the water, use the same figure four position you use to don your fins.**

## ***Breathing with the Snorkel***

Using the snorkel will help you conserve energy.

Unit 3- Diving Skills

- **Breathe slowly and deeply when using a snorkel so you get a good air transfer through the tube.**
- **Remember to keep your body in the horizontal position when swimming at the surface.**



**Breathe slowly and deeply when using a snorkel so you get a good air transfer through the tube.**

**Remember to keep your body in the horizontal position when swimming at the surface.**

# Surface Diving

The key to a successful surface dive is to get as much of your body out of the water as possible.

Unit 3- Diving Skills

- **Head first dives**
- **Feet first dive**
- **There are variations of these dives.**



## **Head first dives:**

The two common headfirst dives: Tuck and Pike

The pike starts in a horizontal moving position.

The tuck starts in a upright stationary position.

## **Feet first dive:**

Feet first dives are particularly useful on scuba.

This dive starts in the upright position.

Push your body upward and allow your weight to push your body underwater.

## **There are variations of these dives.**

**Shallow Water Blackout**

When free diving, hyperventilating excessively before the surface dive can be a problem.

- **Breathing deeply and rapidly more than three times.**
- **Shallow water black out is easy to prevent.**

Unit 3- Diving Skills

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**Breathing deeply and rapidly more than three times.**

Higher levels of CO<sub>2</sub> gives the stimulus to breathe. Breathing deeply more than three times lowers the CO<sub>2</sub> level in the body. Hyperventilation cannot raise the O<sub>2</sub> level in the body.

**When you dive:**

O<sub>2</sub> is used up.

CO<sub>2</sub> builds up.

If the level of CO<sub>2</sub> does not build up enough to a point that you feel the need to breathe, you can lose consciousness.

This is called shallow water black-out because it is most likely to happen near the surface.

**Shallow water black out is easy to prevent.**

Breathe in and out deeply before the dive, but no more than 3 times.



# Clearing the Snorkel

There are two ways to clear the snorkel quickly and efficiently.

Unit 3- Diving Skills

- Blast clearing
- Displacement clearing



## Blast clearing

You perform the blast clear by exhaling air from your lungs forcefully as you surface from the dive.

## Displacement clearing

The displacement clear is a free-diving technique.

This method uses the least amount of energy.

Water is removed by expansion when a small amount of air is exhaled at depth during ascent.

## ***Review on Snorkeling Skills***

What have you learned so far?

Unit 3- Diving Skills

- Describe the best way to walk in fins.
- Describe how you can prevent losing your balance when donning fins.
- List the two methods of clearing the snorkel.
- Name the method of snorkel clearing uses the least amount of energy.

**Summarize this section.**

**Review the main points of each slide.**

**Emphasis key points of each main point.**

**State the objective statements as questions.**

## ***Assembling Scuba Equipment***

Only you are responsible for proper assembly and operation of your equipment.

Unit 3-Diving Skills

- **Key points to assembling your scuba unit.**



### **Assembling your scuba unit, a few key points are:**

Place your cylinder in front of you with the on/off knob to your right and the opening for air is facing away from you.

Once the first stage is connected the second stage should be on your right side and gauges on the left.

Tighten the yoke screw only finger tight. Do not use force.

Point the gaugeface away from you when first turning on the air.

Slowly turn on the cylinder by turning the on/off valve counter clockwise.

Before using the unit, you must test it to be sure it is operating properly.

## ***Testing your Scuba Unit***

Make sure that your primary and back-up second stages work and that your BC is inflating and deflating properly.

Unit 3- Diving Skills

- **Check the submersible pressure gauge.**
- **Check the primary and secondary first stages.**
- **Check the operation of the low pressure inflator.**
- **Check the buoyancy compensator.**



### **Check the submersible pressure gauge.**

Check to see you have enough air to complete the dive.

### **Check the primary and secondary first stages.**

Breathe on each to make sure of proper operation.

### **Check the operation of the low pressure inflator.**

Press the button, check for ease of operation and to ensure the button does not stick.

### **Check the buoyancy compensator.**

Inflate and deflate the BC making sure the deflator valves are working properly.

# Assembling the Weight Belt

How you set-up your weight belt is important because it effects your comfort and safety.

Unit 3- Diving Skills

- **Determining how much weight you should wear.**
- **Distributing the weight.**



## **Determining how much weight you should wear:**

A rule of thumb:

In salt water using a 7mm wetsuit you will need 10% of your body weight.

2 to 4 lbs may need to be added depending on the person.

## **Distributing the weight:**

Weights should be distributed evenly on each side leaving the back middle area clear for the cylinder

Weight keepers can help keep the weights from shifting or sliding on the weight belt.

**Ensure the weightbelt can be ditched quickly in an emergency.**

# Donning Scuba Gear

There is a specific order to donning all of your scuba gear before you get in the water.

Unit 3- Diving Skills

- Donning your diving suit.
- Donning your scuba unit.
- Donning your weight belt.



## Donning your diving suit:

No matter which type of suit you are wearing, be sure you sit down when donning the bottom portion.

You usually don the bottom of your suit first, followed by your booties.

If you get too warm with your suit on, be sure to cool yourself down by getting in the water or pouring cool water over your head.

## Donning your scuba unit:

A buddy pair should don scuba units as a team.

Check to make sure unit is comfortably positioned.

## Donning your weight belt:

Hold the belt in front of you, step over the belt with both legs.

Slide the belt up over your legs and over your hips.

Bend over and let your back support the weight of the belt.

Fasten the belt securely around your waist.

# ***Review on Assembling Scuba Equipment***

What have you learned so far?

Unit 3- Diving Skills

- Describe how your regulator should be oriented when you mount it on your cylinder.
- Describe how you turn the valve to open the cylinder.
- Describe how you and your buddy should don your scuba units.
- Name the last piece of equipment that should be donned to ensure it can be ditched.

**Summarize this section.**

**Review the main points of each slide.**

**Emphasis key points of each main point.**

**State the objective statements as questions.**

## ***Entering and Exiting the Water***

Because you will be diving at many different sites, you must know different ways of getting in and out of the water.

Unit 3- Diving Skills

- **Never assume that you know how to enter and exit the water everywhere.**
- **Always get an orientation from a diving professional to the diving procedures for every new site and region.**



**Never assume that you know how to enter and exit the water everywhere.**

**Always get an orientation from a diving professional to the diving procedures for every new site and region.**



## Checking your Equipment

Always check one another's equipment one last time before getting in the water. You must know how each other's works.

Unit 3- Diving Skills

- **SEABAG**: an easy way to remember dive planning
  - **S**ite Survey
  - **E**mergency Planning
  - **A**ctivity Planning
  - **B**uoyancy
  - **A**ir
  - **G**ear and Go



### **SEABAG**: an easy way to remember dive planning

See Chapter 6 for the steps for site survey, emergency planning, and activity planning. The steps for buoyancy, air, and gear and go are covered in this section.

**B**uoyancy

**A**ir

**G**ear and Go

# Entering the Water

The only objective for an entry is to get into the water with minimal effort and effect on both you and your equipment.

Unit 3 - Diving Skills

- **General rules that apply to most boat and platform entries.**
  - Giant stride entry
  - Back roll entry
  - Seated entry



## **General rules that apply to most boat and platform entries:**

Your BC should be partially inflated to provide buoyancy.

You should hold your mask firmly in place to avoid flooding it or having it come off.

You should breathe from your regulator during the entry.

You should make sure the entry area is clear and sufficiently deep for the entry you are using.

## **Giant stride entry:**

You can use this entry from a boat or platform where the distance is no more than 2 meters (6 feet).

## **Back roll entry:**

You use this entry if standing up in a boat is not safe.

## **Seated entry:**

You can use this entry from a low platform such as the side of a swimming pool, a ledge at the water level in a quarry, or from a boat dock, or swim step of a boat.

## Other Entries

Beach or shore entries can be very different depending on your location.

Unit 3- Diving Skills

- Calm water
- Surf
- Rock jetties or breakwaters



### **Calm water:**

When you can walk into shallow, calm water to begin your dive it is usually an easy entry.

If you lose your balance during the entry, do not try to stand up again. Crawl forward on your hands and knees and begin swimming.

### **Surf:**

Entries through surf require special training.

Your BC must be deflated when doing a surf entry so you can easily get underwater.

### **Rock jetties or breakwaters:**

Steep rock entries require some special training.

You must be careful to maintain your balance and move slowly.

# Exiting the Water

The only objective for an exit is to get out of the water with minimal effort and effect on both you and your equipment.

Unit 3- Diving Skills

- **General rules that apply to most boat and platform entries.**
  - Ladder
  - Boat transom platform
  - Calm water
  - Surf
  - Rock jetties or breakwaters



**General rules that apply to most boat and platform entries:** Evaluate the exit area before getting out of the water. Make sure all your equipment is in place and secure as you approach the exit area. Think out the steps of your exit in advance. Keep your fins in place as long as you are in the water.

**Ladder:** You might be asked to climb the ladder with your scuba unit and weight belt in place. Always remember to stay away from the ladder when someone is using the ladder to exist the water.

**Boat transom platform:** You must coordinate your approach to a swim platform with the wave action. The water movement will help lift you on to the platform.

**Calm water:** You can swim towards the shore until waist deep. Stand up, remove your fins and walk out.

**Surf:** Keep your regulator in your mouth. Hold your mask. Never stop in the surf zone.

**Rock jetties or breakwaters:** With rock exits you reverse the entry procedure. Use the wave action so that the water movement will help you get onto the exit area.

## ***Review on Entering and Exiting the Water***

What have you learned so far?

Unit 3 - Diving Skills

- Name the pieces of equipment you must check before entering the water.
- State three general rules that apply to entries.
- State the objective for an entry.
- List an example of when to use the following entries:
  - Giant stride
  - Back roll
  - Seated entry

**Summarize this section.**

**Review the main points of each slide.**

**Emphasize key points of each main point.**

**State the objective statements as questions.**

# Mask Skills

There are a number of ways that water can get into the mask during your dive.

Unit 3- Diving Skills

- Clearing water from your mask
- Purge vs. non purge masks



## Clearing water from your mask:

To clear a mask you must replace the water with air.

Exhaling air through the nose into the mask forces the water to flow out of the bottom of the mask.

A single sustained exhale is more effective than short or strong bursts.

## Purge vs. non purge masks:

Start exhaling through your nose. As you exhale, tip your head back slowly.

With a purge valve in your mask, look down, and simply exhale into the mask.

# Mask Skills

Removing and replacing the mask.

Unit 3- Diving Skills

- If your mask comes off, you must be able to calmly locate it and put it back on.



**If your mask comes off, you must be able to calmly locate it and put it back on.**

When wearing contact lens you run the risk of losing the lenses if your mask comes off.

Keep your eyes closed unless you need to see to locate the mask.

# ***Review on Mask Skills***

What have you learned so far?

Unit 3- Diving Skills

- **List the steps to replacing your mask underwater.**
- **Describe how to clear a mask with a purge valve.**



**Summarize this section.**

**Review the main points of each slide.**

**Emphasis key points of each main point.**

**State the objective statements as questions.**



# **Regulator Skills**

Learning to scuba dive includes more than just learning how to breathe from a regulator.

Unit 3- Diving Skills

- **Breathing underwater**
- **Clearing the regulator**



## **Breathing underwater:**

When on scuba you do all of the breathing from your mouth.

Without a mask you must concentrate on breathing through your mouth.

## **Clearing the regulator:**

Whenever the regulator is out of your mouth, you must continually exhale.

There are two primary ways to clear your regulator:

**Blast clear**

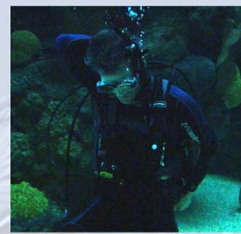
**Purge clear**

# Recovering a Regulator

There are two ways to recover your regulator.

Unit 3- Diving Skills

- Sweep method
- Reach method
- Other times when you need to recover or find your regulator.



## **Sweep method:**

Always remember to exhale when the regulator is out of your mouth.

Sweeping your right arm around in a large circle is one way to find your regulator.

## **Reach method:**

Feeling over your right shoulder with your right hand for your regulator hose is one way to find your regulator.

You can always use your alternate regulator until you locate your primary regulator.

## **Other times when you need to recover or find your regulator:**

Orally inflating your buoyancy compensator.

Switching from your regulator to snorkel.

## ***Monitoring Your Air Supply***

You must check your air consumption by frequently checking your submersible pressure gauge.

Unit 3- Diving Skills

- **At a minimum, check your air every 5 minutes.**
- **Air consumption**



### **At a minimum:**

Check your air every 5 minutes when in shallow water.

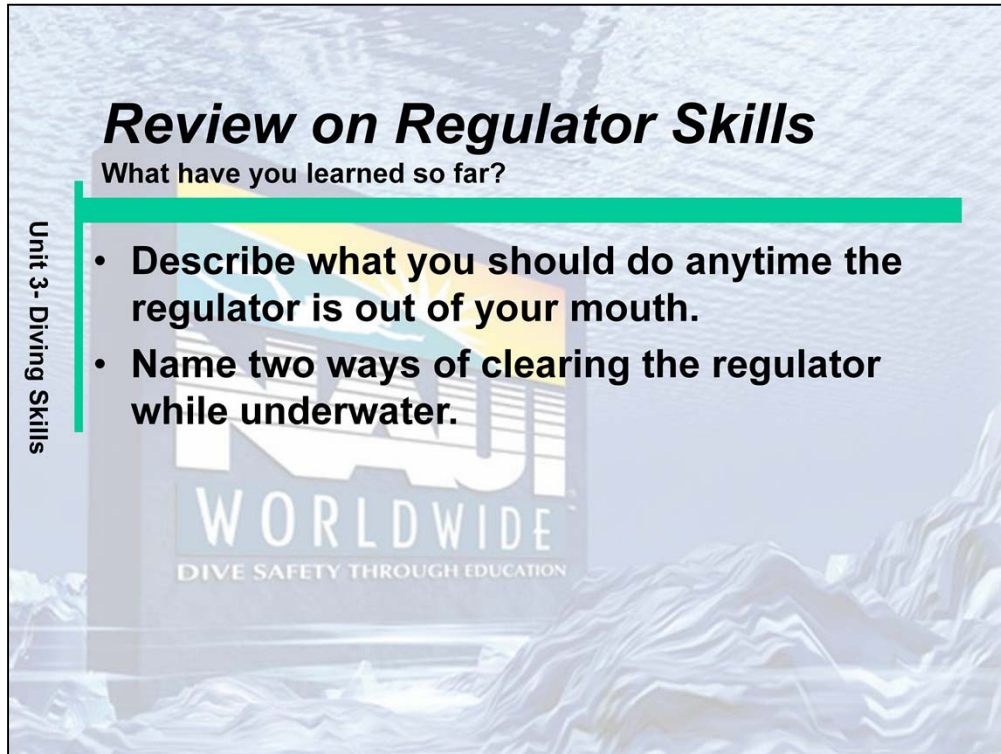
More frequently when you are in deeper water.

### **Air consumption:**

As you begin to gain experience and comfort in the water your air will last longer.

On dives to 18 meters (60 feet) or less begin your ascent at 50 bar (800 psi).

On deeper dives begin your ascent at 70 bar (1000 psi).

A presentation slide with a blue and white background featuring a diver's regulator and a logo. The logo reads "WORLDWIDE DIVE SAFETY THROUGH EDUCATION". The slide title is "Review on Regulator Skills" in a bold, italicized font. Below the title is the question "What have you learned so far?". A vertical label on the left side reads "Unit 3 - Diving Skills". A green horizontal bar is positioned below the question. Two bullet points are listed: "Describe what you should do anytime the regulator is out of your mouth." and "Name two ways of clearing the regulator while underwater."

***Review on Regulator Skills***

What have you learned so far?

Unit 3 - Diving Skills

- Describe what you should do anytime the regulator is out of your mouth.
- Name two ways of clearing the regulator while underwater.

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**Summarize this section.**

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# ***Buoyancy Skills***

If there is one skill that determines a person's diving ability, it is buoyancy control.

Unit 3- Diving Skills

- **Many factors affect your buoyancy in the water.**
- **You must begin your dive properly weighted.**



## **Many factors affect your buoyancy in the water.**

Type of protective suit you wear.

Amount of weight you wear.

Amount of air in your BC or dry suit.

Amount of air in your lungs.

## **You must begin your dive properly weighted.**

Fine tuning your buoyancy comes from the amount of air in your lungs.

You use your BC for surface floatation and as a backup for buoyancy underwater.

## Checking Buoyancy

If you are properly weighted, you should be able to hover at 4 meters (15 feet) with 34 bar (500 psi) or less.

Unit 3 - Diving Skills

- You must test your buoyancy at the surface before you begin your dive.
- You will control your buoyancy during your dive by adding to or removing air from your BC.

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**You must test your buoyancy at the surface before you begin your dive.**

Make sure that your BC is empty.

Assume an upright position in the water.

Take in a deep breath and hold it while you hang in the water motionless. You should float eye level.

Exhale completely. You should start to slowly sink.

**This rule of thumb method is used for divers wearing 5-7 mm wetsuits. Additional weight may be needed depending on your equipment configuration.**

**You will control your buoyancy during your dive by adding or removing air from your BC.**

# Descending

Being able to descend easily in the water is one of the important skills of diving.

Unit 3- Diving Skills

- **General steps for descending.**
- **You will lose buoyancy as the pressure compresses the wetsuit.**



## **Some of the general steps for descending:**

Note the exact time that you leave the surface.

Deflate your BC. Remember to hold the inflator hose over your head and watch for air coming out as you descend. Most BC's will have an alternate dump valve that may be used.

Equalize your ears.

Exhale and begin your feet first descent.

Stay close to your buddy during descent.

## **You will lose buoyancy as the pressure compresses the wetsuit.**

You will need to add small amounts of air to the BC to compensate.

## ***Descending***

Your rate of descent should not be rapid. It is recommended not to exceed a rate of 23 meters (75 feet) per minute.

Unit 3- Diving Skills

- **As your wetsuit compresses, you may need to adjust your weight belt.**
- **Use your fins as little as possible during descent.**
- **Doing a controlled descent will allow you to concentrate on:**
  - Equalizing your ears
  - Maintaining buddy contact
  - Controlling buoyancy

**As your wetsuit compresses, you may need to adjust your weight belt.**

**Use your fins as little as possible during descent.**

Control your descent by buoyancy, not by kicking.

**Doing a controlled descent will allow you to concentrate on :**

Equalizing your ears.

Maintaining buddy contact.

Controlling your buoyancy.



# Ascending

For every descent you make, you make an ascent.

Unit 3- Diving Skills

- **General procedures for doing an ascent**



## **Some general procedures for doing an ascent:**

Stop a minute and secure any accessories.

Make sure your automatic exhaust valve will open if you are wearing a dry suit.

Find your power inflator hose, deflator button, and hold it over your head.

Give your buddy the up signal.

Start swimming slowly towards the surface.

Remember to look up and breathe normally.

Control your buoyancy and your ascent by venting air from the BC. (Your rate of ascent should not exceed 9 meters (30 feet) per minute).

Stop at a depth of 4 meters (15 feet) for 3 minutes.

## ***Review on Buoyancy Skills***

What have you learned so far?

Unit 3- Diving Skills

- **List three steps to prepare for a descent.**
- **Name three actions you perform on every descent.**
- **List three actions performed during a normal ascent.**
- **List four factors that affect buoyancy.**
- **Describe what must be done as the air expands in your BC during ascent.**

**Summarize this section.**

**Review the main points of each slide.**

**Emphasis key points of each main point.**

**State the objective statements as questions.**

# Safety Skills

There are some important safety skills you must master to be a responsible diver.

Unit 3- Diving Skills

- Sharing air with another diver
- Octopus method
- General steps (octopus method)



## Sharing air with another diver:

If you have a contingency air supply, that is the best method of sharing air with your buddy.

## Octopus method:

The preferred method of sharing air with another diver.

The exact procedure you use for sharing air with an alternate air source depends on your equipment configuration and personal preference.

## General steps (octopus method):

Give your buddy the regulator when they signal they are out of air.

Hold on to them with one hand, position your buddy in front of you.

Ask your buddy if they are OK.

Give your buddy the up signal, make a normal ascent.

## Safety Skills

The other method of sharing air is the buddy breathing.

Unit 3- Diving Skills

- If you do not have a secondary regulator to pass to your buddy.
- Unless you practice buddy breathing on a regular basis, it is unrealistic to expect you could perform it in an emergency.

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### **If you do not have a secondary regulator to pass to your buddy:**

You share air by passing your primary regulator.

This procedure is simple but requires a higher level of skill from you and your buddy.

Take a breath from the regulator before passing it.

Get control of your buddy.

Pass the regulator while maintaining control of it.

Allow your buddy to take two breaths, then pass it back to you.

When both of you are ready, make a normal rate of ascent.

**Unless you practice buddy breathing on a regular basis, it is unrealistic to expect you could perform it in an emergency.**

# Safety Skills

If you cannot obtain air from your buddy, you must make an independent ascent to the surface. (Swimming or Buoyant)

Unit 3 - Diving Skills

- **Emergency Swimming Ascent (ESA)**
- **You will discover that the expanding air flows out from your lungs almost naturally with very little effort on your part.**



## **Emergency Swimming Ascent (ESA):**

Emergency Swimming Ascent is done from shallower depths 18 meters (60 feet).

Look up to maintain an open airway.

Keep the regulator in your mouth.

Exhale as you ascend.

Be ready to vent the BC to control your ascent.

**You will discover that the expanding air flows out from your lungs almost naturally with very little effort on your part.**

## Safety Skills

You do a buoyant emergency ascent when you run out of air at greater depths.

Unit 3- Diving Skills

- You drop your weight belt and gently exhale to the surface.
- Monitor your submersible pressure gauge frequently during your dive to avoid running out of air.



### **You drop your weight belt and gently exhale to the surface.**

If you are wearing a wetsuit and drop your weight belt, you should get yourself horizontal in the water and be facing up.

If you are in warm water and drop your weight belt, you will have to swim to the surface.

**The optimal method of knowing that you have air for an emergency is to carry a contingency air supply like a pony bottle.**

**Monitor your submersible pressure gauge frequently during your dive to avoid running out of air.**

## ***Review on Safety Skills***

What have you learned so far?

Unit 3 - Diving Skills

- **State how many breaths a diver should take when sharing the regulator.**
- **State how you will know which regulator to use in an assisted ascent.**
- **Describe what should be done if you are planning to use buddy breathing in an emergency.**
- **Describe when you would choose a buoyant emergency ascent.**

**Summarize this section.**

**Review the main points of each slide.**

**Emphasis key points of each main point.**

**State the objective statements as questions.**

# Buddy System

Diving is fun, but not if you spend most of your time looking for your buddy.

Unit 3- Diving Skills

- Keep track of your buddy.



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## The following points help you keep track of your buddy:

Agree on a leader.

Discuss the dive before you get in the water.

Maintain your same position relative to one another for the entire dive.

Establish your direction.

Use the lost buddy procedure if you lose your buddy.

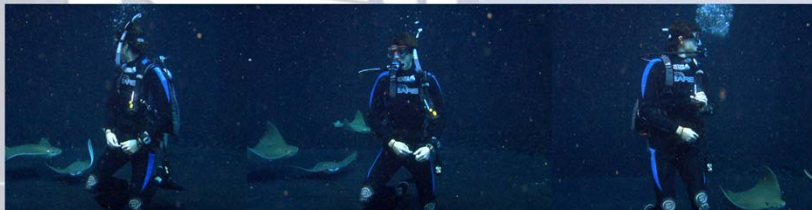


# ***Buddy System***

Use the lost buddy procedure if you lose your buddy.

Unit 3- Diving Skills

- **Have a pre-arranged plan.**
- **Use the common lost buddy procedure.**



**Have a pre-arranged plan.**

**The common procedure is:**

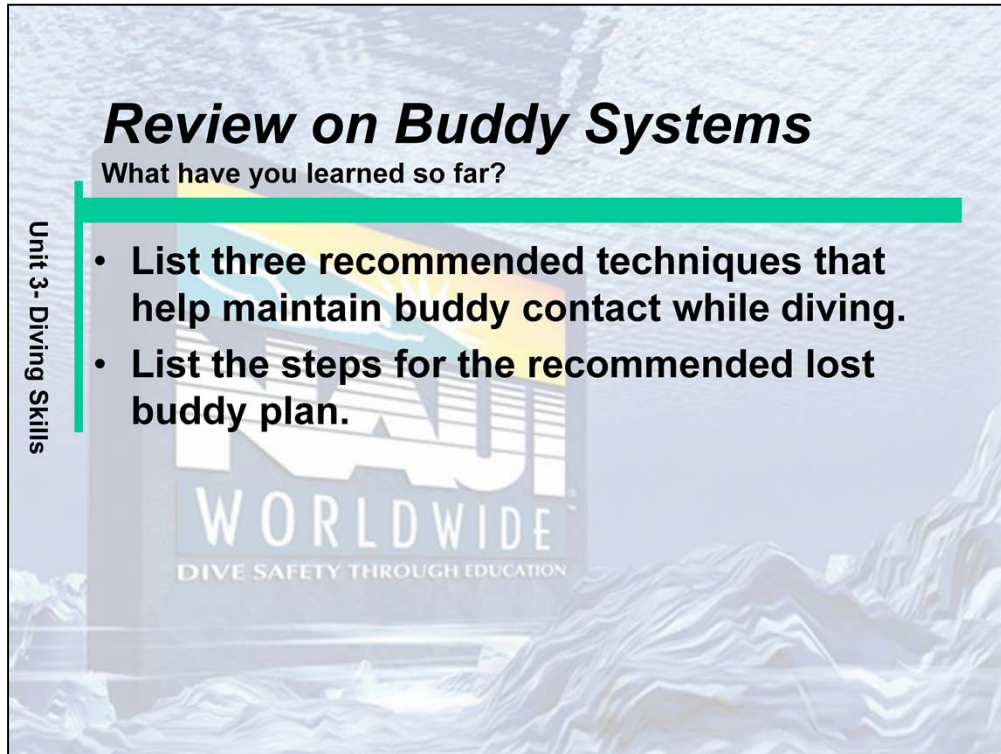
Get your self vertical and look in all directions.

Rise about 3 meters (10 feet) in the water and look for bubbles.

Ascend slowly to the surface after about a minute.

At the surface note your position and wait for your buddy.

After about 5 minutes, signal for help in finding your buddy.

A presentation slide titled "Review on Buddy Systems" with a background of a diver underwater. The slide includes a question "What have you learned so far?" and two bullet points. A vertical label on the left reads "Unit 3- Diving Skills". The Worldwide logo is visible at the bottom of the slide.

**Review on Buddy Systems**

What have you learned so far?

Unit 3- Diving Skills

- List three recommended techniques that help maintain buddy contact while diving.
- List the steps for the recommended lost buddy plan.

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**Summarize this section.**

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# Communication

There are standard signals you need to know to communicate underwater as well as on the surface.

Unit 3- Diving Skills

- Remember, for a signal to be effective, all concerned must discuss it and agree upon it before you start the dive.
- At the surface, you can use different types of audible and visual signals to communicate.



**Remember, for a signal to be effective, all concerned must discuss it and agree upon it before you start the dive.**

When you give a hand signal, you must display it distinctly and you must wait for a response from your buddy.

Always remember to review your hand signals with your buddy before each dive.

You can write messages to your buddy on an underwater slate.

You can use a sense of touch or sound, such as rapping on your tank.

**At the surface, you can use different types of audible and visual signals to communicate.**

## ***Review on Communication***

What have you learned so far?

Unit 3- Diving Skills

- **List four ways to communicate underwater.**
- **List two ways of communicating at the surface.**
- **Describe what must be done when giving hand signals underwater.**
- **Name the most important point to remember regarding diving communication.**

**Summarize this section.**

**Review the main points of each slide.**

**Emphasis key points of each main point.**

**State the objective statements as questions.**

## ***Handling Scuba Equipment***

There will be times when need to don or remove your equipment in the water.

Unit 3- Diving Skills

- **When donning your scuba unit over head, be sure to keep the hose for you second stage between your arms.**
- **Donning your scuba unit:**
  - On the surface
  - Underwater
- **Removing and replacing your weight belt.**



**When donning your scuba unit over head, be sure to keep the hose for your second stage between your arms.**

### **Donning your scuba unit:**

At the surface, you want your scuba unit to be positively buoyant.

At the bottom you want your scuba unit to be negative.

### **Removing and replacing you weight belt:**

Always handle the belt by the free end (without the buckle).

Keep the belt between you and the bottom.

## ***Review on Handling Equipment***

What have you learned so far?

Unit 3- Diving Skills

- **Name the primary difference between donning your scuba equipment on the surface and underwater.**
- **Describe where your regulator hose should be when donning your scuba unit over head.**
- **List two points to remember when handling a weight belt.**

**Summarize this section.**

**Review the main points of each slide.**

**Emphasis key points of each main point.**

**State the objective statements as questions.**

## ***Navigation Skills***

When you are out of the water you are constantly using navigation skills (maps, street signs and landmarks).

Unit 3- Diving Skills

- **Natural navigation**



### **Natural navigation:**

Ripple marks in the sand on the bottom form parallel to the shore.

The back and forth movement of the water close to shore is known as surge.

Depth of the water.

Prevailing currents.

Underwater landmarks, such as rock formations, large and unique.

## ***Navigation Skills***

When you dive at night or in limited visibility, natural aids are not as helpful.

Unit 3 - Diving Skills

- **Compass navigation**



### **Compass navigation:**

Using a compass allows you to navigate by dead reckoning, which can be very accurate.

A diving compass must:

- Be filled with liquid.

- Have a reference line, called a lubber line.

- Rotating bezel to show the select bearings.

**Because the compass is magnetic, iron or steel objects close to it will affect it.**



**Navigation Skills**

If you need to navigate precisely, you must reference the compass frequently.

Unit 3- Diving Skills

- **When you use a compass**
- **Reciprocal course**
- **Simple navigation skills make diving more enjoyable.**

WORLDWIDE  
DIVE SAFETY THROUGH EDUCATION

**When you use a compass:**

Keep the lubber line aligned with the centerline of your body and the compass level.

The compass needle always points to magnetic north.

**Reciprocal course:**

This is made when your outbound course is a straight line and halfway through the dive you make a 180 degree turn.

**Simple navigation skills make diving more enjoyable.**

**Review on Navigation**  
What have you learned so far?

Unit 3- Diving Skills

- Name three natural aids to navigation.
- Describe two points to remember when using a compass for navigation.
- Describe a reciprocal course.

WORLDWIDE  
DIVE SAFETY THROUGH EDUCATION

The slide features a background image of a boat on the water with a sign that reads 'WORLDWIDE DIVE SAFETY THROUGH EDUCATION'. A green horizontal bar is positioned below the title and question. The text 'Unit 3- Diving Skills' is written vertically on the left side of the slide.

**Summarize this section.**

**Review the main points of each slide.**

**Emphasis key points of each main point.**

**State the objective statements as questions.**

## ***Disassembling Your Gear***

After diving you must disassemble your gear and rinse it with fresh water.

Unit 3- Diving Skills

- **General steps**



### **General steps:**

Turn off your air.

Relieve all the air pressure in the hoses of your regulator.

Undo all attached accessories that may be clipped or connected to the BC.

Unscrew the yoke screw from the cylinder valve.

Dry the dust cap.

Replace the dust cap over the inlet to the first stage.

Remove the BC from the cylinder.

Drain the BC of any water.

Rinse your equipment with fresh water.

Allow it to dry completely before storage.

## End of Unit 3 *Diving Skills*

### Unit 3 - Diving Skills

- Snorkeling skills
- Assembling scuba equipment
- Donning scuba gear
- Entering and exiting the water
- Mask skills
- Regulator skills
- Buoyancy skills
- Safety skills
- Buddy system
- Communication
- Handling your scuba equipment in the water
- Removing and replacing your scuba unit
- Removing and replacing your weight belt
- Navigation skills
- Disassembling you scuba gear

#### **Transition Statement:**

**Review of Main Points:** See this presentation slide.

#### **Emphasize Key Points:**

Snorkeling skills

Assembling scuba equipment

Donning scuba gear

Entering and exiting the water

Mask skills

Regulator skills

Buoyancy skills

Safety skills

Buddy system

Communication

Handling your scuba equipment in the water

Removing and replacing your scuba unit

Removing and replacing your weight belt

Navigation skills

Disassembling you scuba gear

#### **Ask Students for Questions:**

## ***Student Performance***

By the end of the lesson students will be able to:

Unit 3- Diving Skills

- List the snorkeling skills introduced in the course.
- Describe the steps for assembling and testing your scuba equipment.
- List the steps for donning your scuba gear.
- Describe some methods of entering and exiting the water.
- List the mask and regulator skills introduced in the course.
- Describe buoyancy control and list buoyancy skills introduced in the course.
- List the safety skills introduced in the course.

**Restate the students performance statements as questions.**

### **Assignment:**

Instruct the students to read chapter 4 in preparation for the next lesson.