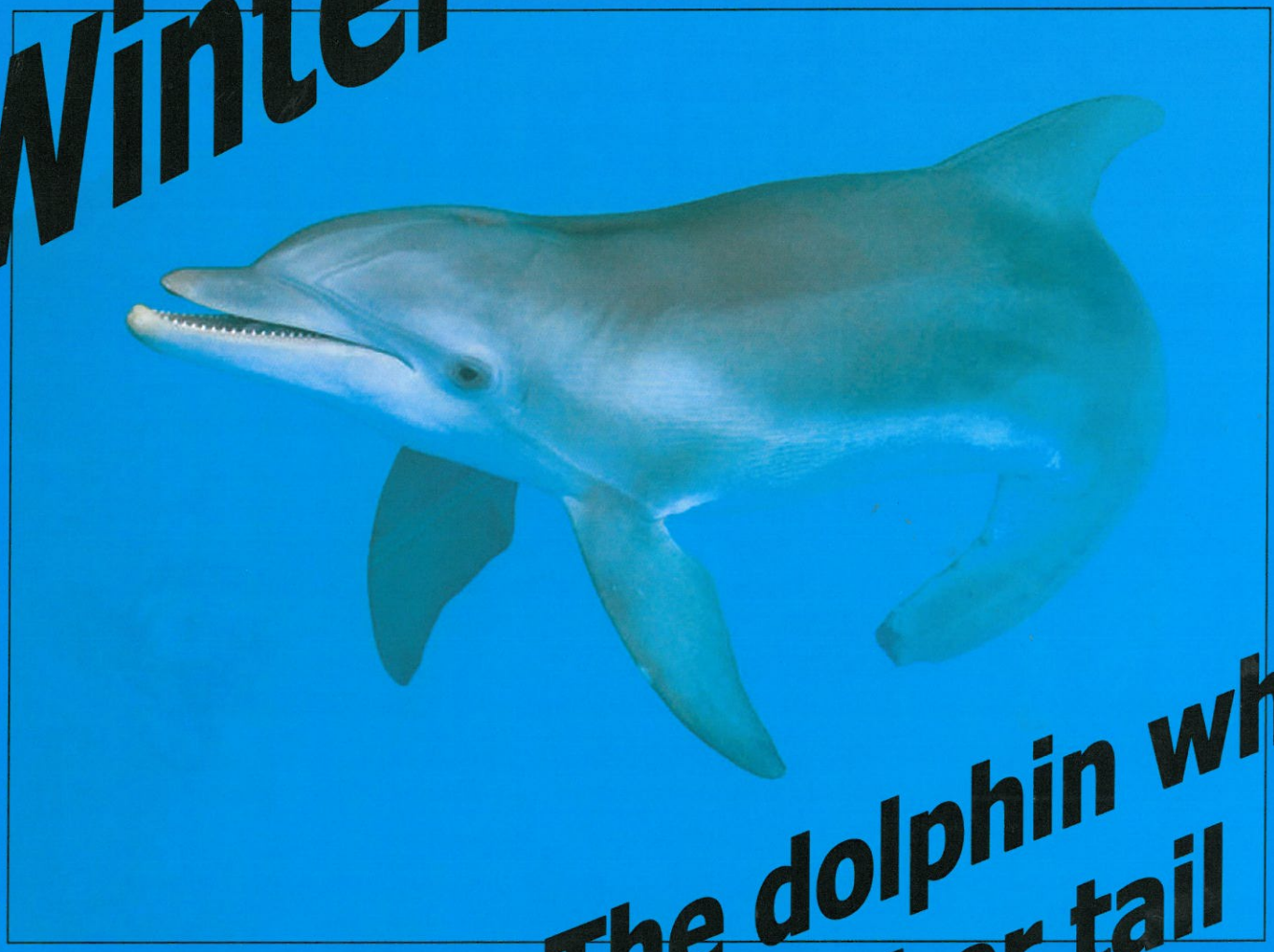
Winter



The dolphin who lost her tail

CLEARWATER MARINE AQUARIUM

RESCUE • REHAB • RELEASE

About this Booklet

This booklet was designed by Clearwater Marine Aquarium though a grant from the Pinellas County Environmental Fund.

Clearwater Marine Aquarium is a not-for-profit organization dedicated to restoring and preserving the marine environment. They accomplish this mission through leadership in education, research, and the rescue, rehabilitation, and release of injured or stranded marine life. CMA is open daily to the public and offers a unique marine life experience through animal presentations, boat trips, dolphin encounters, behind the scenes tours and large format theater viewings. Visit **www.SeeWinter.com** for details.

Pinellas County Environmental Fund (PCEF) is a unique partnership between the Pinellas County Board of County Commissioners, the National Oceanic and Atmospheric Administration (NOAA), and the National Fish and Wildlife Foundation. These three groups share the common goals of actively pursuing the protection, restoration, and enhancement of Tampa Bay's natural resources. PCEF is funded by the Pinellas County Board of County Commissioners, the National Oceanic and Atmospheric Administration, and corporate and individual sponsors. The National Fish and Wildlife Foundation administers all grant awards on behalf of PCEF.

Pinellas
County
Environmental
Fund

WINTER

THE DOLPHIN WHO LOST HER TAIL

This is the story of Winter, a young dolphin living in Florida at Clearwater Marine Aquarium (CMA). She looks and acts a lot like other Atlantic Bottlenose dolphins at the aquarium, except that Winter has no tail. She lost it after becoming entangled in a crab trap line when she was only a few months old and still living in the ocean. The line wrapped so tightly around her tail area that it stopped all the blood circulation, and her tail withered away shortly after arriving at CMA in December 2005. Fortunately, with the expert treatment and care by the aquarium's Marine Animal Stranding Team, her other cuts and injuries healed, but her tail will never grow back.

So Winter will always be just a little bit shorter than her pool mates, which may grow up to ten feet in length and weigh over 500 pounds. To make up the difference, she's being fitted with an artificial tail to help her swim and keep her back muscles and bones in proper shape. Her prosthetic tail is the first of its kind and will have to be updated over the years as she grows and more is learned about dolphin swimming motion.

A dolphin's tail, known as its flukes, is moved up and down as they swim. This is different from fish or sharks, which move their tails from side to side. In fact, dolphins are not related to fish at all, they're mammals like you and I. Mammals are warm-blooded, have hair, give live birth, and breathe air. Dolphins breathe air through a hole on the top of their head known as a blowhole. They close their blowhole when they dive below the surface and blow any water away from it before they take their next breath. That's the spray you see when whales and dolphins take a breath. Bottlenose dolphins usually breathe about twice a minute, and can hold their breath for several minutes on deeper dives.

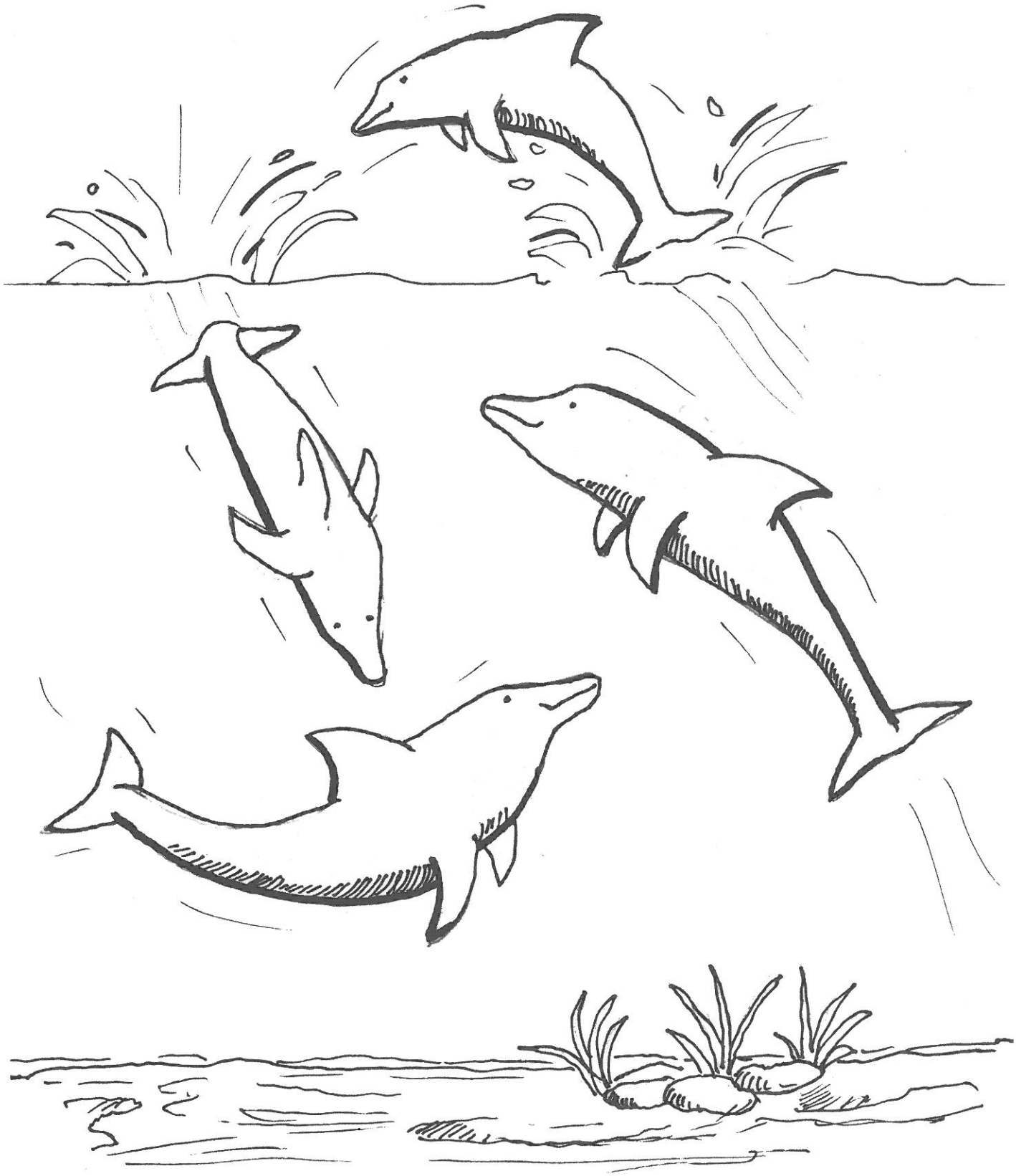
Many marine mammals have thick, waterproof hair or fur. But not dolphins. You can look at Winter from top to bottom and not see a single hair. That's because the small whiskers they have when they're born fall off shortly afterwards, although you can still see the small holes or pits on a dolphin's **rostrum** where they used to be. Whales and dolphins don't need fur, because they have a layer of fatty blubber to keep them warm. Even dolphins living in the tropical waters of the Gulf of Mexico need the warmth, since water pulls the heat from your body more quickly than air. And if they should get too warm, they can control how much blood flows through the veins on their flukes and fins to cool down. The more the blood flows, the more the heat escapes their bodies.

Their fins have other uses as well. The pectoral fins, or flippers, are used for steering and braking, much like the rudder on a boat. They have bones shaped a lot like our hand and fingers under the skin to help them control the motion.

The top, or dorsal fin, is used to help keep the dolphin swimming straight, kind of like the keel beneath a boat. Each dolphin's dorsal fin looks a little bit different and marine biologists use its unique shape and markings to identify individuals in the wild. This fin has no bones or muscles and is made of connective tissue similar to that of our ears.

Speaking of ears, dolphins have them too. They just don't stick out like ours do, they're more like a small hole on each side of their head. Dolphins can hear and see very well, both in and out of the water.

SWIMMING WITH HER WILD POD



Before Winter came to CMA, she lived with her mom and other Bottlenose dolphins off the east coast of Florida. A group of dolphins is called pod, and can range in size from a few to a few dozen. Sometimes pods will mix together with other types of whales and can number in the hundreds. Bottlenose pods are usually made up of the females and their young, with the males leaving the pod after a few years. These males will sometimes form smaller pods and travel around together.

When a new calf is born into the pod, the mother and other females have to feed and protect it. Dolphins are very smart, and like people, they need to learn how to survive. Unfortunately, Winter was too young to learn many of the things she would need to know to live in the wild. She was taught by the CMA staff to nurse from a bottle and later eat solid food, but can't fully understand how to avoid sharks and other predators, how to hunt, or even how to communicate with other wild dolphins.

Exactly how they communicate is very complex and we still don't know all the details. They produce sounds by moving air through nasal sacks located under their blowhole; they don't have vocal cords like us. These calls travel easily underwater and can be heard from great distances by other dolphins. Some whales sing to each other clear across the Atlantic Ocean! Bottlenose dolphins also have a signature whistle that they can use to identify each other and help calves find their way back to their mothers. Most dolphins brought into CMA call out using this signature whistle after being rescued.

They seem to communicate with behavior as well. Tail slapping, jaw popping, bubble blowing and **breaching** are all ways to signal each other. Dolphins have even been observed "dancing" together and they love to imitate each other's moves! All these actions help build the social bonds dolphins need in the wild. A dolphin is a powerful hunting force in the ocean, but they're even stronger when working together as a team.

Teamwork helps in defense too. Adult bottlenose dolphins can drive away sharks looking for a satisfying meal. Recent studies show that they rarely actually ram the sharks; instead they race towards them and turn away at the last second. It's enough to scare off most sharks and the dolphin doesn't have to worry about hurting itself against the shark's tough skin. Only if the shark won't leave will the dolphin be forced to ram it, sometimes killing the shark with a blow to its gills.

With the protection of its pod, a dolphin calf can safely learn and adapt to its environment. Unlike **instinctual** animals that have a hard time figuring out changes in their surroundings, dolphins can use these changes to their advantage. Human made objects such as cement seawalls can pose a tough barrier to many ocean creatures, but dolphins use them to help corner their prey and enjoy a tasty dinner. They love to swim alongside boats and have learned that people can sometimes mean a free meal, and some dolphins will actually beg for a handout. Unfortunately human food and uninspected dead fish can make a dolphin very ill and luckily it is now illegal to feed them in the U.S. The **Marine Mammal Protection Act** states that we cannot chase wild dolphins with boats, feed them, pet them, or even move too close to watch them. That's because we don't want to interrupt the social learning we've mentioned that might be going on within the pod. As with all wild animals, let them come to you if they want to; don't go after them.

WINTER BECAME ENTANGLED IN CRAB TRAP LINE

Often people do things that harm dolphins and other sea creatures without even knowing it. Many of the animal injuries cared for at Clearwater Marine Aquarium could have been prevented if people were aware of the problems. Here in Florida we are fortunate to be surrounded by beautiful ocean waters, and if we want to keep using them for fishing and recreation, it's our responsibility to do so in a way that doesn't harm the sea life that was there before us.

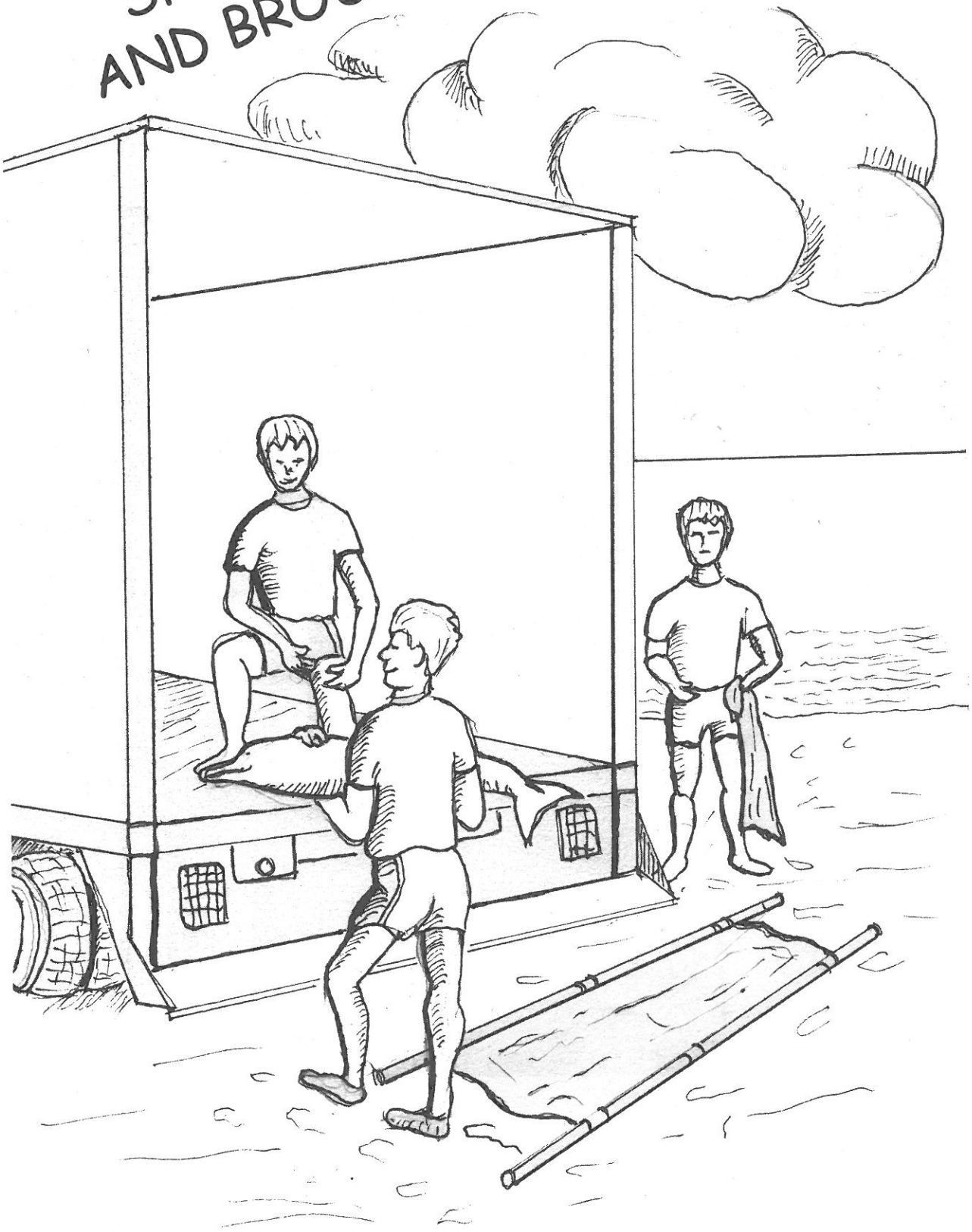
One of the biggest problems is pollution, including plastics and other debris that ends up entangled around dolphins and sea turtles. Monofilament fishing line, six-pack holders and plastic bags can wrap around their necks, fins and flippers so tightly that it can stop the flow of blood to those areas. CMA currently has sea turtles missing flippers due to line entanglement. Their flippers will not grow back and some of these animals can never be released back to the wild. To make matters worse, many plastics break down very slowly in water and last for hundreds of years. That's another reason it's so important to pick up and recycle litter that could wash into the sewers then overflow into the oceans.

Additional pollution comes from a wide range of sources, not just factories and oil spills, but from around the house too. Improperly disposed of cleaning chemicals or car oil, and fertilizers or pesticides in rain runoff can pollute our **watersheds** that lead to the ocean. Wasting fresh water by leaving on a faucet or hose more than is needed puts a strain on our **aquifers**, resulting in people having to convert sea water and possibly changing the ocean's **salinity**. All these pollutants, along with commercial chemicals intentionally dumped in the sea, can make the plants and animals sick, or weaken them to fighting off natural viruses and disease.

Fishing methods can also be dangerous if not done responsibly. Dolphins may get caught in nets or on **long lines** and drown. Some dolphins will follow fishing boats hoping to get the **by catch** thrown over by the fishermen and get too close. Others are curious and may explore crab traps and other devices with brightly colored baits and markers.

Which brings us back to Winter. She was only about three months old when she got entangled in the marker and line attached to an unattended crab trap. It wrapped around her mouth, flippers and tail flukes. As she fought to free herself, the line cut in tighter and tighter around her tail. By the time she was rescued by the staff at Harbor Branch Oceanographic Institute, all the blood had been stopped to her tail and all of its tissues were dead. She was very weak and they did not know if she would survive. So they called CMA and decided to send her over for examination and treatment.

SHE WAS RESCUED AND BROUGHT TO CMA



Winter was brought to us from across the state, but many dolphins wash ashore closer to CMA. When this happens CMA will send their stranding van, which is a lot like an ambulance, only with four-wheel drive and ramps for picking up local animals right off the beach. Jet skis and kayaks can also be towed to get to those animals stranded in shallow water.

CMA responds to dozens of strandings each year, including dolphins, whales, manatees, river otters and sea turtles. A stranding is when a marine animal washes ashore, often because it is too sick or too hurt to fight the changing tides. Not every call actually turns out to be an animal in need: people occasionally mistake animals hunting or playing in the shallow waters as a stranding. They even get calls that turn out to be floating tires or tree branches!

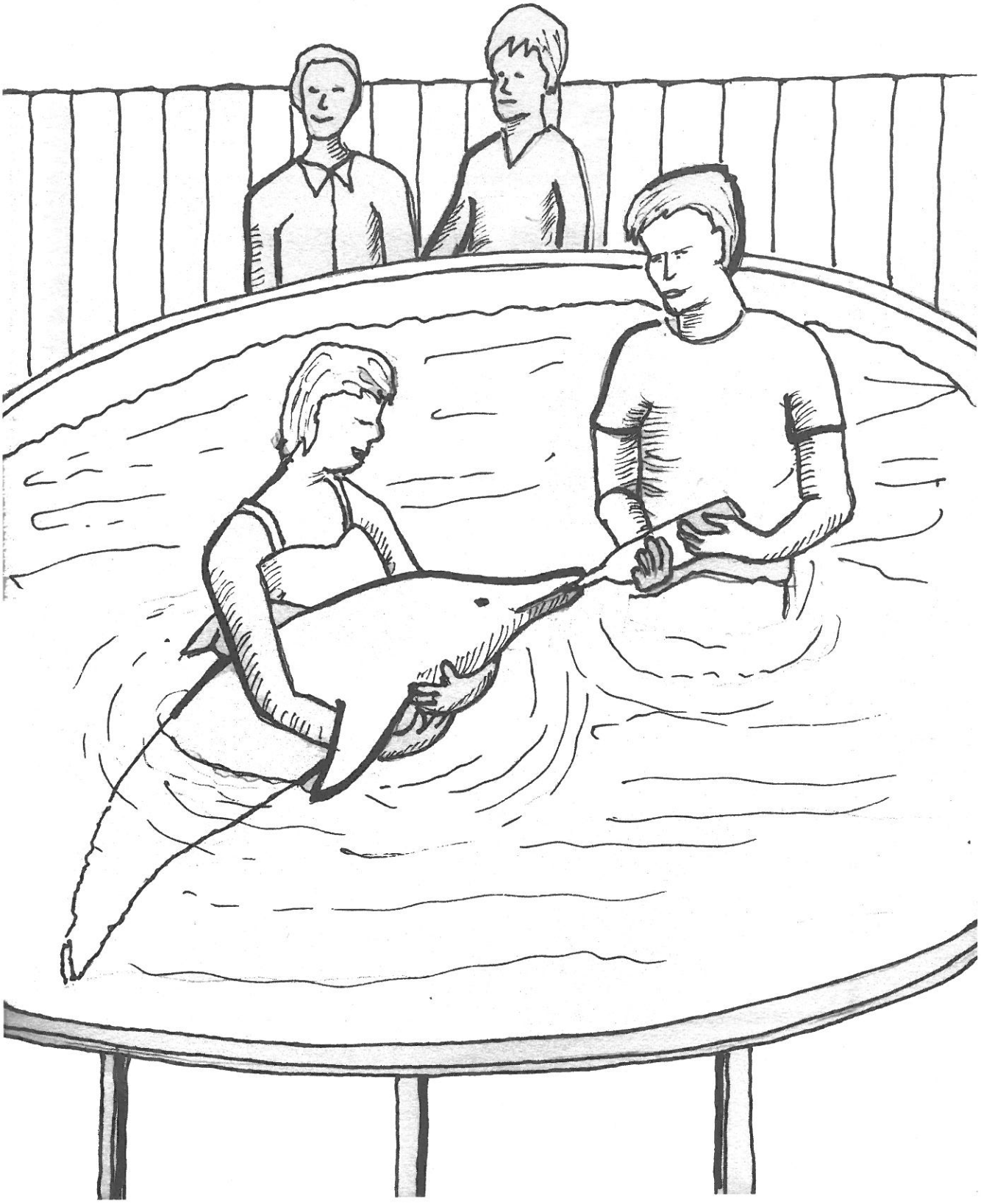
Once a rescue team arrives on the scene, they must act quickly. Dolphins easily overheat and must be cooled with wet towels and water sprayers. Sunburn is a serious injury for them and we apply zinc oxide as a sun block right away. One of CMA's dolphins named Nicholas lost about a third of the skin on his back from a sunburn, and it took almost a year of treatment by CMA's rehab staff before the skin grew back.

Crowd control can also be an important early role of a stranding response call. Often a beached dolphin is first sighted by people who are simply enjoying the beach, with little or no marine animal rescue experience. Sometimes they'll try to help the dolphin by pushing it back into the ocean or pouring ocean water in its mouth. Unfortunately these acts do not help the dolphin at all; in fact they can cause great harm. Stranded animals are usually very weak and may drown if pushed back into the water. Others may still have some energy left and try to bite or attack people who approach them. The best thing to do for both the dolphin and your safety is actually very easy: call for help. Most police, life guards and other officials know which animal rescue facility to call.

Next, the animal is loaded into the van using poles and stretchers. Treatment starts right in the van, collecting blood samples and recording as much information as possible before arriving at the aquarium. And if there's no room at CMA, they may have to take it to another rehab facility.

Most of the stranded animals are transported on mats spread out across the back of the van, and are kept wet with sprayers and towels. They often have to be held in place on the mat as the rescue team keeps track of their breathing and heart rate to make sure they're doing OK. The van is also equipped with a generator for light and air conditioning to make them more comfortable along the way.

SHE DRINKS MILK FROM A BOTTLE



After an animal has been rescued and brought to the aquarium, CMA veterinarians and trained support staff are notified and the initial treatments begin. It can be a long and exhausting time for both the animal and those caring for it, including crews working around the clock trying to bring the dolphin back to health. The dolphins are usually so weakened that they have to be walked or carried around in a shallow pool with the rehab team holding their blowholes above the water.

Sometimes the rehab team isn't fully aware of all the injuries and illness. Internal problems, as with the stomach, heart or other organs, can be hard to **diagnose**. Other injuries, as with Winter, are on the outside and much easier to see. CMA was aware of Winter's condition even before she arrived and was ready for treatment.

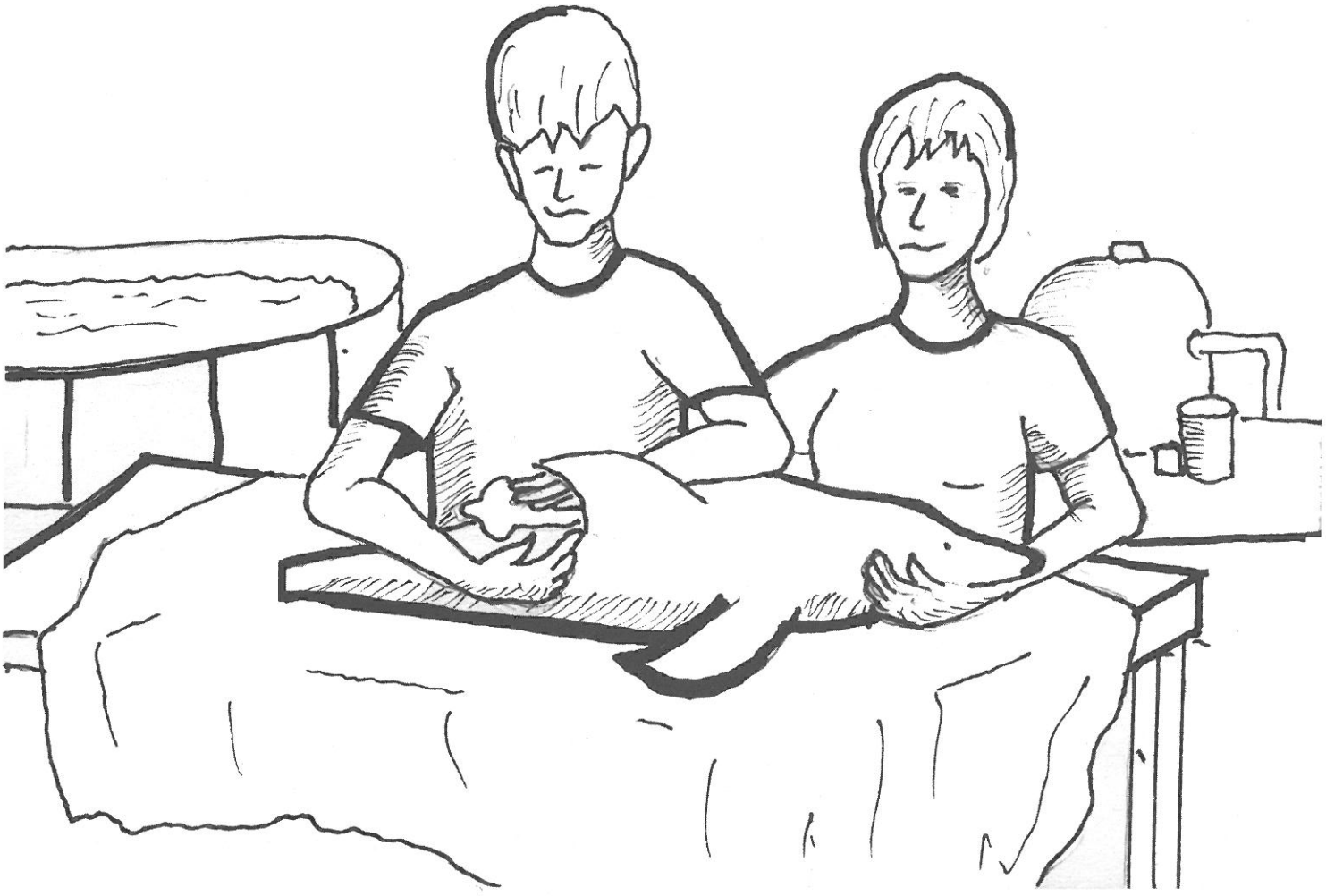
She was placed in a **quarantined** holding pool outside the main aquarium building to make sure she didn't bring in any diseases that could make CMA's other dolphins ill. The crew working with Winter had to be careful as well, because people can spread certain dolphin diseases. So they can't go near the other dolphins for two or three days after working with a new arrival.

Next, it was time to get some food into hungry little Winter. CMA's dolphins are fed several times daily to keep up their strength. Winter wanted to be fed too, but only being a few months old, she wasn't ready yet for solid food. She, like all mammals, was born live and was fed with her mother's milk. Sometimes other female dolphins in the pod will help nurse the calves too.

Winter's mom was at least five to ten years old and was pregnant for 11 to 12 months before giving birth. Dolphins are born tail first and are gently helped to the surface for their first breath. The calves are approximately 40 to 50 inches in length and weigh close to 45 pounds. Bottlenose dolphins usually produce only one calf every few years to ensure that the baby is well cared for, develops the social and hunting skills it needs to survive, and has ample opportunity to nurse or feed from the mother's milk.

The calves grow quickly feeding on the rich milk. And since you can't find dolphin milk at the grocery store, Winter's milk formula had to be made by the rehab team at CMA. Her powdered animal formula was thickened with goat's milk, oils, vitamins, medications and even fish fillets, all blended together and poured into a bottle. She learned to suck from the bottle and had to be fed every couple of hours all day and night. In fact, Winter got her name from the long winter hours the rehab crew spent working with her those first few weeks.

WINTER
RECEIVES
MEDICAL
CARE



Winter grew stronger under the care of the rehab team. The dead tissue remaining from her tail injury withered away, including the last three **vertebrae** of her backbone. But Winter was one tough little girl and did great throughout her daily treatments. She even learned to swim using a side to side motion with her **peduncle** muscles. This is quite different from, and less effective than, the up and down motion used by other whales and dolphins. They can reach speeds of 25 miles per hour under the water and leap out over 15 feet high.

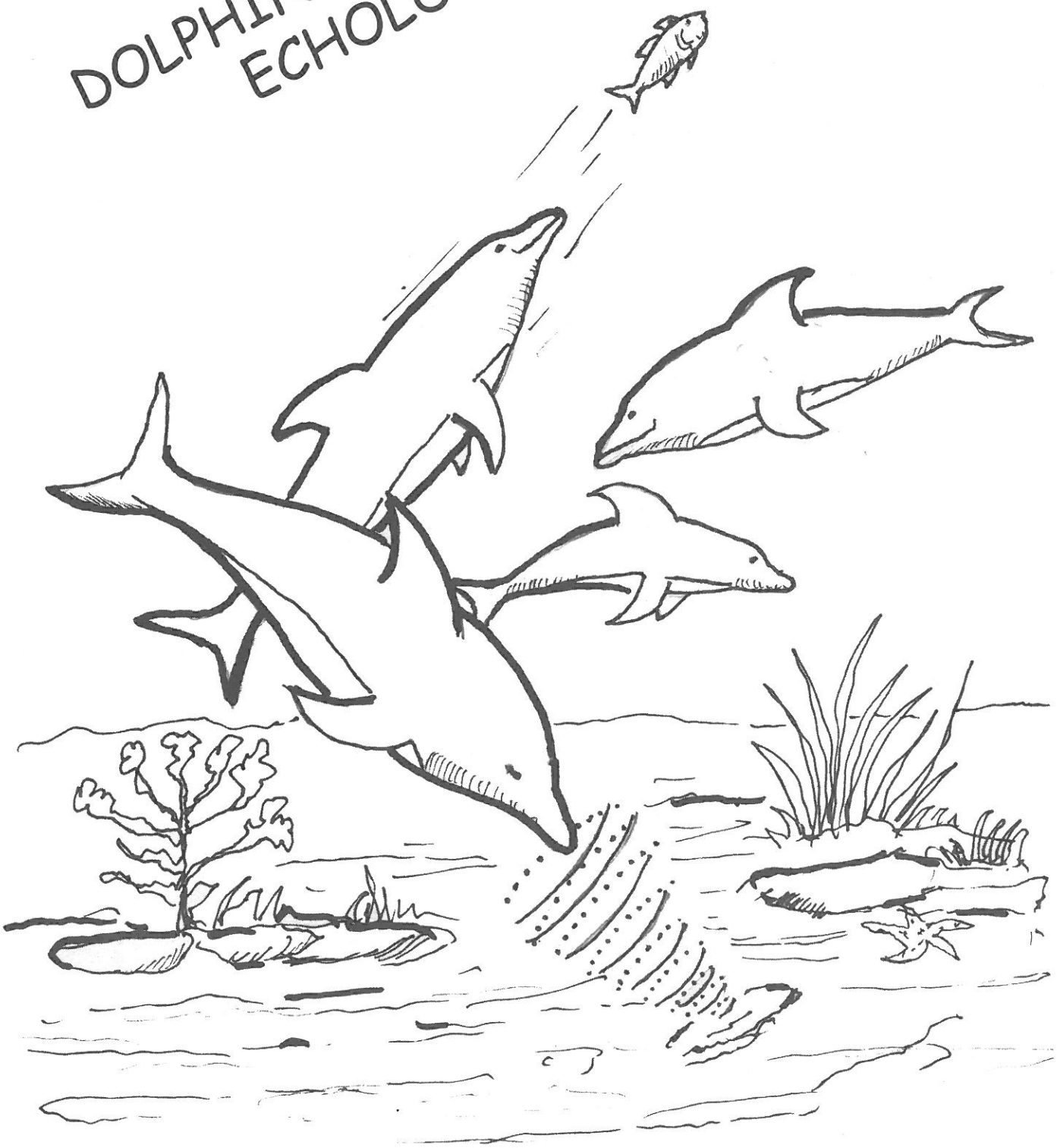
Wild dolphins use this speed to hunt down their food. They school fish together into underwater bait balls and take turns swimming through and grabbing a meal. They grip their catch with about 90 sharp cone-shaped teeth and swallow their food whole. They usually spin the fish head first to slide down more easily. An adult Bottlenose dolphin spends quite a bit of time hunting and can eat over twenty pounds of fish a day!

It can take over a year for a wild dolphin calf to learn how to hunt for itself. Winter had to learn to eat fish too, but not live ones. CMA uses frozen fish and squid to ensure the best quality. Each fish is carefully inspected for any breaks in the skin or other defects that might allow germs or bacteria to be passed along, making the dolphins sick. It's also easier to store the frozen food; they can fit a whole month's supply in their walk-in freezer, and they can put vitamins and medicine right inside the fish! It takes animal care volunteers working at the aquarium all morning to prepare the day's food for all their rehab animals.

To help teach Winter how to eat whole fish, CMA decided to put her into a larger pool with an adult female dolphin named Panama. It had been several months since Winter's arrival at the aquarium and all her wounds had healed. So she was ready for some company and Panama seemed like a perfect choice. Panama had come to CMA as a full grown adult after stranding on the beach, and had probably raised calves in the wild. Her gentle nature blended well with Winter's playfulness and they were swimming around together in no time.

Winter could now get around surprisingly well without her tail. She would dive down nearly 20' in her new pool while playing with Panama. The CMA training staff joined in too: they knew that Winter could never be released back into the wild and began getting her used to being around more people. Soon she would be ready to move inside the building with the rest of CMA's dolphins and trainers.

DOLPHINS HUNTING WITH ECHOLOCATION



Winter and Panama moved inside to join Indy and Nicholas, two young male Bottlenose dolphins. Panama had been in with them before, and weighing in at 450 lbs, she had no trouble keeping the boys in line. But Winter, now about 100 lbs, was still a little too small to keep up with this lively pair, so she was kept separate from the two boys in a different section of the large indoor pool. Plus she needed to be free from too many distractions as she began the fitting and training for her new tail.

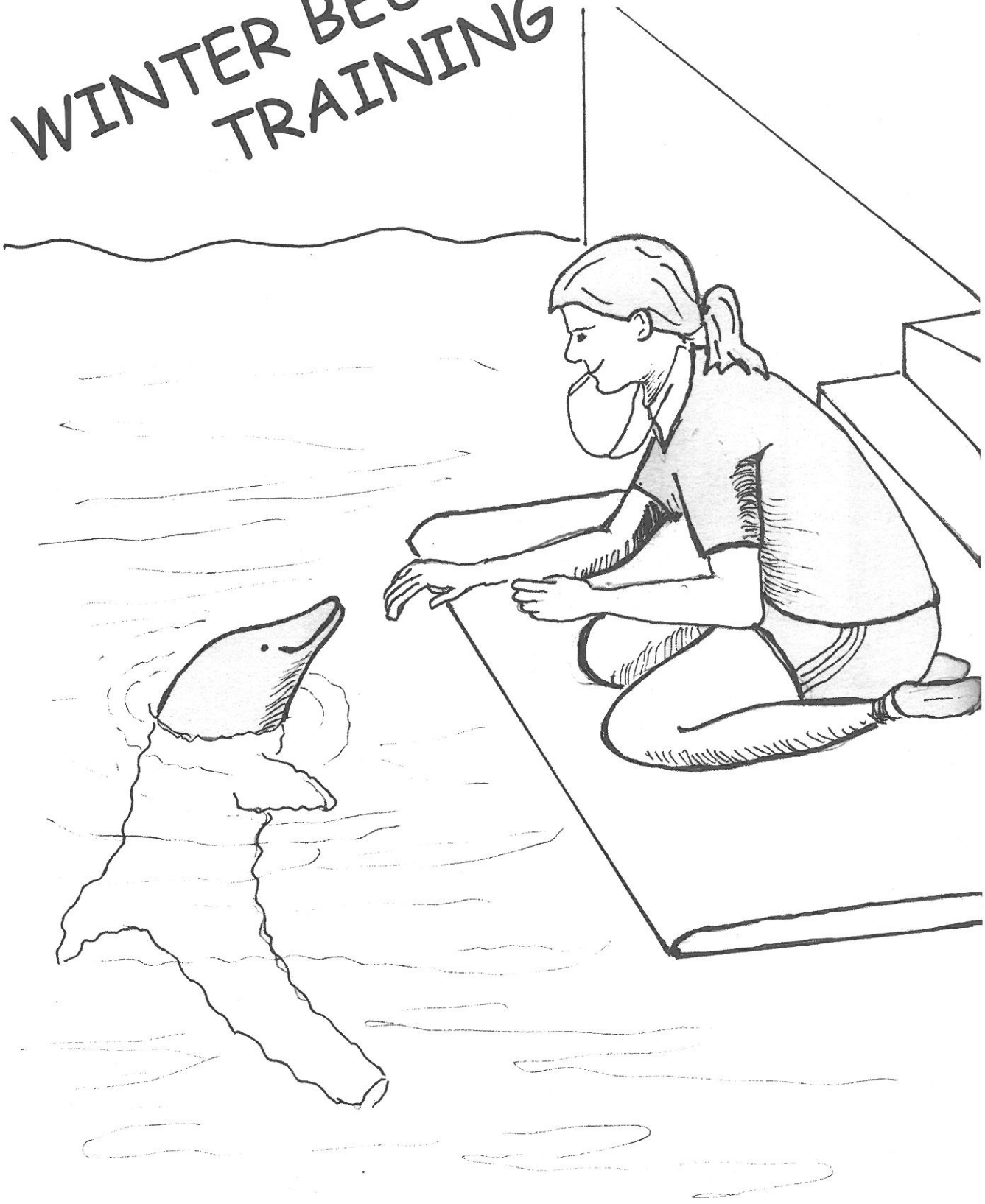
That's right; Winter was getting a new tail! An artificial, or **prosthetic**, tail was being designed to help her swim. The veterinary staff was worried that her side-to-side swimming might cause problems with her back. They believed that a prosthetic tail would allow her to strengthen her muscles and spine by using the up-and-down motion other dolphins use. It would take months of research and development just to make her first tail and it will have to be modified over the years as she grows. No surviving dolphin has ever lost as much of their tail as Winter, so her tail is the only one of its kind. The new technology used to make her prosthetic tail is now being used by people needing artificial limbs as well. It's amazing to see all the benefits from Winter's rehab.

Winter would next have to be trained how to use her new tail. The trainers had already been working with Winter on other behaviors, and she was learning all sorts of new things. She loves waving, making sounds through her blowhole and dragging around her enrichment items. These items are a variety of different shaped and colored objects given to her to make her home more interesting, a lot like toys.

She searches for her favorite items using a combination of keen senses. Dolphins have excellent hearing and vision, plus a special ability called echolocation. They release a focused beam of sound waves from their blowhole and a fatty section of their forehead known as the melon. These waves bounce off objects in the water and return to the dolphin as an echo. The waves strike the dolphin's jaw and a fatty channel under the skin carries the wave into their brain. This creates an image in the dolphin's mind of the objects, much like an **ultrasound** that doctors use to "see" objects inside a person. CMA tests the dolphins' ability to use echolocation by having them find objects while blindfolded during training sessions.

Another important reason for training at CMA is that it allows the treatment team to examine the dolphins more closely. Imagine having to wrestle a 400-500 pound dolphin every time you had to check its heartbeat or give it a shot. The aquarium's dolphins are trained to swim right over for treatments. They'll even float upside down and hold their breath while the staff draws blood from the bottom side of their tails!

WINTER BEGINS HER TRAINING

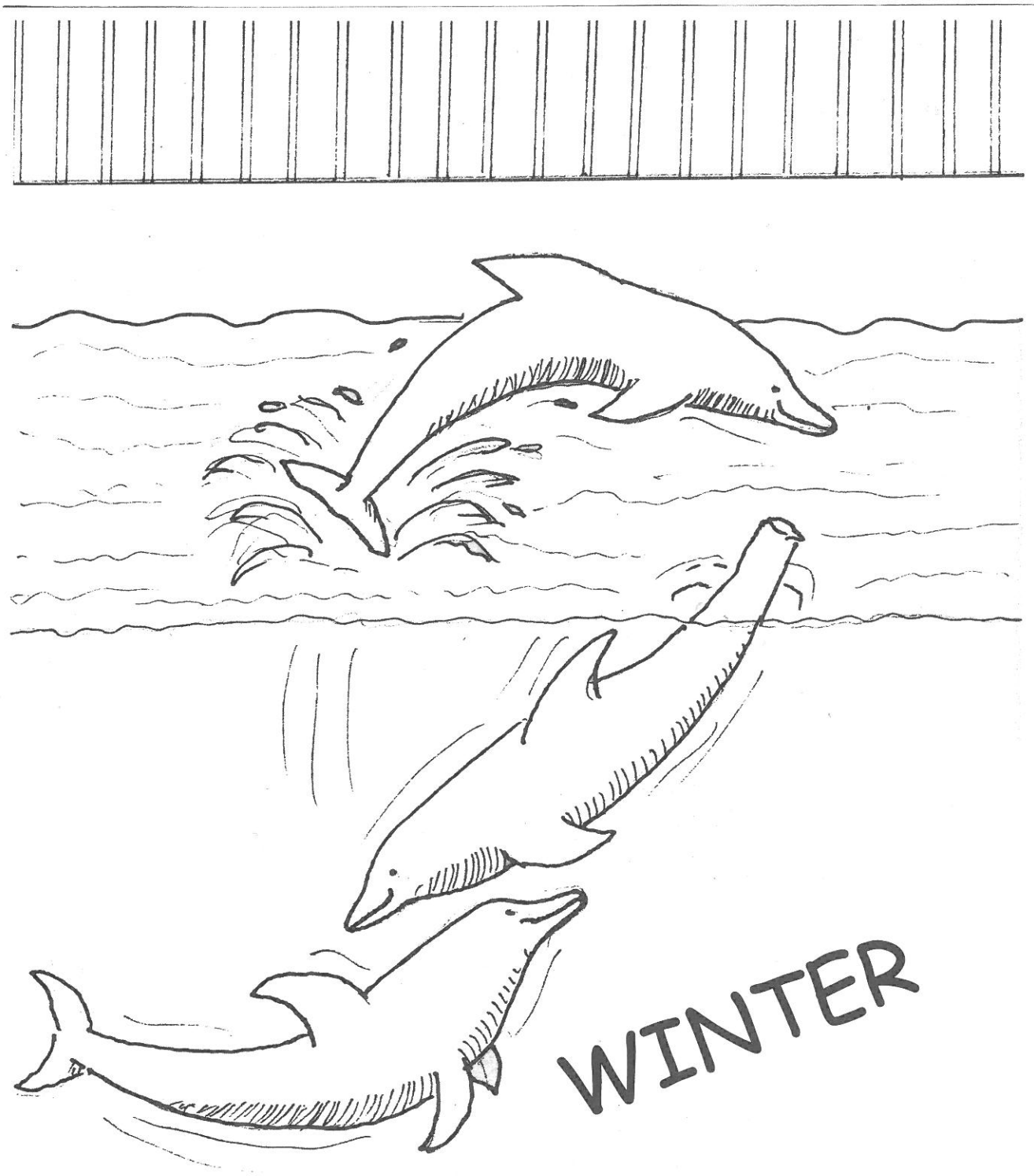


Training is very important to all dolphins in captivity; it has to be done. That's because dolphins need both mental and physical exercise to stay healthy. In captivity they do not face the same challenges that they would in the wild, like hunting, migrating, and avoiding predators. So instead the trainer challenges them to learn new tasks that are both fun and require complex thoughts and motions. It also builds strong social bonds between the animal and the trainer to replace some of the social bonds they would form with other wild dolphins. And it's fun to watch! The dolphins seem to like all the clapping and attention, and a dolphin show is a great way to teach people the importance of protecting the ocean and all its creatures. Most of CMA's injured animals are excellent examples of the reasons to be careful when using the ocean for fishing and recreation. Many of their injuries could have been avoided or minimized if people were just a little more aware of the dangers their trash, boating and fishing equipment pose to our environment.

As for Winter today, she still seems to be beating the odds and doing just fine. Not all stranded dolphins do so well, and few make it past their initial treatments. Sadly, stranded whales and dolphins only have about one chance in a thousand of surviving. If they do survive, and have the skills necessary to live in the wild, CMA tags and releases them back into the ocean. But even when they don't make it, it's still important to collect data and use that information to find out what may have caused the harm to that animal. The facts collected might help save future stranded animals, and CMA's vets and animal experts share what they learn with researchers all over the world. The more they learn, the more animals they can save.

You can share in their learning too. Clearwater Marine Aquarium is open to the public every day, so you can come experience their mission of education, preservation, and the rescue, rehab and release of marine animals for yourself. Don't forget to stop by the dolphin pool during a training session and say "hi" to Winter and her friends. And if you can't come by in person to visit the dolphins, sea turtles, river otters, stingrays, sharks and fish, you can interact on-line at www.SeeWinter.com. You'll also find information on animal adoptions, memberships and other ways to support the aquarium in all its hard work.

Winter and her new tail are now making news all over the world. Camera crews, veterinarians, school groups and visitors from around the globe often pop in for a visit. She loves the attention from being one of the most famous dolphins on the planet! So think of Winter the dolphin when you see litter on the beach or blowing down the street, and do your part to keep the environment cleaner and safer for all living things.



PLAYING WITH OTHER DOLPHINS
AT CLEARWATER MARINE AQUARIUM

Winter's trainers began to work with Winter each and every day using the tail. At first, they slid on just the sleeve, a stretchy protective barrier between the tail and her sensitive skin. This sleeve was made of a special material made just for Winter and is called Winter's gel. Although Winter was very curious, she worked with her trainers to get used to the feeling of something covering her tail stub.

Once Winter learned to move her tail stub up and down with the sleeve on, the trainers fit her with her prosthetic tail. Just like a child with a new toy, Winter examined her new tail, twisting around to get a better look.

Using her new tail was fun, but it took a lot of energy. The trainers swam in the water with Winter to make sure she was using the tail correctly, moving it up and down to strengthen her muscles and straighten her spine. They also helped her stretch out her tail muscles even when the prosthetic tail wasn't on. All of this was part of the important work help Winter.

Winter was still a young dolphin and growing more and more each day. The prosthetic tail, unlike her real tail, could not grow with Winter, so new tails had to be designed as Winter kept growing. Like a child getting new shoes, Winter's new tails had to fit her body just right. Each time Winter had to get a new tail, the doctors and researchers added new improvements to make them more comfortable and better for her spine. And each time Winter received a new tail, the trainers would report back to the doctors about her progress.

As Winter continued her work with the prosthetic tail, the news crews and other visitors kept coming. Eventually, Winter became so famous that people all over the world knew Winter's name and story...even people in Hollywood! In fact, a few people at some famous studios such as Warner Brothers and Alcon Entertainment liked Winter's story so much that they decided to make a movie all about her! The movie is a fictionalized version of Winter's story, but is based off her true story. Most of the movie was filmed at the Clearwater Marine Aquarium and Winter plays herself in almost all the scenes (a robot stunt double helped Winter out with her stranding scene)! The movie is called *Dolphin Tale* and comes out September 23, 2011.

After the movie was finished being filmed, the aquarium received a new dolphin calf from the same area that Winter was rescued. Strangely enough, this baby dolphin was even rescued by the same team five years and one day after Winter's rescue. Named Hope, this new baby dolphin was brought to the Clearwater Marine Aquarium and was deemed a permanent resident. Hope is like Winter's little sister and one day, the two of them will swim together...once Hope is weaned off her baby bottle and starts eating whole fish, that is!

Glossary of Terms

Aquifer - a layer of rock, sand, or gravel through which groundwater flows, containing enough water to supply wells and springs

Breach - a leap out of the water by a whale or dolphin

By catch - the part of a fishing vessel's catch that consists of fish and other ocean life that it was not targeting and cannot use. The by-catch is usually discarded at sea

Diagnose - to identify an illness or disorder in a patient through an interview, physical examination, and medical tests and other procedures

Instinct - an inborn pattern of behavior characteristic of a species and shaped by biological needs such as survival and reproduction

Long lines - a commercial fishing technique that uses hundreds or even thousands of baited hooks hanging from a single line

Marine Mammal Protection Act - a law protecting wild marine mammals from human harm by activities such as feeding, chasing, and hunting

Peduncle - a muscular section resembling a stalk in shape or function, e.g. the base of a fish's or dolphin's tail

Prosthesis - an artificial body part used to replace a missing or injured body part

Quarantine - enforced isolation of people or animals that may have been exposed to a contagious or infectious disease

Rostrum - a beak or beak-shaped part of an organism, e.g. the snout area of a dolphin

Salinity - containing or impregnated with salt, e.g. the amount of salt in ocean water

Ultrasound - a technique that uses high-frequency sound waves for medical diagnosis and treatment, e.g. to create images of internal organs, to treat deep tissue disorders, and to break up kidney stones

Vertebrae - a bone of the spinal column, typically consisting of a thick body, a bony arch enclosing a hole for the spinal cord, and stubby projections that connect with adjacent bones

Watershed - the land area that drains into a particular lake, river, or ocean

TEN TIPS FOR A HEALTHIER OCEAN

Helping marine animals like Winter may be easier than you think!

Following these simple tips is a great way to start:

ON THE BEACH:

1. **Litter is lethal to marine life.** Avoid bringing disposable plastics to the beach. Many animals accidentally eat the plastic, making them sick. Others become entangled in it, causing injury or even death. Some plastics take over 400 years to break down in the marine environment, so bring reusable containers instead of bags and wraps.

2. **Bring a bucket to the beach.** Great for playing and building sandcastles, then use it at the end of the day for collecting litter to put in the trash.

3. **Watch what you're "dune".** Dunes and grasses protect inland areas from wind and wave action, and help preserve the shore. They provide habitat for nesting birds and animals, and they stop litter from blowing into our waterways. So tread lightly and use walkways whenever possible to avoid the dunes.

4. **Critter encounter.** The shore is home to thousands of fascinating creatures. Observe them from a distance and try not to disturb them, for both their safety and yours. If you see an animal entangled, injured, or in danger, contact a lifeguard, law officer, park ranger or wildlife rehabilitator.

ON THE WATER:

5. **Practice catch-and-release fishing.** Over-fishing is a primary threat to many of the world's game and food source fish. Preserve stocks by releasing fish. Use barbless single hooks and try to handle the fish as little as possible.

6. **Don't leave fishing line behind.** Fishing line can entangle and kill wildlife. Cut used line into small pieces to dispose in the garbage or bring to a local tackle shop for recycling. Pick up any loose line you see, being careful of any attached hooks.

AT HOME:

7. Save water by using less. For example, turn off the water while brushing teeth, take shorter showers, and if washing a car, use a qualified facility that recycles water.

8. Recycle. Recycle items from your school, work and home. Most towns have recycling centers for plastic, cans, paper and glass. Encourage your school, work and home to buy recycled paper and other products.

9. Don't put harmful chemicals down the sink. These chemicals ultimately end up in our waterways. Decrease or limit your use of phosphates, which promote algae blooms in waterways that harm marine life. For dishes, use soap rather than detergent. For dishwashers, try using 50% washing soda (sodium carbonate) and 50% Borax or a detergent with low phosphate content.

AROUND THE TOWN:

10. Educate yourself and pass it along. Learn all you can about your favorite marine animals and habitats. Visit a local nature center, park or aquarium to learn about the surrounding environment and its resources. Share the information with family and friends, so everyone can help save the ocean and all its incredible creatures.

Every little bit counts, so spread the word and do your part to help make the world a cleaner, safer place for all!

Booklet written by Joe Malo and Sarah Schulze

Illustrations by Cliff Aldrich

Winter: The Dolphin Who Lost Her Tail

Wordsearch

Directions: Use the "Glossary of Terms" to match the definitions with the hidden words below then circle the words you find

X E D R G V K J O F X A L P R O C L Z M
C Z P R O S T H E S I S A C V N K C B A
B L P O Q H W X A D T S Q D T S Q W U R
T A Q S E T U F A K B S Y E A F D J K I
A G O T H P B L K W T A T I B C V L G N
D N D R F C O F D A Q U I F E R Z A I E
Q B Z U D L J K N K O L J K G H D M L M
U Z A M X X A D S Q W X A D T S Q D F A
X A Y O L F A K C P U F A K B S Y E G M
S R O C C U F A C E Q U F A K A T J I M
D R B J D B L K T D U B L K W D T H L A
G U X R C T E V A U W A Y O L F B N N L
V L E L E E U F A N N R O C C U T E R P
B T W T E A B L K C S A Y O L F K A I R
Y R N K A D C O B L R T E D T S Q U S O
U A S Q U R K H K E E K A N K A T H T T
M S W T E R J H W H S Q U S Q B B N B E
I O N K A K N K C C V O J F D B T E T C
P U D T S Q S Q D D T S Q N K Y K A K T
T N C V N K N K C E A L J K G C Q U Q I
Q D R O C E L J K G L X A D T A O J K O
I D L O N G L I N E S F A K B T X A V N
F L J K G L J I N H E U F A K C Q K S A
D X A D T X A K K W D T H K W H A A D C
L F A K B F A Q V N K B N V N S S F V T
M U F A K U F O K W D T H K G V H H M Q
H I N S T I N C T J F X A D T A K B O U
G A A Y O L F A A Q J F A K B F A K K O
Y F R O C C U F R U G D S S D L K W L K
P L A Y O L F A A A G Y Z A B Y O L M Q
V E R T E B R A E R P T E T L O C C O U
O J A X A D T W D A M K A K B I D B K O
X A R F A K B U F N O Q U Q Z C N J H W
Q K A U F A K K J T K O J O A Y O I A B
A A J B L K W J I I L X A X R O C N T O
S F e X A D T T N N D N T Q A Y O J T Y
H H D I A G N O S E X A Y T L T C B S R
U F X A D T X A D T X W A T E R S H E D
E E F A K B F A K B F R J H W H S Q S W

CLEARWATER MARINE AQUARIUM

RESCUE • REHAB • RELEASE

Environmental Education & Marine Life Rescue

www.SeeWinter.com

249 Windward Passage, Clearwater, FL 33767

727-441-1790