

TREASURES
OF OUR
LOCAL
OCEAN



The Local Marine Environment

Santa Barbara Channel Treasures

Dear Teacher or Parent:

Welcome to *Current Times: Treasures of our Local Ocean*, a newspaper supplement about the importance of the local ocean waters to our community. Written by kids for kids, the Big Blue Reporters (the youth editorial board) explored and uncovered many treasures provided by the waters of the Santa Barbara Channel region. Now, through this newspaper, your students and children can also learn how people rely on and enjoy the local ocean.

Be it fisheries (commercial and recreational), offshore oil, ocean farming or marine recreation (surfing, boating, diving, whale watching), or the beauty or cultural importance, the local ocean provides much for our community. We hope by increasing the understanding of its value – both economic and cultural – you and your students/children will explore, enjoy and take care of this environment.

Now let's dig in and uncover the treasures of our local ocean!



The Santa Barbara Channel (SBC) region is a special marine environment. There are several characteristics that make the SBC different from other areas. Among them are the coastline, the mixture of species and the presence of four islands. The SBC also has nutrient-rich water, as do other areas of the west coast, which supports a large amount of sea life.

The SBC coastline is pretty interesting. Instead of running north-to-south like much of the California coastline, it runs east-to-west. Check out the map on this page. The northern boundary of the SBC region is Point Conception. Point Mugu is the southern boundary.

The currents are also special along the SBC coastline. This region is known as the "transition zone" of the west coast - the place where different currents come together. Cold waters come down from the north and warm waters come up from the south. This creates a diverse environment, which supports a rich variety of species.

There are four islands in the SBC region. East to west they are Anacapa, Santa Cruz, Santa Rosa and San Miguel. This group of islands is also known as the northern Channel Islands. These four islands and Santa Barbara Island to the south are part of the Channel Islands National Park and the water surrounding them encompass the Channel Islands National Marine Sanctuary. The islands provide different underwater habitats for lots of sea life, including rocky reefs, kelp beds and sandy areas. They also provide places for seabirds to nest and for sea lions to breed. The islands also help protect the coastal area from storms.

The SBC region often has nutrient-rich water, which is a result of an event called "upwelling." Upwelling occurs when cold nutrient-rich water comes from the bottom up to the surface. This provides lots of food for fish and other sea life, supporting the food web.

The treasure chest of the local marine environment of the SBC region provides something for everyone. The SBC enables many people in our community to make a living, such as commercial fishermen, mariculturists, oil rig workers and those providing ecotourism. Thousands of people also enjoy the recreational activities possible in the SBC, like sailing, kayaking, snorkeling, fishing and scuba diving. And, if that isn't enough, the SBC provides opportunities for art and culture, as well as environmental awareness.



Point Conception

Santa Barbara

San Miguel Is.

Santa Rosa Is.

Santa Cruz Is.

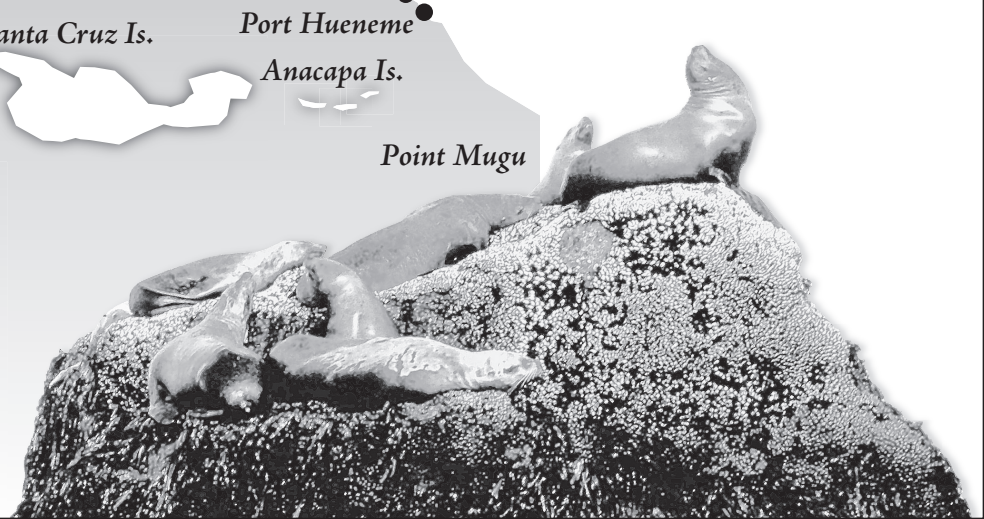
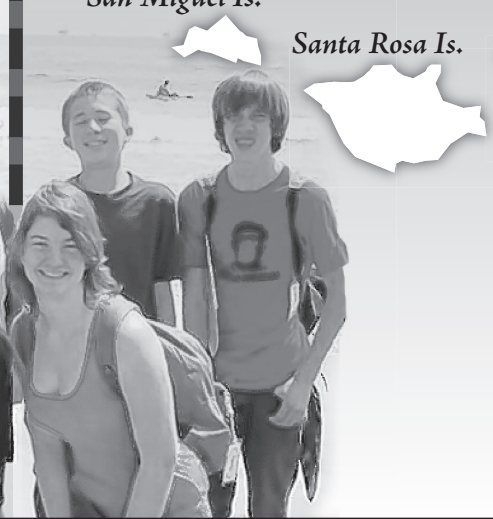
Ventura

Oxnard

Port Hueneme

Anacapa Is.

Point Mugu



Working Waterfronts

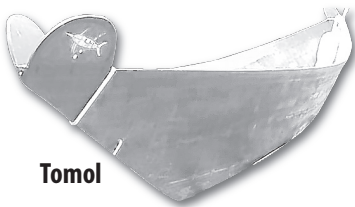
Our Local Harbors



You may be surprised to find that harbors and ports are an important part of our local community. Our local waterfronts -- the Port of Hueneme, Channel Islands, Ventura and Santa Barbara harbors -- help bring us many different things. For example, cars, tractors, construction equipment and food products come across the oceans on huge ships and into the Port of Hueneme everyday. It is one of the largest ports for 'rolling' cargo -- cargo that can be rolled on and rolled off (has wheels) -- such as cars. BMWs, Mini Coopers, Rolls Royces, Volvos and Hyundais are some of the cars that arrive in this port. The Del Monte bananas that you eat are another product that comes in on large ships into the Port of Hueneme. These items that arrive on large ships don't come into any of the other SBC harbors. Do you know why not? Because, Port Hueneme is on top of a natural canyon, making it the only deep water port in the SBC region that large ships can enter. The other harbors are too shallow. Tug boats are used to slowly and carefully pull the large ships in and out of the docks and the port.

Did You Know?

The word Hueneme was derived from the native Chumash word "Wynema" meaning "halfway" or "resting place." The Port of Hueneme was built on a local Chumash resting ground where the Chumash would go before paddling their tomols (canoes) across the channel to Anacapa Island.



Tomol

The local harbors are important for many other reasons. They provide access to fishing and diving areas. They also offer many services needed for commercial and recreational fishing and diving, offshore oil operations, ocean farming and boating. Ice, bait, fuel and hoists for offloading gear and fish are just some of the harbor-based services that support people working in the ocean. Boat repair and hull cleaning (to get rid of any barnacles or other organisms that could slow a boat down and cost the owner money in fuel) are also important services you can find at the harbors. For those people who keep their boats at home out of the ocean, they may not need a hull cleaner, but they need something else -- a launch ramp. When they want to take their boat out for a visit to the ocean, they can't just drop the boat in the water from the street. They need the boat launch ramps provided at the harbors. Let's say you don't own a boat or you just want to paddle around, what would you do? Another handy service harbors usually have is canoe and kayak rentals.

By visiting the local harbors and looking at the different boats and services you can understand the types of ocean activities that occur in our community. For example, if you visit the Port of Hueneme, you will see very large ships along with a few commercial fishing boats and oil supply boats. At Channel Islands harbor, there are a lot of recreational boats, but commercial fishing boats are also an important part of this harbor. Ventura harbor is the second biggest commercial fishing harbor in our area. It has many large squid purse seine vessels and a variety of other commercial fishing vessels. It also has recreational boats of all sizes. Santa Barbara Harbor has the most commercial fishing vessels of the local harbors. There are many commercial dive and trap boats, and a fleet of small trawlers too. There is also no shortage of recreational boats in this harbor.

These are some of what makes the local waterfronts amazing and important 'treasures' of the SBC. Keeping them alive and thriving as ports and harbors will help support our local community.

BAIT ICE
CARGO PORT
DOCKS SHIPS
FUEL SLIPS
HARBOR TUGS
HOIST VESSELS

WORD SEARCH

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

TREASURES
OF OUR
LOCAL
OCEAN



Oil Development

Black Gold

Have you ever wondered why there are so many oil rigs off our local beaches? I know we have. It's because we have very large underground deposits of oil in the ocean floor and along our coast. These deposits don't occur everywhere!

The Chumash took advantage of this naturally occurring oil. They collected the oil (tar) from the beach to glue their 'tomols' – large wooden canoes -- together. When Spanish explorer Juan Cabrillo was exploring in the Santa Barbara Channel region (SBC), he saw a large group of Chumash building tomols in an area that he then decided to call "Carpinteria," or "carpenter's area." Carpinteria was an important area for working on the tomols because of the large natural oil seeps there. You can still see these seeps at Carpinteria beach. Tar oozes straight out of the ground there. It is amazing to see, but watch where you step!

The uses for oil have since expanded and the methods of gathering it have changed. When gasoline was first developed as a fuel for automobiles, more oil was needed. California, and specifically the SBC, became a hot spot for oil development. 'Offshore' oil was first produced in the United States right here, off wooden piers in Summerland. Although these piers did not reach very far offshore, they made it possible to produce oil from shallow ocean areas. It took almost another 30 years to develop enough technology to build the first stand-alone offshore oil platform that could get oil from deeper ocean areas. Again, the SBC made U.S. history in

1958 by becoming home to the first truly offshore oil rig – Platform Hazel – about one mile from shore in about 100 feet of water.

Today, there are 26 oil platforms off the coast of California, with 16 located here in the SBC. These rigs give us oil and gas used to run our cars and heat homes, among other things. The SBC rigs are anywhere from 2 miles (Platform Holly) to 10 miles (Platform Gail) offshore. They are in water ranging from 95 feet deep (Platform Gina) to 1075 feet deep (Platform Heritage). They sure have come a long way from just drilling off of piers.

You may be wondering how the platforms get their names. We, the Big Blue Reporters, don't fully know, but we know that the first letter of the platform name is determined by where the platform is located. Here in the SBC, the names begin with a "G" if they are in the more southerly part of the Channel toward Ventura. Those in the northern part of the Channel off of Santa Barbara have names that begin with an "H". "Irene" is the most northern platform in California, just around the corner of the SBC. The southern most platforms in California near Long Beach all have names that begin with an "E" like Edith and Eva. Pretty neat, don't you think?

As you can see, oil, or black gold, remains an important and valuable natural treasure of the SBC. Something to keep in mind next time you gaze at the rig lights at night or get a gooey glob of naturally occurring tar on your feet after walking along the beach.

FUN FACT

Some oil platforms are taller than the Empire State Building.



Naturally seeping oil.

Mariculture

Farming of Sea Life



Seed oysters.



Market oysters.

When you hear the word 'farm' what do you picture? A field, with a tractor and lots of crops? Or maybe a large hilly area with cows eating? That is what we think of, too. But, did you know there are also farms that grow sea life? This type of farming is called 'mariculture,' the culture (farming) of marine (ocean) species. It is also called 'aquaculture,' although this term includes the farming of both salt water and fresh water species.

Mariculture is much like traditional farming except the crops are grown in water – sea water. Marine crops are grown either directly in the ocean, or on land in tanks that have ocean water pumped into them. In the Santa Barbara Channel, oysters, mussels and white seabass are grown in the ocean in cages. Abalone and limpets (types of marine snails) and California halibut are grown on land in tanks.

Ocean animals are grown for different reasons. Oysters, mussels, abalone and California halibut are grown for the many people that like to eat them. White seabass may also eventually end up on your dish, but the ones grown here are used for 'enhancing' the ocean. Instead of being sold to restaurants, these farmed fish are grown to a certain size and then set free in the ocean. They then reproduce, giving the ocean more young seabass. Giant keyhole limpets are being raised for a very different reason – one you will never guess! Their blood is special and is being used in certain medical tests. Some day, it may also be part of the treatment for some cancers and other sicknesses. Can you believe that?

Just like with other types of farming, ocean farmers have to know a lot about what they are growing. Understanding what the crop needs to grow is a good place to start. For example, oysters and mussels only eat the tiny

little plants and animals (plankton) that we can't see in the water. Known as 'filter feeders,' these shellfish just need seawater that has a lot of tiny food. Abalone need more than just seawater, they eat seaweed. Abalone farmers must either grow the seaweed or get it from the ocean to feed their abalone crop. Seabass, California halibut and other fish and shellfish eat even more. They eat other types of fish and marine animals. Ocean farmers must take care of their crops until they are ready to harvest, which can take some time! Oysters and mussels may only take a year or so before they end up on a dinner plate. But, abalone take 3 to 4 years to grow to market size. That is a much longer time to wait, but they are sold for more money, which helps.

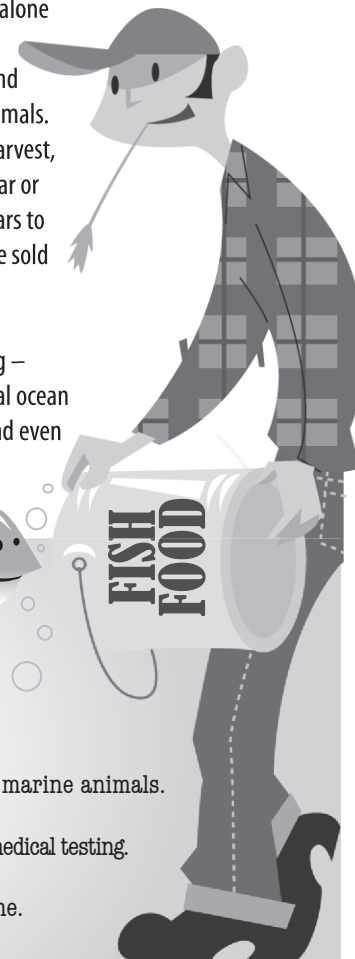
As you can see, the waters of the SBC are very important for farming – although maybe not the type of farming you normally think of. Local ocean farmers are growing sea life that can satisfy our seafood cravings and even help with medical problems. These are just a few reasons you should treasure and take care of the ocean.

True/False

- T F **1.** Marine crops are grown only in the ocean.
- T F **2.** Oysters eat plankton.
- T F **3.** Abalone take 3-4 years to grow to market size.
- T F **4.** California halibut are grown in ocean cages.
- T F **5.** White seabass are filter feeders.
- T F **6.** Ocean water is pumped into tanks to grow some marine animals.
- T F **7.** Seaweed is fed to abalone.
- T F **8.** Giant keyhole limpet blood is used for some types of medical testing.
- T F **9.** Ocean crops are used only for food.
- T F **10.** Mariculture and aquaculture are exactly the same.



Keyhole limpets





Commercial Fishing

Putting fish on your dish



Matching Game

Gear used

1. Air Hose
2. Metal guard and net
3. Lights, pulley and net
4. Metal 'doors' and net
5. Crates, traps

Animal Fished

- a. Ridgeback shrimp
- b. Lobster
- c. White seabass
- d. Squid
- e. Sea urchin

The sea life of the Santa Barbara Channel region (SBC) has long been treasured as an important source of food. Historically, the Chumash Indians ate lots of local seafood. You know how we know? Lots of shells and bones have been found in their garbage piles. Today, people are eating more and more seafood. But where is it coming from?

Many people in our community are making a living by commercial fishing, providing seafood to people locally and all around the world. Commercial fishing is the system of catching and selling marine plants and animals for profit. The SBC region is a productive area for fisheries and many different types of fish are commercially caught here. Squid (which is the number one fishery of the SBC and the state), sea urchins, California halibut, white seabass, ridgeback shrimp and spot prawn are just a few of the animals that are fished locally.

Different types of gear are used to commercially fish, such as purse seine nets, traps and hook-and-line. Some sea life is picked by hand by commercial divers. You can learn a lot about your local fishing fleets by taking a trip to the harbor. There you can see what types of fish have been caught as they are unloaded from the boats. You can also just look at the commercial boats and the type of gear that is onboard and figure out what is being fished locally. For example, in SBC harbors:

- *If there are crates or traps on the boat, crabs, California spiny lobster, spot prawn or certain species of rockfishes are likely being fished.*
- *A metal net guard on the back of a boat is used when fishing white seabass, California halibut and other large fishes with a net.*
- *Boats with nets and wood or metal 'doors' hanging off the stern catch ridgeback shrimp, California halibut and other fishes.*
- *Large lights, a net and a round metal pulley are needed to fish squid.*
- *An air compressor and long coiled-up air hose is needed by divers to fish sea urchins and sea cucumbers by hand.*

In addition to knowing how to operate the boat, how to use the gear, and how to find fish, commercial fishermen have to know and follow many different types of regulations. There are times when and places where fishing is not allowed. There are also restrictions on the types of gear that can be used, the number of people that can be part of a fishery, and the size, gender, and amount of fish that can be taken. These regulations are different for every fishery. There is certainly a lot to keep track of. These laws are in place to maintain good populations of the fished animals. Fortunately, most of the fisheries in the SBC region are currently considered to be in good condition. Some species of rockfishes and abalones are exceptions, but their populations are showing improvement thanks to new regulations and favorable ocean conditions.

If you would like to enjoy some fresh local seafood, go down to the harbor in the morning on the weekend (check the harbor schedule) and you can buy local seafood at the fisherman's market (like the farmers markets). There are also seafood stores in the harbor that have local fish and some restaurants in the area that serve local seafood, too.

To learn more about commercial fishing of the SBC region, check out last year's newspaper *Fish on Your Dish* at http://ceventura.ucdavis.edu/Marine_Fisheries (click on *Fish on Your Dish*). It is a fun and interesting topic, and an important part of our community.



Sea urchins from SBC produce some of the world's highest quality and best favored uni (used in sushi).

Recreational Fisheries



*Putting more fish
on your dish*



Word scramble

1. rsfu fnhsiig
2. icnlsee
3. aragiidlb
4. ohpo nte
5. lcacoi ssba

Answers: 1. surf fishing 2. license 3. garibaldi 4. hoop net 5. calico bass

Commercial fishing isn't the only way to put fish on your dish. There is also recreational fishing, something that many people in our community like to do. Recreational fishing, also known as sport fishing, is a great way to enjoy multiple types of fishing. You can go pier fishing, deep sea fishing, surf fishing, and even "fish" by diving for lobster and crabs, or catch fish by spearfishing!

In order to go sport fishing, you need to know a few things. First, if you are 16 years or older, you will need to buy a license. However, if you just want to try fishing without spending money on a license, you are in luck. No matter what your age, you may fish off public piers and some jetties without a license. Just check to make sure that the pier/jetty you want to go to is one where you don't need a license to fish.

You also need to know:

- *what you can fish*
- *where you can fish*
- *(some fish are protected)*
- *when you can fish*
- *how many and what size fish you can take*
- *what type of gear you can use*

Sound familiar? Just like commercial fishing, there are many rules to follow when recreationally fishing. These rules are often different for commercial and recreational fishing. For example, some fishes

can only be taken when sport fishing, not commercial fishing. One of these is the kelp bass, which is also known as the calico bass due to its spots. The giant sea bass, commonly known as the black seabass, and the bright orange garibaldi (our State Marine Fish!) are protected by law – you're not supposed to take these. You should also know that while you may sport fish for lobsters, they can only be caught during certain seasons (fall & winter) and you can only keep them if they are larger than a certain size. There are also some areas where fishing is not allowed, including several sites at the Channel Islands. It is important to know these restrictions so you don't do something illegal and to help protect the animals so they can reproduce and thrive. You can find the rules, license requirements and other information about recreational fishing at the Department of Fish and Game Web site, http://www.dfg.ca.gov/marine/sportfishing_regs2009.asp.

There are many other things you should know to increase your chances of successfully catching a fish. You can learn about what types of fish are being caught locally and get some tips on how to catch these fish by talking to people fishing or by searching online. This can be very helpful for figuring out what type of bait and gear you will need to catch the fish you want. One thing we learned is that if you are going to fish for halibut you need heavier gear (larger hooks and thicker line and poles) than for small fish like sardines. Also, figure out what types of hooks you should use because there are many kinds to choose from. Some creatures, like the California spiny lobster, cannot be caught with poles and line. You will need a

hoop net to fish lobster and crabs from a pier, or dive gear if you are going to catch them by hand underwater.

The nice thing about sport fishing is you can do it for the 'sport' (it is so exciting to reel in a fish) or for food or for both. Catch and release, is a common way to enjoy the sport of fishing. You can have fun catching the fish and then release (return) it to the ocean so it can grow and reproduce. However, if you want to keep the fish to bring home and eat, this is also an option, as long as you have followed the rules. No matter what your reason for fishing, just remember to dispose of your used line properly. Otherwise, it might end up getting tangled around birds' feet or choke other marine life!

So, are you ready to try your hand at recreational fishing? We did, and it was a blast! We can see why many use this activity to uncover some of the treasured sea life of the SBC.



Ecotourism and



Do you know what ecotourism is? It is the practice of traveling to and visiting natural habitats (being a “nature tourist”) while minimizing ecological impacts and building awareness of the environment and its importance to the local community. As we, the Big Blue Reporters, prepared to write this newspaper, we were eco-tourists! We toured many different beaches, went to museums and visited commercial and recreational fishing boats, learning both economic and cultural values of the local ocean. We also learned countless ways to help the environment, and wrote this newspaper to share our new knowledge with you! We learned that ecotourism is a great way for both kids and adults to have fun while learning about and gaining an appreciation for the ocean and all it has to offer.

Ecotourism in the SBC includes whale watching and island tours, as well as several mainland-based activities. During the months of January through March, when the California gray whale migrates through the SBC, tourists (and local whale enthusiasts) visit our area in hopes of seeing one of these giants as they pass by. The entire journey – between Alaska and Baja, California – takes the whales about 11,000 miles, round trip! During the summer, both blue whales and humpback whales can be seen in the SBC. You can see whales “spyhopping” – poking their heads out of the water to look around, “breaching” – jumping out of the water, and “blowing” – exhaling water through their blowholes. Dolphins, orcas, and other marine life can also be spotted during whale watching trips.



The Channel Islands are a big tourist attraction, with visitors enjoying many of the recreational activities that locals can enjoy regularly. People like to kayak around Anacapa Island where there are great caves and arches. The crystal clear water around Anacapa allows you to see down into giant kelp forests when kayaking and boating. Anacapa Island is a nesting ground for many different birds, including seagulls, cormorants, hawks and pelicans. Sea lion rookeries (breeding grounds) are found on San Miguel Island, where these animals enjoy a safe environment and where they are rarely bothered. There definitely is a lot for visitors to see and experience at the Channel Islands.

Surfing is a fun and extremely popular ocean sport in the SBC region. People come from all over the world to surf our local waves. Both experienced and beginner surfers can enjoy waiting for breaking waves, riding them in, and then swimming back out and waiting for another wave to come. Surfing doesn’t require much gear, just a wet suit and a surfboard. Wet suits are made of a rubber fabric called neoprene that keeps the surfers warm. Surf boards come in lots of sizes and designs. Surf shops can help you find the right wet suit and board. If you are just starting out, you should take some lessons so that you can safely “catch some waves”!

In addition to surfing, there are other ocean sports that involve a board and waves, such as boogie boarding, skim boarding, kite boarding, wind surfing, and paddle boarding. Wind surfing and kite boarding use a kite and the wind to speed the board and surfer along.



How can you tell seals and sea lions apart? Sea lions have ear flaps; seals only have ear holes • Sea lions have rotating back fins;

Surf, sand and sunscreen Recreational Activities



Besides being on a board or a boat, you might also like being in the water! Whether it's swimming or scuba diving, you will have a lot of fun in the ocean. When swimming, be sure to swim where a lifeguard is on duty and use the buddy system. Don't swim out too far, and don't get in the ocean when the surf is too high or the currents are dangerous. Be safe! And, don't forget the sunscreen!

Scuba diving is also an exciting recreational activity. But it is important to get proper training and certification so that you can safely use the oxygen tank to dive and swim down in the ocean. The Channel Islands are a great place to scuba dive. Divers can see different types of wildlife, ranging from the California spiny lobster to the California state fish, the Garibaldi – a beautiful bright orange fish. The Channel Islands are considered one of the top diving sites in the world for many reasons. One reason is the visibility at the islands is often very good. At Anacapa Island you can usually see more than 50 feet because the island is made of volcanic rock so there is little sediment in the water. Another reason is there are beautiful kelp (seaweed) forests with lots of sea life.

The dolphin maze

Go on a sight-seeing trip for a closer look at a dolphin!



Visiting a harbor offers many opportunities for activity and fun. Many harbors have sail and motor boats for rent. Charter companies offer fishing and whale watching expeditions, harbor tours and more. Wonderful fish markets and restaurants can often be found at most harbors as well.

Walking and biking are good ways to enjoy the ocean from land. Most of the beaches in the SBC have bike trails, and many harbors and beaches have bike rental shops. You might try a 4-wheeler that holds several people, and everyone pedals! This is great fun for the entire family, and good exercise, as well!

There are so many fun things to do when you visit our local beaches and ocean! Whether you like to fish, or if you prefer to explore tide pools... whether you like to be in the water surfing or you like to take a walk along the coastline, our coastline and ocean are truly a treasure. Enjoy and protect them!

seals have straight back fins • Sea lions have long front fins; seals have short front fins • Sea lions can 'walk' on land; seals can only move by scooting along.





Coastal Arts

Books, Beach Boys and Bling

Around the world, people travel countless miles to go to the ocean to relax, enjoy the beauty and to have fun. Luckily, many talented people have shared their memories and love of the ocean through their art, music and literature. Be it stories, songs, jewelry, fabrics, photographs of other art forms, it is easy for everyone to enjoy the ocean when they cannot visit it.

Art is one of the most common ways people share their enjoyment of the ocean with others. Many artists show their creativity by making ocean designs on clothing, oil paintings, drawings and even on surfboards. Fish printing or gyotaku (pronounced guy-oh-ta-koo) is a type of art that first became popular in Japan. Fishermen would make a print of their fish to prove what size and what kind of animal they had caught. Now this process is used to make beautiful artwork to decorate homes or offices. We, the Big Blue Reporters, printed scallops shells and octopus. We made our prints on paper, but you can make t-shirts too. It is great fun!

Other artists make models of ships. Making these models is very time consuming; it takes a very experienced and patient artist to construct a ship in such detail. Model ships can be made from wood, but some of the older ones were made from bone. You can see these types of models and other works of art locally at the Maritime Museum at Channel Islands and Santa Barbara Harbors.

Fish/Shell Printing In 9 Easy Steps

1. Prepare your fish/shell for printing. Clean and dry it.
2. Place your fish/shell on a newspaper covered table.
3. Position your fish/shell. Make sure to spread out the fins of the fish.
4. Brush ink onto the fish/shell.
5. Place printing paper over the fish/shell.
6. Slowly rub/press the paper down on the fish/shell.
7. Gently remove the paper from the fish/shell.
8. Add finishing touches, like painting in the fish eye by hand.
9. Admire your print!

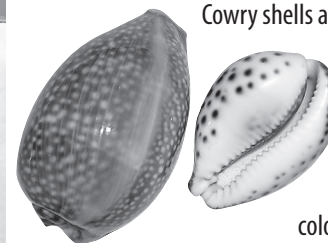
Visit www.natureprintingsociety.info/gyotaku_deweese.pdf for more detailed directions.



Big Blue Reporters create octopus and sea shell prints.



Many people enjoy looking at sea shells and using them for artwork. Oyster shells are very eye-catching. They have beautiful markings that show the growth patterns of the oyster. Another good-looking shell is the chestnut cowry.

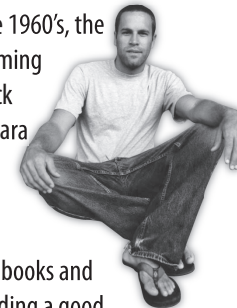


Cowry shells are known as "love shells" because the scientific Latin name means "Aphrodite" – the goddess of love.

This shell is really smooth and shiny with a chestnut colored top and white rim. The

Chumash used abalone shells to decorate their tomols (canoes) and to make beautiful jewelry. Today, many people buy shells to make jewelry, for arts and crafts projects and to decorate homes – a reminder of some of the treasures that come from the ocean. And, many of these people sell their creations, earning money while doing something they love to do!

The ocean has also inspired music and literature. The Chumash and Polynesians are two groups that sing about the ocean. These songs tell stories and are a record of events happening among them. In the 1960's, the Beach Boys became popular for performing songs about the surf culture. Today, Jack Johnson, a graduate of U.C. Santa Barbara and previously a professional surfer, is popular for his 'surf vibe' music.



The ocean has also been the subject of books and movies for all ages over the years. Reading a good book about the ocean or watching a movie, such as "Finding Nemo" is a relaxing way to spend an evening. Maybe you can write your own story about the ocean! You might even become famous!

As you can see, the ocean is an important part of many cultures, can be experienced in many different ways, and gives us many fun hobbies and art forms that can turn into a career.

Careers



For thousands of years the ocean has provided humans with food to eat and a place to enjoy, as well as different types of work. These jobs are not strictly limited to the obvious, like commercial fishing or marine biology, but span a wide range of opportunities. For example, careers range from harbor patrol officer to mariculture farmer (ocean farmer) and from oil rig worker to surf board designer. Let's talk about just a few career opportunities.

The harbor patrol's job is to act as the fire department, police force, paramedics, and landlords of a harbor and its surrounding areas. If you think you might want to join the harbor patrol, you could become a "pinhead" (deckhand) on a fishing boat. This gives you experience with boats and working with people that will help you with this career.



There are many people who keep an oil rig running, giving us oil that we use everyday. Some of these people work offshore on the rigs, while many others stay onshore and work in an office. Geologists are vital to offshore drilling operations. And, cooks are also needed to feed the hungry workers out on the oil rig.

Many different types of scientists work to keep the oceans productive and healthy, study ocean currents and weather conditions, and much more. If you like science, there are lots of career opportunities with the ocean!

Here are a few tips on ways to get started in an ocean-related career.

- There are many local organizations, like the Channel Islands National Marine Sanctuary (<http://channelislands.noaa.gov>), that offer activities to help you learn more about the ocean.
- Read! There are many helpful resources available on the Web, like www.marinecareers.net.
- Look into camps and summer programs that are focused on marine science and other ocean-related subjects.
- As you get older, you can also research some colleges that specialize in this field.
- Talk to people about your interests in ocean jobs. If you go to a harbor, don't be afraid to ask a commercial fisherman what the job is like. There are also people at seafood markets, scuba diving shops and recreational fishing boats that you can talk to about their jobs – just don't interrupt them when they are busy.

Whether or not you decide to have a career related to the ocean, you can still play a role in helping keep it a special place so all can enjoy this natural treasure.



Ocean Stewardship

We, the Big Blue Reporters, think we should all take care of our marine environment. Taking care of things is called "stewardship." You can be a good steward of the marine environment even if you're not at the ocean. What you do each day can make a big difference... let us tell you how!

CONSERVE to take care of your marine environment!

- Conserve water whenever possible. This reduces the amount of wastewater going into the ocean.

PROTECT your marine environment!

- Use less plastic, and properly recycle any you use. Plastic that gets into the ocean can harm and kill marine life.
- Clean up after your animals so that their waste doesn't end up in the ocean.
- Recycle batteries, computers, TVs and other electronics at a waste disposal facility. When not disposed of properly, chemicals can get into the ocean and damage our marine environment.
- Keep from polluting any type of water source, including rivers and streams, because they run down into the ocean.

ENJOY your marine environment... if you enjoy something, you'll want to take care of it!

- Home aquariums are pretty, fun, educational and can inspire stewardship. Buy your aquarium animals at a store; NEVER take ocean animals for your aquarium. And, don't dump your aquarium animals into the ocean. You could introduce species that are not native to our area, which could harm the local marine environment.
- Join a beach or river clean up activity as often as possible. This is a good way to earn community service hours and help the environment.
- Most of all, share what you've learned with your friends and family, and continue to learn about and care for this amazing local resource.

JOIN US IN BEING GOOD STEWARDS!



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Ventura County Star, Printing and distribution

ACKNOWLEDGEMENTS

Much appreciation and thanks to the many generous people who contributed to this project:

Andria's Seafood
California Sea Grant

Andria Bargiel
Joan Barminski
Kristine Barsky
Ben Beede
Scott Begly
Will Berg
Bill Conroy
Nathan Dunlap
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The content of this newspaper is a work of the California Sea Grant Extension and 4-H Youth Development programs, University of California Cooperative Extension. For more information on local marine resources please email Dr. Carolynn (Carrie) Culver at csculver@ucdavis.edu.

WORD SEARCH

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

Word search answers from page 3.

