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Patchwork Designs, Inc

DISCOVERING MARINE LIFE

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About this 'Discovering Marine Life' kit

This **kit** was created to assist you or your group in completing the 'Discovering Marine Life' patch program.

Kits are books written to specifically meet the requirements for the patch program and help individuals earn the associated patch.

All of the information has been researched for you already and collected into one place.

Included are crafts, recipes, coloring sheets, and other educational information. These materials can be reproduced and distributed to the individuals completing the program.

Any other use of these programs and the materials contained in them is in direct violation of copyright laws.

If you have any questions, please feel free to contact Patchwork Designs, Inc. using any of the methods listed below.

Updates and revisions by:
Ariel Lynn

Ordering and contact information

After completing the 'Discovering Marine Life Patch Program', you may order the patch through Patchwork Designs, Incorporated. You may place your order in one of the following ways:

Mail
Checks and Money Order:
Please send checks and money orders, payable to Patchwork Designs, Inc. to:
Patchwork Designs, Inc.
8421 Churchside Drive
Gainesville, VA 20155

Credit Card
Telephone your MasterCard, Discover, or Visa order to (703)743-9948. Leave your order and credit card number on our secure line.

Fax
Using these same card types, you may also fax your order to (703) 743-9942.

Email
orders@patchworkdesigns.net
Email is not secure to send your credit card information. Though you can email orders if you have any questions about ordering.

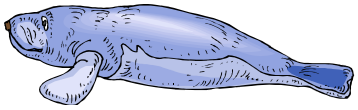
Online Store
Effective November 2006, customers may also order online through Patchwork Designs' website at: www.patchworkdesigns.net

All information is secure.

Written by: Cheryle Oandasan

Requirements for Discovering Marine Life

1. Dolphins are mammals, that means they breathe air and their young are born alive. Learn about one marine life creature that is a mammal. Find out if they have any unique qualities, the color of their skin, and where they live. Examples are manatees, otters, porpoises, walruses, sea lions, polar bears and whales.



Manatees or sea cows—gentle, slow moving, enjoy living in warm shallow waters. They eat seaweed and have gray to brown wrinkled skin

Sea otters- live along coasts, kelp beds or bays, primarily found in California or Alaska. Sleek dark brown fur

Walruses- live in the arctic sea or ice sheets, enjoys sunbathing on the beach. large, noisy mammal with 2 long tusks and whiskers, reddish brown skin

Harp Seals- cold water and on the ice. whiskers, short thick white fur with black patches and a black face. California Sea Lion is black and the Harbor seal is brown

Dolphins– They use echolocation, sound waves that bounce off things in the ocean. Based on the echo that they hear, they can tell where and what things are. They have been recorded swimming up to 25 mph. Dolphins are commonly black, brown, or gray in color and are often marked with patterns of white or other light colors. They live throughout the world. Rough-toothed dolphins inhabit the warm waters in the Gulf of Mexico. Hourglass dolphins live in the frigid waters around Antarctica.

Porpoises- smaller than dolphins, cone like heads, lack the dolphin's characteristic beak. They are usually bluish-black on top and sometimes whitish below. Live in cool and cold waters of the north coast, especially where the oceans meet rivers, estuaries and inlets of large rivers.

2. There are a large variety of fish in the ocean. They can be found in a variety of sizes, shapes and colors. Choose one fish to learn more about. What do they eat, where do they live, and what do they look like? Examples: Seahorse, clown fish, salmon, or sting rays.

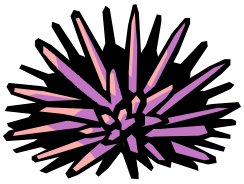
Seahorses- Seahorses eat small shrimp and fish. They can be found in seaweeds in near the shore and warm water seas. They have a head resembling that of a horse, a long tail, and a snout. It's body is covered in bony plates with a series of spines.

Salmon- Salmon eat smaller fishes, crustaceans, and insects. They live in the north, cold, fresh and salt waters. They are usually pink or gray.

Sting Rays- Sting rays eat mollusks and crustaceans. They live in warm, shallow water in almost all seas. They have broad, flattened bodies that can camouflage (change colors to hide themselves).

Angler- An angler can eat other fish as big as itself. They live deep on the dark ocean floor along the coasts of Europe and North America. About 5 ft long, parts of it's body looks like fishing rods or lures that glow. They use these to trick fish into coming closer.

3. Did you know that if a starfish lost an arm it would grow a new one? This species of marine life is called an echinoderm, a spiny skinned invertebrate. Choose one to learn more about by visiting an aquarium, reading a book, or viewing the internet. Examples include sea urchins, brittle stars, sea stars, sand dollars and sea cucumbers. For extra, you may wish to create an art project.



Sea Urchins- Sea Urchins have rigid, circle-shaped shells, or *tests,* made up of bony plates that are close together. They move about by using their spines as legs. Sea urchins protect themselves with spines that make them difficult to eat. They have a mouth at the end of one of it's spines. Some are poisonous.

Brittle Stars- Brittle Stars live mostly in the tropic, warm waters, but can be found everywhere. They have flat, rounded bodies with five flexible arms that can be easily broken but always grow back. They eat small organisms such as plankton.

Sand Dollars- The sand dollar has a white, flat, circle-shaped shell. It has many small dots that make a flower design on top. The shell has many small, brown spines on the bottom. This gives enables the animal to move about. Sand dollars obtain food by swallowing sand and filtering out little plants and animals, through a small hole under their shell. They are about the size of a baseball.

Sea Cucumbers- Sea Cucumbers are about five inches long. They have soft, tube-shaped bodies that resemble a cucumber. They eat microscopic organisms, which they sense and sweep up from the bottom of the ocean tentacles that branch out from the mouth. They move around like a slug.

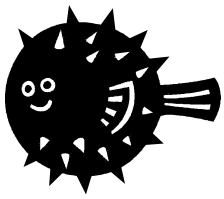
4. Coral Reefs are ecosystems created with coral, algae, and tiny animals. They are usually located in shallow warm water near land. Find out two things that live in a coral reef. Observe their shape, color and where they live. You may also wish to create a drawing of a coral reef, visit an aquarium, or create an art project.

Coral Reefs- Coral reefs are the most complex ecosystem in the water. The largest group of coral reefs is found in the western part of oceans. There are two categories of coral reefs: shelf reefs and oceanic reefs. Shelf reefs include fringing reefs, platform reefs, bank reefs, and barrier reefs and are located on the continental shelf, while oceanic reefs are found off the continental shelf growing around the margins of volcanic islands. Coral reefs support greater numbers of fish and invertebrate species than any other ecosystem in the ocean.

5. Jellyfish are 98% water, and they can sting and glow in the dark. Choose one marine life animal that sting or poison their enemy to protect themselves. How do they protect themselves? Examples are octopi, stingrays, puffer fish, anemone, and eels.

Octopi- The octopus has a soft body with eight arms that have two rows of suckers each. Colors range from red to brown or gray. Some have white spots. (It often lures its victim by wiggling the tip of an arm like a worm; or it glides near and pounces, sinking its beak into the shell and injecting a poison that kills; the poison of a very few species is dangerous to humans. When an octopus is attacked, it draws water into its mantle cavity and pushes it with great force through a funnel. The result is a jet-propelled exit, usually behind a cloud of "ink," a dark substance the octopus ejects for defense. The ink of some species seems to have a paralyzing effect on the predator.)

Stingrays- Stingrays have broad, flat fins that give them a diamond shape. A long, finless, whip-like tail has one or more large, sharp spines at its base. They can change colors to camouflage themselves.



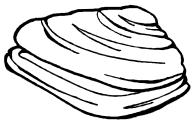
Puffer Fish- Their bodies are covered by spines; they are named for their habit of inflating themselves with water or air when threatened. The skin is usually spotted.

Sea Anemone- It has a vase-like body attached to rocks or coral at one end and at the other has a central mouth surrounded by tentacles armed with nematocysts (These tentacles have nematocysts cells that paralyze and entangle the small fish and marine animals it eats). Sea anemones are much like the polyps that make coral reefs, so they are a common site in this environment.

Eels and Electric Eels- Eels look like underwater snakes, and are protected by a layer of slippery mucus instead of scales. Most are about a meter long. Some young eels have a yellow color, while the colors of adults are black and silver. Electric eels are not true eels because they are in a different order. They are capable of emitting a discharge of 450 to 600 V from a concentrated bunch of nerve cells in their tail. They use it for catching prey or self defense.

6. Many people collect sea shells. They are pretty, shiny and great for art projects. Did you know that animals live in shells? Learn about one marine animal that have a shell, what it looks like, and its color OR create an art project with shells. Examples include oysters, clams, scallops, conch, and mussels.

Oysters- Oyster shells are oval shaped and made of a top and a bottom shell. These shells are connected by an elastic muscle that acts like a hinge. Many shells are four inches long.



Clams- Clams burrow into sand or mud using a muscle foot. Clams are eaten throughout the world. The giant clam may weigh as much as 500 lb, including the shell, and it may yield about 20 lb. of edible flesh. Most clams are much smaller, approximately the size of oysters.

Scallops- Scallops bear ridged shells, about 2 in long. The edges of the shell are sharp and scalloped, giving these animals their common name, and the shell is broad and flattened at the hinge.

Conches- The covering of the shell opening is a claw-like structure, having spikes that stick out and are useful for movement. The largest conch, the Queen Conch, can reach three feet in length.

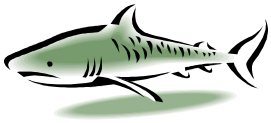
Mussels- Mussels are small mollusks with thin oval shells about three inches long, and usually black. They have soft bodies inside that can be eaten like clams or scallops.

7. Public aquariums offer exhibits, hands on activities, educational sessions, and signs describing the marine life. Visit an aquarium, seashore, or marine life exhibit. You may also discover information by surfing the internet or books. Learn about at least three species of marine life.

See the journal in the back of the manual to complete flip books about different marine life animals.

8. Cookie cutter sharks are small sharks. They have no bones and are considered fish. Find out how it got its name OR learn about one other type of shark, their size, and color. Examples: Tiger shark, blue shark, hammerhead, lemon, angel shark, whale shark, and mega mouth.

The Cookie-Cutter Shark's Name- They have round jaws with small upper teeth and many rows of large, triangular lower teeth. When it attacks it's prey, it takes a cookie shaped bite!



Tiger Sharks- It has identified by sickle-shaped teeth that have serrated edges. Although most reach 20 feet, they have been recorded as big as 30 feet. They have tough, leathery skin, tiger like markings on a dark back; whitish underbelly.

Blue Sharks- Their teeth are pointed and serrated. They are found in open waters worldwide. These sharks are among the fastest swimming sharks and can even leap out of the water. The blue shark has an indigo colored shark about 12 and a half feet in length.

Hammerheads- The great hammerhead shark has a wide, thick head with eyes on the side. The head is indented at the center of the "hammer," which is almost rectangular in shape. This shark is gray-brown above with an off-white belly.

Lemon Sharks- The lemon shark's back is deep yellow and its belly is off-white. They average about 8 to 10 feet; the largest recorded length was 12 feet.

Angel Sharks- The angel sharks are flat-bodied sharks, with a body similar to a stingray. They like to bury themselves in the sand to camouflage them from predators. They have long, wide fins that look like wings, giving it its name. It reaches the length of 6.5 feet.

Whale Sharks- The whale shark is a the biggest shark and the biggest fish, but is not a whale. It has a huge mouth and a rounded snout. The whale shark has distinctive light-yellow markings (random stripes and dots) on its very thick dark gray skin. Its skin is up to 4 inches thick. It reaches lengths of 46 feet and weights of 15 tons.

Megamouth Sharks- The megamouth shark is a large, slow-swimming, timid shark that considered one of the rarest species of sharks alive. They have a huge head and a large mouth. Its color varies from gray to bluish-black above and is pale gray below. The tips of most of the fins are usually white. They reach lengths of 16 ft.

9. Did you know that crabs walk sideways? They are called crustaceans because they have a hard shell and no back bone, or <u>invertebrate</u>. Some examples include hermit crab, lobster, krill, and shrimp. Discover one species. Find out where they live, what they eat and what color they are.

Hermit Crabs- 18 inches, predominately red bodies. In the wild hermit crabs will eat almost anything. As a pet, they will eat anything from peanut butter to cat or dog food. They occupy the empty shells of periwinkles, whelks, and other mollusks. When the hermit crab grows out of one shell it seeks a larger one.

Lobsters- 10 inches, light brown. They inhabit shallow near shore rocky or reef environments. They hide in rock crevices during the day and come out at night to scavenge for bits of food. Their diet consists of organic debris on the ocean floor.

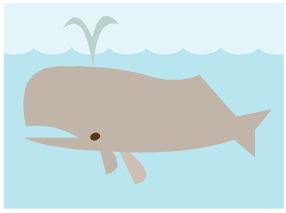
Krill- Krill eat phytoplankton, microscopic plants that float near the surface of the water. Some krill eat zooplankton, tiny one-celled animals. They have transparent bodies so you can see their insides, the back half of their body is sometimes blue while the front, where their long antennae are, is red. Some types of krill give off a blue-green light. Krill inhabit open seas.

Shrimp- Shrimp live in both salt- and freshwater, most at shallow depths near shore, but some may go as deep as three miles. Many are transparent like krill, others are green or brown in color. They eat tiny plants and animals.

10. Plankton is microscopic plantlike organism that drifts in the water. Animals that eat plankton are baleen whales, crustaceans, squid and fish. Learn about one animal that enjoy plankton OR look at plankton in a microscope, book or online. For extra create a food chain of marine life animals. (Crustaceans" and "Fish" are categories too broad to give an effective, concise summary.)

Basking Sharks- Basking sharks enjoy great amounts of specific types of zooplankton. The sulfide that zooplankton emit is easily picked up by basking sharks, and that's how the basking sharks find the plankton. In one hour, a basking shark can filter 330,000 gallons of water.

Blue Whale- The blue whale is the largest whale, and the largest creature ever to live on earth. The skin has a light-gray-and-white mottled pattern, which appears light blue when the whale is just below the surface of the water on a sunny day. The mottled pattern, which is unique to each animal, has been used by researchers to identify individual whales.



Blue whales feed by opening their mouth into groups of small sea creatures such as krill or fish. They have fringed baleen plates that hang from the roof of the mouth. The plates act as a sieve, catching food inside the fringes.

How does a whale eat? Experiment with a toothbrush in water. Place small particles of paper and crumbs in a dish of water. Move the toothbrush through the particles and then look at the toothbrush. That is the small food that the whale gathered when they were eating.

Squid- The squid has a large head and a relatively large brain. It's body is cigar-shaped, with two lateral fins. The tentacles are used to seize prey. Squid can swim faster than any other invertebrate by rapidly expelling water. Many deep-sea squid are bioluminescent, which means they shoot out a cloud of dark ink when pursued by enemies. Squid species vary greatly in size. The common squid is about 12 to 18 inches long. The giant squid is 60 ft long. It is the largest aquatic invertebrate and lives at deep depths of the sea.

11.The study of oceans and marine life is called oceanography. Learn one about a job or career that uses the ocean or marine animals. Such as aquarium, scuba diver, surf instructor, etc.

Oceanographers can specialize in several areas: physical oceanographers study the ocean currents, tides and circulation; geological oceanographers study the landforms, rocks and sediment beneath the ocean; biological oceanographers study marine life; marine scientists study the chemistry of the ocean and how the atmosphere and ocean affect each other.

12. Sea Turtles are large turtles that spend most of their lives in the seas. They are fast swimmers and vary in color. Find out more about the sea turtle OR create an art project about sea turtles.

Sea Turtles- Sea Turtles four flipper-like legs and a shell. They vary in color from shades of brown to green to black. They range in size from 2 to 6 feet and weighing 78 to 1900 pounds. When they are swimming a lot they need to go to the sea's surface every few minutes in order to breathe air. They always return to the place they were born to lay their eggs. The eggs must remain undisturbed in the warm sand for about 55 days before hatching. If the temperature goes above 28 degrees C the eggs will hatch as females, below this temperature males will hatch.

Together, the hatchlings dig their way out of the nest. Usually emerging at night, the group makes its way down the beach and enters the sea. They race to the sea to escape predators, then they begin to feed food in the water. It is believed that they drift with the currents,

13. Have a themed event or fun with your family. Create marine life themed food, drinks or decorations.

Refer to the 'Recipe and Craft' section in the back of this manual.

14. Let's have fun with marine life. Play a game, practice tongue twisters, create a craft or enjoy a party with a marine life theme. Some suggestions are crab walk, "Who am I?," charades, sand art, and sea shell art.

Refer to the 'Games' section in the back of this manual.

15. Be creative and make something that has a marine life or ocean theme. Examples include ocean in a bottle, seashell magnet, walrus puppet.

Refer to the 'Crafts' section in the back of this manual.

16. Research a map showing the oceans of the world. Choose an animal and find what ocean it lives by.

There are four oceans in the world. The Pacific, Atlantic, Indian, and Arctic.

17. Some marine life animals are endangered. Choose one to learn more about and why it is endangered.

18. Watch a movie or read a book about marine life or ocean related items.

19. The brown pelican is a large bird that lives along the coast of oceans. What is a pouch and how do they use it to catch fish? Learn about one bird that lives near the ocean or sea. Examples: Seagull, puffin, penguin, or egret.

What is a Pouch? The brown pelican has a long, large, flattened bill, the upper mandible terminated by a strong hook that curves over the tip of the lower one. They can store fish that they caught in their pouch until they want to eat it. The pelican catches the fish by diving or plunging into the water with its mouth open.

Sea Gulls- This bird varies from pale gray to black on top, and from white to gray underneath They search for food along the seashore and in shallow water.

Puffins- Puffins have large, triangular, flat bills. The Atlantic puffin is black above and white below, with the bill patterned in red, yellow, and bluish gray.

Penguins- Penguins cannot fly but are excellent swimmers. Most penguins have a white breast and a black back and head. Many species exhibit red, orange, or yellow patches on the head and neck. Because their short legs are placed far back on their bodies, penguins usually stand. They live in the arctic and have thick layers of fat to keep them warm.

Egrets- Egrets are a species of heron, and have white feathers and long soft feathers on the lower part of their backs during the breeding season.

Resources

Websites:

Microsoft® Encarta® 98 Encyclopedia. © 1993-1997 Microsoft Corporation.

http://www.suite101.com/article.cfm/aquatic_animals/65951

http://www.museum.vic.gov.au/crust/lobbiol.html

www.enchantedlearning.com

http://childparenting.about.com/od/funcelebrations/tp/Fun-Beach-Games-For-Kids.htm

http://www.activityvillage.co.uk/beach_games_and_activities.htm

http://www.ehow.com/way_5333522_beach-game-ideas.html

http://tlc.howstuffworks.com/family/beach-games-for-kids1.htm

Books:

Morgan, Nina, First Facts The Sea, NewYork: Kingfisher, 1993.

Wise, Debra, Great Big Book of Children's Games. NewYork: McGraw-Hill, 2003.

Beery, Barbara, Mermaid Cookbook, Layton, Utah: Gibbs Smith, 2008.

Ross, Kathy, Crafts for Kids who are Wild about Oceans, NewYork: Scholastic Inc., 1998

Fraser, Kathleen, Laura and Mary, The 175 Best Camp Games, Ontario, Canada: Boston Mills Press, 2009

Patchwork Designs, Inc

Crafts

Secret Treasure Chest

Create Your Own Seashell

Beachy Wind Chime

Ocean in a bag

Recycled Turtle

Sea Urchins

Flowing Octopus

Breezy Jellyfish

Sand Shapes

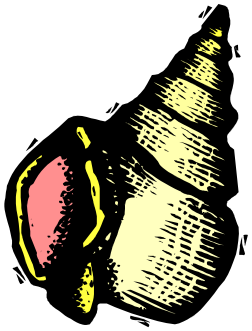
Beach in a Bottle

Secret Treasure Chest– Store your treasures you find at the sea in this treasure chest.

Empty egg carton
Cotton Balls
Acrylic paint
Hot glue gun with sticks or white craft glue
Seashells, rocks, and/or sea glass you've found or collect
Permanent markers, glitter, rhinestones, sand, etc. for decorating
Paper (optional)

Paint your egg carton any color you wish. Decorate with the things listed above. You can write your name, your collection name, or anything on here. Let dry. Glue the cotton balls in the holes where the eggs used to be. Place your collection on top of each cotton ball to display. If you want to, you can label where, when, and how you found it on a little piece of paper like at the museums!

Create Your Own Seashell



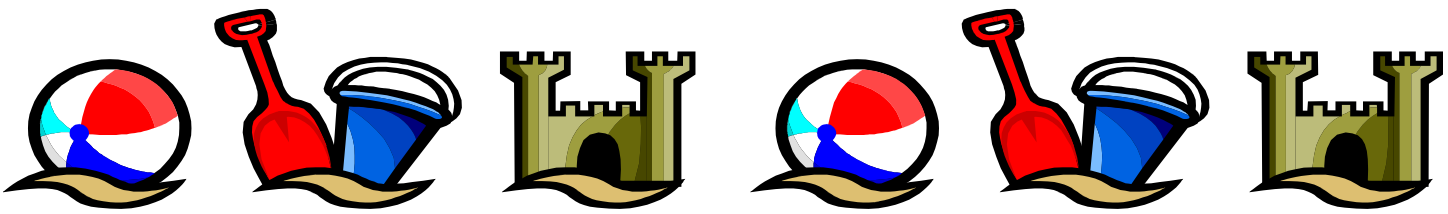
Seashells (ones with bumps and ridges work best)
Modeling dough or clay that doesn't get hard
A clean tub (like an ice cream tub)
An empty shoebox
Plaster of Paris and a stirring stick
Watercolors, paint, markers, or crayons (optional)

Knead the clay with your hands until it is pliable. Make it into a small, votive/cup shape and place in the shoebox. Mix your Plaster of Paris up in your tub with a stirring stick (found at paint stores). Place your shell in the little hole or bottom of the votive shape and gently press so it becomes engraved in the clay. Make sure it doesn't go through the bottom of the clay lump or else this won't work. Remove your seashell once you are satisfied with the shape that was imprinted inside of it. Then, pour the Plaster of Paris into the shell mold you had just made and fill it up all the way. Let the plaster dry for overnight. The next day, carefully pull the clay away from the Plaster of Paris. Now you have your very own shell! If you want to, make your shell colorful with the above options.

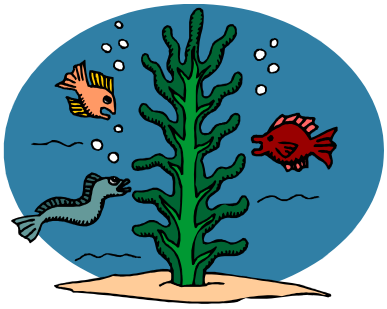
Beachy Wind Chime--A lot of seashells have holes in them because snails and oysters dig holes into the shell. You can use these types of shells for wind chimes. If you can't find shells with holes in them, then hot glue them to the string.

12 feet of sturdy string
Scissors
Lots of seashells, each with a hole in it
Hot glue gun with sticks
A piece of drift wood, or a thick stick

Cut your string into various lengths and hot glue the shells to the string. You can also use more string to tie the shells to it for more support. Make sure to tie a piece of string to the top of the stick to be able to hang it from something. Tie all the strings with the seashells on them to the stick to create a unique wind chime to hang inside your room or outside your house.



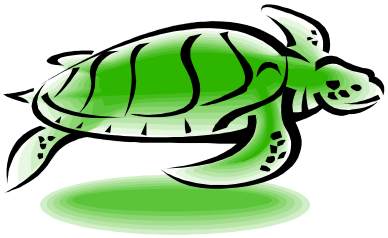
Ocean in a bag



Two Ziploc bags of the same size
Fish foam shapes
White or pastel-colored plastic beads
Blue hair gel or aloe vera
Small seashells
Clear packaging tape
Glitter, confetti, or fake leaves/stems for seaweed (optional)

Fill on of the bags with blue hair gel/aloe vera and flatten it so it is about 1/4 to 1/2 inch (about 1 cm). Place your fish foam shapes in the bag. Add in some seashells and add some plastic beads for bubbles. At this time you can add the optional items listed above or your own creative ones. Squeeze as much air as possible out of the bag. Place the bag inside of another bag of the same size, but make sure the seals are on the opposite ends of another. Seal the ends of the bags with clear tape.

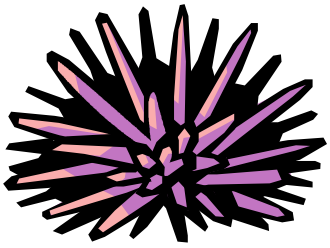
Recycled Turtle



Two shoulder pads (found at your fabric stores in the button section)
An old glove
Scissors
White craft glue or hot glue gun with sticks
Two googly eyes
Permanent markers, glitter glue, puffy paint, sequins, etc. or decorated paper for decoration

Cut all of the fingers off of your glove. Turn the shoulder pad to the back and glue the fingers for the legs and tail, leaving the biggest one, the thumb, for its head. Glue the other shoulder pad on top of this, making sure the fluffy side is up, and hold it down for it to stay. You can choose to decorate its shell with whatever you like. Finish with googly eyes its head.

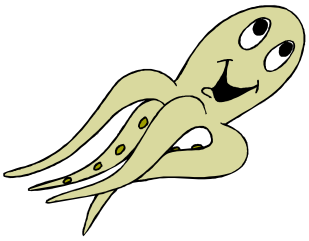
Sea Urchins



Three 2-inch Styrofoam balls
Toothpicks (about 25 per person)
Acrylic paint
Paintbrush
Glitter glue
Paper plates/newspaper for setting up

Cover your station with newspaper or old magazine pages. Place your paint in the paper plates and paint the Styrofoam ball any color you like, then paint with glitter glue near the same color or silver or gold. Let dry and paint your toothpicks the same color. Let dry again. Insert the toothpicks to look like a sea urchin and display!

Flowing Octopus



Paper plate for each person
Black permanent marker
Acrylic paint or washable markers
Crepe paper or streamers
Scissors
White craft glue

Cut all of the rims off the paper plate except one side. Cut the side angled in to create its neck. Paint or color with markers and let dry. Draw the eyes and smile on with the black permanent marker. Cut the streamers into 8 pieces, since octopi have 8 tentacles. They can be same color as its head or you can be creative and do a different color. Attach with white craft glue to its head. You can punch a hole through its head and hang it with string if you want to.

Breezy Jellyfish

Two clear or white trash bags
Rubber band
String
Black permanent marker
Scissors
Fish foam shapes (optional)

Make one of the trash bags into a medium sized ball for its head. Place this inside of the other trash bag and push all the way to the top left corner. Place the rubber band around the bottom of the head inside to form to head, leaving the excess trash bag at the other end of the rubber band. Using your scissors, cut the rest of the outside trash bag into strips for its tentacles. Make two holes with your scissors at the back of his head and tie the string through it to hang it by. Make a face on him with the permanent marker. Place fish foam shapes into its tentacles if desired. The best part of this windsock is that it's waterproof so you can hang it outside!

Sand Shapes

Fine sand
Water
Bowls
Aluminum foil pie pan
Marine animal cookie cutters or seashells
Plaster of Paris
String or wire

Mix sand with water to make it wet and clump together, but not soupy. Fill the pie pan halfway full and press the sand down so it is even. Press your shapes into the sand and let sit for a couple of minutes so the shape is imprinted deeply. Mix a ratio of 1 1/2 parts plaster of Paris to 1 part water, gradually pour the plaster into the water and stir until smooth. Slowly pour the mixture into your sand mold. Make a loop with the string or wire for a picture hook and gently poke the ends into the plaster. Let plaster dry overnight. Peel one side of the box away and life the sand cast out. Let your casting dry for another hour; then gently brush off excess sand.

Beach in a bottle

Sand
Resalable sandwich bags
Large clear plastic or glass bottle with a cork lid
Funnel

Collect many different kinds, colors, or textures of sand from different beaches you visit and keep them in separate sandwich bags. Carefully funnel one kind of sand into a large bottle, tipping it every now and then to make the layers look wavy. Then funnel in another colored or textured sand to make the next layer. Alternate sands until you get to the very top of the bottle, and then put a cork in it and screw the lid on. Be careful not to shake the bottle too much or you will mix up all of the layers.

Patchwork Designs, Inc

Recipes

Baked Bananas By the Sea

Under the Sea Crunch Chips

Honu Cookies

Seashore Fruit Smoothie

Creamy Pineapple Fruit Dip

Paradise Crunch Trail Mix

Rainbow Koi Fish Cup

Sea Foam Spritzer

Lemonade Lagoon Drink

Sweet and Sour Slurpees

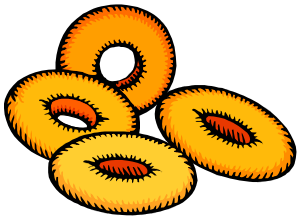
Blue Bay Milkshake

Baked Bananas By the Sea

2 cups crushed corn flakes
1 teaspoon cinnamon
4 slightly green bananas
2 to 3 tablespoons honey
Frozen vanilla yogurt (optional)
Assorted fresh berries (optional)
1/4 cup powdered sugar (optional)
2 gallon sized Ziploc bags

Preheat oven to 350 F. Line a cookie sheet with foil and spray with non-stick spray and set aside. Pour corn flakes and cinnamon into a Ziploc bag and place inside of the second one. Seal them both shut. Crush mixture with your hands. Set aside. Peel your bananas and cut in half lengthwise. Place them on prepared cookie sheet. With a small spatula or pastry brush, spread honey halfway up each banana. Using a fork, pick up a banana and put it into the corn flake mixture. Seal the bag again and shake gently to coat. Place the banana onto the cookie sheet and repeat with all of your bananas. Sprinkle any leftover corn flake mixture evenly over them. Bake for ten minutes. Garnish bananas with vanilla frozen yogurt, berries, and powdered sugar for a finishing touch. Serve immediately. Makes 6-8 servings.

Under the Sea Crunch Chips



6 mini bagels
1/2 cup colored sugar
1 teaspoon cinnamon
1 tablespoon butter

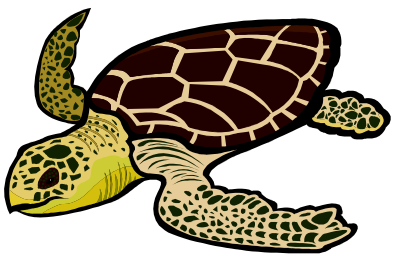
Preheat oven to 325 F. Line a cookie sheet with parchment paper and spray with non-stick cooking spray. Set aside. Slice the bagels in half, then slice in half lengthwise to make thinner circles. Combine sugar and cinnamon in a measuring cup and mix. Set aside. With a small spatula or pastry brush, brush the top of the bagel with softened butter and sprinkle evenly with sugar mixture. Place bagels on prepared cookie sheet and bake for 15 to 20 minutes, or until lightly browned. Cool for 5 minutes and place on the cooling rack for 10 minutes. The chips will become crispier as they cool. When completely cooled, store in an plastic, airtight container with a lid for up to 2 days. Makes 24 “chips.”

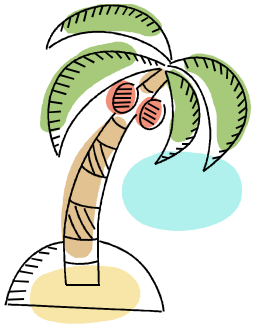
Honu Cookies

Honu *is the Hawai’ian name for turtle. They are said to bring good luck and friendship if you see one wild.*

1 1/2 cups pecan halves
24 caramel candies
1 cup milk chocolate chips
Assorted candy decorations

Preheat oven to 325 F. Line a cookie sheet with foil and spray with a non-stick cooking spray. Set aside. Break pecan halves into 5 thin pieces lengthwise to create 4 legs and a tail for each *honu* cookie, but use a whole pecan half for its head. Arrange thin pecan slices, flat side down, on prepared cookie sheet, in clusters of 5 to form the *honu’s* four legs and tail, then the head. Put a caramel candy on top of each group of pecans. Place the *honus* in the oven and heat until caramels soften, about 5 minutes. Cool them on the pan for 10 minutes. Melt your chocolate chips according to the package directions—melted but not burnt. Spoon about 1/2 teaspoon of melted chocolate onto each *honu* and sprinkle with sprinkles, non pereils, chocolate chips, etc. Place in refrigerator to chill for 15 minutes and serve. Makes 24 cookies.



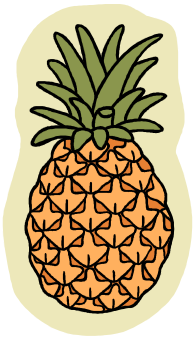


Seashore Fruit Smoothie

1 cup non-fat vanilla yogurt
2 tablespoons orange juice
1 cup sliced fresh strawberries
1 to 2 tablespoons honey
1/2 cup raspberries
1/2 cup blueberries
1 kiwi, sliced

Mix all ingredients together in a blender. To serve, pour equally into 4 cups or bowls and garnish with a tropical umbrella, extra fruit, ice cream, or whipped cream.

Creamy Pineapple Fruit Dip



1 (8-ounce) package cream cheese
1 cup non-fat strawberry yogurt
1/4 cup honey
1 teaspoon vanilla extract
1 (8-ounce) can crushed pineapple, drained

Soften the cream cheese by microwaving or leaving out for a couple of minutes. With an electric mixer, beat cream cheese, yogurt, honey, and vanilla until light and fluffy. Fold in pineapple pieces. Move into a medium sized bowl and store covered in the refrigerator for up to 8 hours. Serve with Under the Sea Crunch Chips, mini carrots, chips, pretzels, and celery sticks. Makes 3 cups.

Paradise Crunch Trail Mix

1/4 cup macadamia nuts
1/4 cp roasted soy nuts
1/4 cup pretzel sticks
1/4 cup each dried pineapple chunks, dried mango, and dried cherries
1/4 cup dried banana chips
1/4 cup white chocolate chips
Makes 2 cups

Pour all ingredients into a large Ziploc bag. Mix well and enjoy!

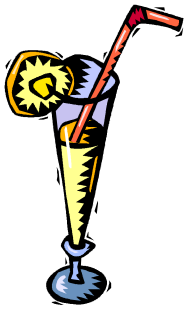
Rainbow Koi Fish Cup

24 vanilla wafers, finely crushed
1 quart of rainbow sherbet
Gummy fish or any chewy fruit sea creature candy

Place vanilla wafers in a Ziploc bag and seal shut. Crush cookies with your hands until completely crumbled. Place scoops or sherbet into ice cream dishes. Press sherbet down to flatten out top and cover each with equal amounts of cookie crumb mixture. Garnish with gummy fish or sea creature candy. Makes 8.

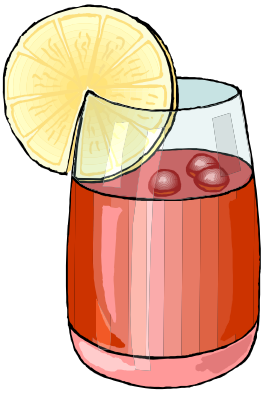
Tropical Fruit Drinks

Sea Foam Spritzer



1 liter lemon-lime soda, chilled
1 pint raspberry or lemon sherbet
1 can whipped cream topping
Fresh raspberries or blueberries

Pour lemon-lime soda 3/4 full into 8 glasses. Place two scoops sherbet in each glass of soda. Garnish whipped cream topping and fresh raspberries/blueberries. Serve immediately. Makes 8 servings.



Lemon-Blue Lagoon Drink

6 lemons, juiced
1/2 cup sugar
2 quarts apple juice, chilled
Blueberries for garnish and/or blue food coloring, if desired
Pineapple or strawberry chunks for garnish

In a large pitcher or punch bowl, combine lemon juice and sugar. Stir until sugar has completely dissolved. Add apple juice. Stir in 2 to 4 cups of ice and/or blue food coloring and garnish with fruit as desired. Serve immediately.

Sweet and Sour Slurpees

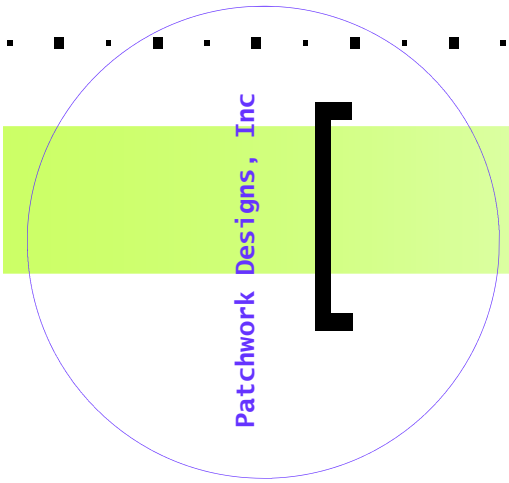
3 cups fresh, seedless watermelon
1 cup crushed ice
4 teaspoons lime juice
1 cup raspberry sorbet Granny Smith apple cubes for garnish

Cut the watermelon into bite-sized cubes, making sure there are no seeds. If watermelon is not in season, try watermelon juice and thicken with ice, ice cream, or yogurt. In a blender, combine watermelon, ice, and lime juice. Add raspberry sorbet and blend until smooth. Divide mixture equally between cups. Garnish with apples and serve immediately.

Blue Bay Milkshake

2 1/2 cups frozen blueberries
1 1/4 cups apple juice or white grape juice
1 cup vanilla frozen yogurt
1/4 cup milk
1/2 teaspoon almond extract
1/2 teaspoon cinnamon
1/2 cup fresh blueberries *for garnish*

Combine all ingredients in a blender. Top with fresh blueberries and whipped topping if desired. Makes 2 servings.



Games

Mermaids and Humans

Going Fishing

Whale and Krill

Changing Whale

Timed Treasure

Sea Urchin Toss

Activities for the Beach

Sand Bucket Race

Creative Ball

Sand Packing Relay

Challenge

Piranhas

Sink the Triangle

Mermaids and Humans

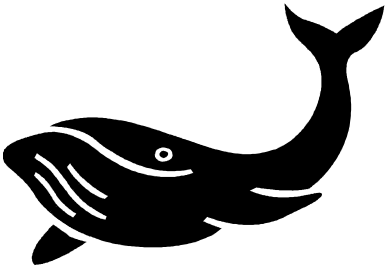
6 or more players

One or two people are chosen to be the humans. The other players are the mermaids. You can choose to reverse the number so there are less mermaids and more humans if you like. The purpose of this game is that the humans want to catch the mermaids. The mermaids are not allowed to leave the water, but one of the corners of the swimming pool could be a safe spot. Once the mermaids are caught, they will become a human.

Going Fishing

Best played with 10 or more players

Choose one player to be the fisherman. They will stand or tread water in the middle of the pool. This game can also be played in a field and the middle of the field could be a sprinkler or set off with cones. The other players (the fish), line up on any end. When the fisherman says, “I’m going fishing!” - the fish must try to swim or run, depending on the area where you are playing, to the other end without being caught by the fisherman. Anyone tagged before reaching the other end must join hands with each other to become the fisherman’s net and join him/her in the middle of the pool/field. The fisherman is still free to roam the swim area and catch those who swim around his net, but the new players that join him cannot. The game ends when the last player is caught.



Whale and Krill

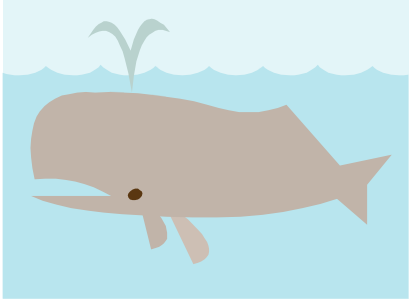
5 or more players

Choose one player to be the whale and the rest of the players will automatically be part of the group of krill. The whale stands at the end of the pool, while the krill are at the other end. The krill have to stay connected at all times by holding hands or putting their hands on each others shoulders. When the signal starts, the whale tries to tag the last krill in line. The line of krill can twist, turn, and move faster to get out of the way of the whale, but they cannot be disconnected. Once the whale catches the last krill on the line, s/he can either become a whale or the that krill becomes the new whale. This game can also be played on a field marked off with cones.

Changing Whale

6 or more players

Choose a person to be the “whale” (or “It”) and the rest being fish. The whale has two sides—black and white. When the whale is black, s/he has to be floating on their back and the fish have to be in the middle of the pool, next to the whale. BUT, whenever the whale decides, she/him can shout out “transformation!” and become the white whale and start swimming again. Once the whale is in its white stage, s/he can tag players and the fish are only safe when touching the borders of the pool (the shore of the ocean) and once they are tagged, they also become whales. The whale can turn back to the black whale whenever they want and start floating.



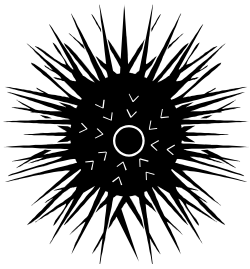
Timed Treasure

6 or more players

Brightly colored object that does not float (examples: goggles, water Frisbee, weighted water stick, plastic coins/jewelry, etc.)
Stopwatch
Pencil and paper to record times

Divide the players up into teams at the deep end of the pool. The person with the stopwatch throws one of the treasure items in and starts the stopwatch as one of the players from the first team dives to get it. Every time the person surfaces, the stopwatch is stopped, then started again once they go under the water again. Once the item is retrieved, the time is written down. If you want, if they take longer than 2 minutes, that can be their time. The first person from the next team goes and the same circumstances occur. Once all of the players have gone from both teams, the scores are added up and the team that wins is the lowest combined score. The prize could be keeping one of the items they dove for.

Sea Urchin Toss



6 or more players

12 or more light floatable balls (tennis, waffle, table tennis, beach balls)
Stopwatch

Divide the players into teams and meet in the middle of the pool with space in between them, creating an invisible line. This game can also be played across a volleyball net or a field marked off in cones. Have a player that is standing outside of the pool with a stopwatch be the keeper of the balls (sea urchins). Have the ball keeper put 6 balls on each side of the pool/area you're playing in. As soon as this is done, the timer is started for 10 minutes. The participants in the pool/playing area have to try to get the sea urchins not to touch them or their side. They can use any obstacles to get the sea urchins to the opposite side, as long as its not violent. After 10 minutes, the team with the least amount of sea urchins on their side are the winners.

Activities for the Beach

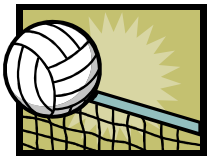
- Dig a channel to the sea.
- Make a dam (use sand, pebbles and other beach finds).
- Dig a hole and try to fill it up with water!
- Create a sand sculpture. Mold it with your hands or sand buckets.
- Search for driftwood, shells, seaweed, crabs, sea glass etc.
- See if you can find a pebble or shell with a ready-made hole in it, to string on a cord for a necklace.
- Collect pebbles, shells, seaweed and other "found" objects and make them into picture frame.
- Have a treasure hunt with your group or family. Award a prize for the most interesting "treasure found."
- Dig a hole in the sand and create a boat or a car big enough to sit in. Go on an imaginary journey.
- Draw pictures, words and puzzles in the sand with a stick.
- Design pictures using pebbles, rocks, seaweed, shells or other items along the seashore.

Sand Bucket Race

3 sand buckets, two of the same size (small) and one large one

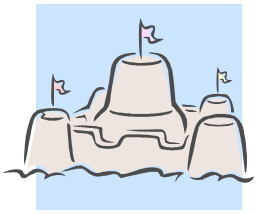
Divide the players into equal teams and place the large bucket of water in the middle. You can also play this at the beach and you can just get the water from the ocean. The teams have to try to carry as much water as they can from the large bucket to their sand bucket at the end of the field. Once the bucket is filled or the time runs out, that team wins!

Creative Ball



A twist on volleyball—take your volleyball net and play volleyball with quirky rules. Pretend to be marine life animals, don't let the ball touch the ocean floor, don't let the ball touch you, only kick the ball, catch it only in your hat, if it gets too much sand in it, the other team get a point, or try not using your hands—be creative!

Sand Packing Relay



This works best at the beach. Have a relay of who can build something out of sand. Examples are, a moat, a bridge, a dolphin, mermaid fin, a tower of a sand castle. Give prized to the best packed, most creative, fastest, etc. Make sure everyone gets one.

Challenge

Make your own challenging course that's creative with the sand and/or marine things. Time it and give away prizes again. Some examples you can do are: drawing hopscotch in the sand, throwing rings around a plastic dolphins neck, crawl underneath a net like a crab, draw your name in sand, bean bag toss, run through a sprinkler, take a drink of water, make a lemonade, hula hoop for 30 seconds, gather seashells in a bucket, and so much more!

Shark Attack

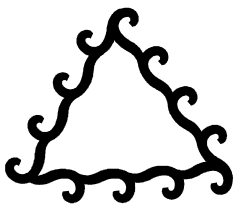
Colored bandanas for all the players, different colors for each team

The more players on your team, the better. Divide your players into equal teams. Hand out bandanas to each player, making sure the teams have the matching ones. Everyone is a shark and they are trying to eliminate the threats to them. Everyone tucks their bandana into the waist band of their shorts/pants/swimsuits. The object of this game is to grab the bandana from them when they're not looking. When your bandana is gone, you are out of the game. The last person left is the winner. For fun, you can give them multiple chances by giving them two bandanas, a safe zone, or you can make it like hide and go seek.

Sink the Triangle

Shovel
Tennis Ball

This game only works on the beach or if you cut this out of poster board/wood. Dig/cut a holes into a triangle or pyramid shape. A suggested amount would be five holes at the bottom, four on the next level, three holes, two, and then one for the point. The points will be according to which holes you roll the tennis ball in. The five holes one could be 15 points each, four holes to be 25, three holes to be 35, two holes to be 55, and the last, top hole to be 75 or 100. Set a time limit or amount of turns you can have. Once you have that settled, try to get the tennis ball into the hole and write down the points as you go. You can do this in teams or individually. The person or team with the most points wins.



Create a book about Marine Life using a file folder.
You will need a file folder, stapler, scissors, glue stick and markers.

Step One: *Prepare* Copy all the template and booklet pages for each participant. Have them color where needed and cut along the outside lines. Folding instructions are included on each page.

Step Two: *Gather your supplies* Participants will need glue sticks or glue to mount the templates or booklets to the file folder. A stapler will be needed to staple the Marine Life flip book together.

Step Three: Create the front cover Fold the file folder in to form a book. (shown below) Have them color or decorate the sky prior to gluing on the items. Using the template # 1, the front cover of the book. Place all the items together as shown below. Older participants may wish to draw fish, sea-shells, in the bottom portion of the outside folder.

Step Four: *Completing the inside* Distribute the booklet patterns for the inside of the book. Make sure they color all the areas prior to cutting them out. See the below picture for placement. The black line is where the folder creases.

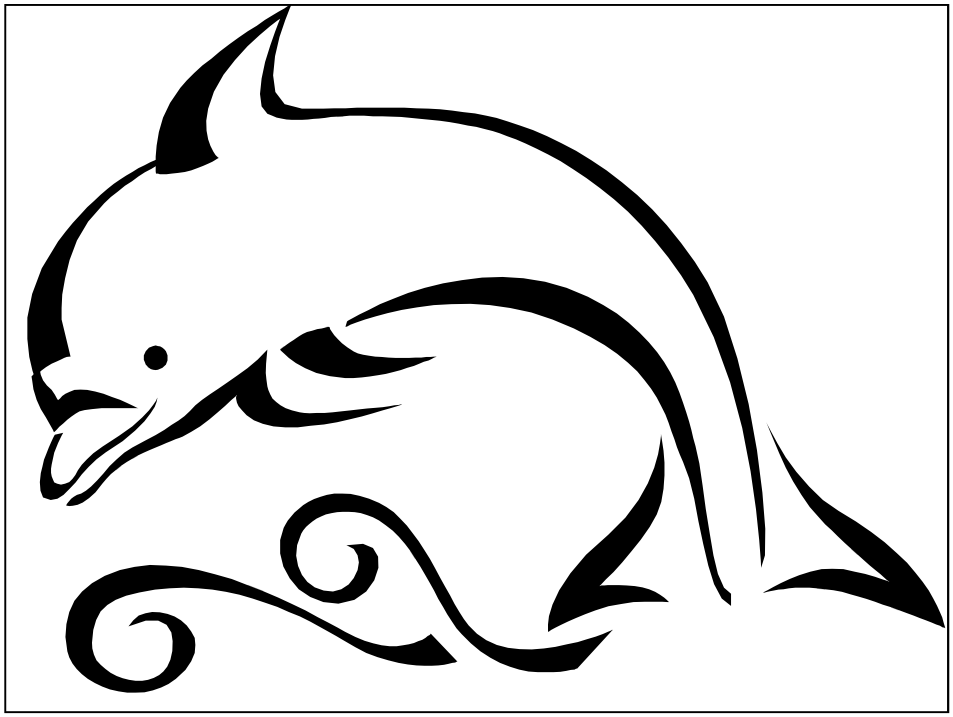
Book-

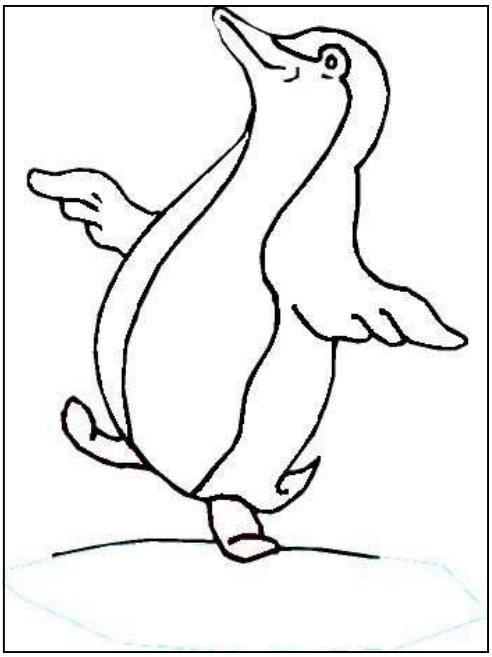
Booklet #1

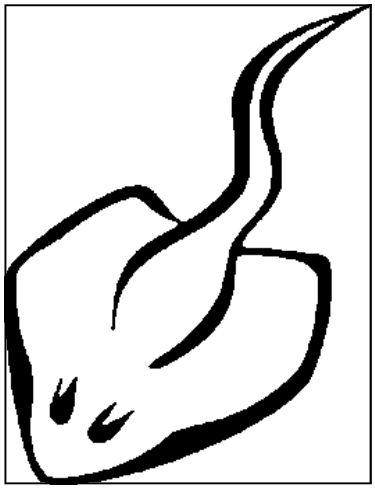
Game pieces pocket

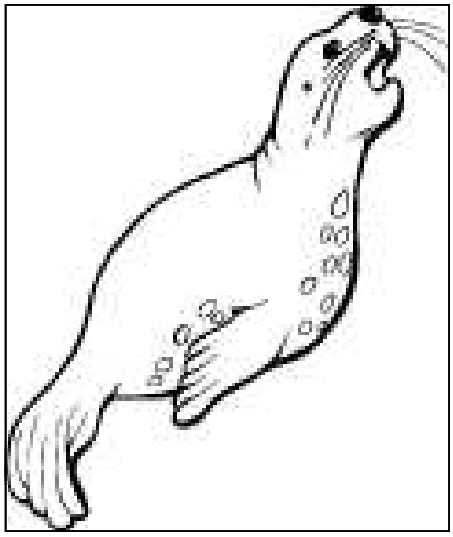
Booklet #4 **Booklet #2**

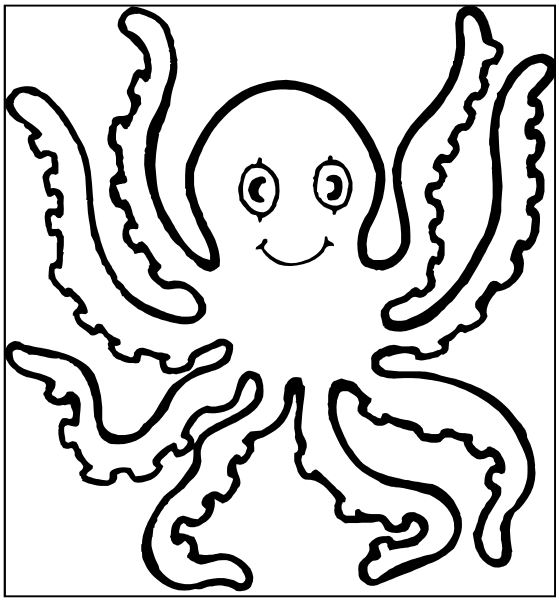
Booklet #3











Use any of the above images to place on the front of your folder for decorations.

Marine Life

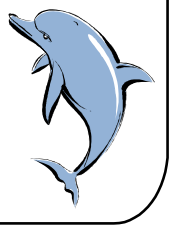
WHO AM I?

I have a long beaklike snout

I breathe through a single blowhole

I am gray and intelligent

I perform for many audiences.



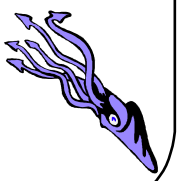
Dolphin

I am an animal without a backbone

I can change the color of my skin to match environment

I am related to the octopus and squirt ink

Many people eat me. I have ten (10) arms.



Squid

I live in warm shallow waters

I breathe through my nostrils

I can be either gray or brown with wrinkled skin

I am also called a sea cow

Manatee

I spend most of my time in the water

I rest on my back and live along coasts in kelp beds.

I am protected because of over hunting

I am sleek and furry

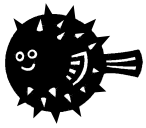
Sea Otter

There are 100 species of me.

I mainly live in fresh water

I contain paralyzing poisons

I inflate myself when danger is coming



Puffer Fish

I live in large colonies

I provide shelter for many animals in the ocean

I am endangered due to pollution

I am colorful

Coral

I breathe using gills

I am a crustacean

I walk sideways

I have a hard shell and people eat me

Crab

The female lays eggs

I am a strong swimmer and good diver

I have four flipper legs

I have a shell

Sea Turtle

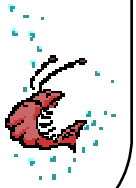
I have swimmerets

I swim backwards

Big animals eat me.

I am beige but when I get cooked I turn pink

Shrimp



I have a soft body and cannot hear

I have blue blood and suction cups

I ink my enemies

I am related to the squid. My name means eight feet

Octopus

I have a soft body and tentacles on my head

I eat grass and algae

I bury myself in the sand when I am in danger

When I die people save my shell as a treasure

Conch

I am brightly colored

I breathe with gills

I live in an anemone

I starred in the Finding Nemo® movie

Clownfish

I am a type of a fish that has no scales

I live in sea beds and a slow swimmer

I can change my color to camouflage from enemies

My head looks like a horse and I have curled tail

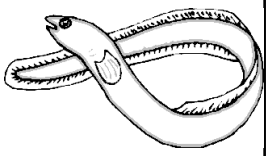
Seahorse

I swim with my mouth open

I am most active at night

I am a long skinny fish

I shock with my electric body



Electric Eel

I have a soft body and I eat plants and fish.

I am 98% water.

I float in the ocean and sometimes glow in the dark

I have poisonous tentacles

Jellyfish

I have no bones

I am closely related to the sharks

I am flat and a graceful swimmer

I have a tail that stings

Stingray

I have tiny feet

I eat meat

I do not have a brain

If my arm is cut off I will grow a new one

My body is shaped like a star

Starfish

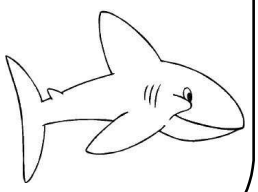
I am most active at night

I can remain motionless in water by swallowing air

I can blend into the sandy ocean floor

I am from the shark family

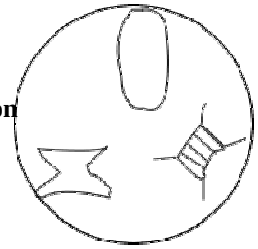
Sand Shark



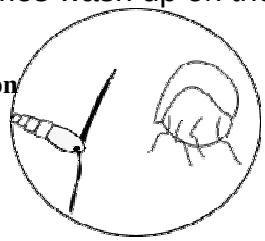
When you are at the beach it is calming, relaxing, and never boring. Things are always moving and changing. The waves roll up to the shore carrying many treasures from the water including sometimes small marine life.

Marine life live on different layers of the ocean or along the seashore. The smallest is plankton. Plankton are tiny plants and animals that drift in the ocean currents and sometimes wash up on the seashore. Many animals rely on them for food.

Plant Plankton



Animal Plankton



Discovering Marine Life

Page 4

When you visit the seashore, look for signs of life. If you gently dig in the sand with a stick then you can discover several different forms of shore creatures. Be careful to only observe and not disturb. If you are observing near a rocky shore be sure to wear safe shoes that can support you. As the water rolls back into the ocean it pulls the sand away, birds scurry for new found food and crabs dig into the sand for safety.

The seashore is a narrow strip of land right next to the ocean. There are two types of seashore: the sandy seashore and the rocky seashore. The word sea is used for the word ocean or small sections of the ocean that are partly surrounded by land. Plants help stop erosion by holding the sand in place with their roots.

shells
sandpipers
crab
seaweed

animal tracks
starfish
sand dollar
snails

Seashore Creatures

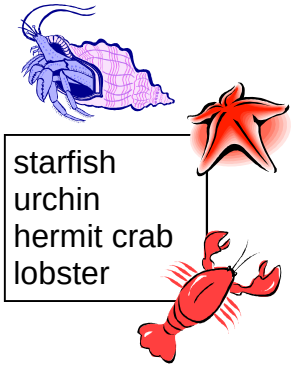
Creating the Marine Life flip book: First, have the participants color the three pages of cut outs prior to cutting them out. Cut along the lines around the box templates.

Starting with the bottom page, labeled page 1, stack each page on top of each other. Each layer gets shorter and shorter as it progresses to the top. After all the pages are layered upon each other, make sure they are straight and staple them together at the top three times to form a flip book.

After the flip book is completed, you can place it the middle portion of your folder about 1/2 inch from the top. This should be adhered into the book with a glue stick. Make sure you have enough to secure it to the folder. The last page will not be numbered because it is on top.

Page 3

Coastal waters are where the land ends and the sea begins. Within this area is a large variety of sea life. An easy way to observe this level of the sea is snorkeling or wading in knee deep water. Unique coves, tide pools, and reefs, located along the edge of shores, are an easy way to observe some of these marine life animals. Tide pools are trapped pools between rocks where many animals had made their homes.



starfish
urchin
hermit crab
lobster

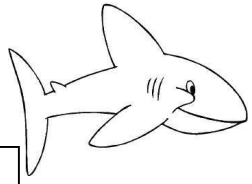
oyster
kelp
algae
shrimp
coral
fish

sea cucumber
mermaids purse
horseshoe crab

Down by the Sea

Page 2

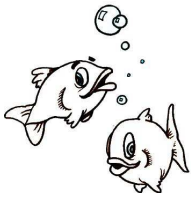
The continental slope is the area where the coastal waters begin to slowly slope into the bottom of the ocean. Within this area, the majority of sea life resides, swims, or searches for food.



eel
shark
fish

whale
dolphin
octopus
squid

seahorse
sea turtle
jellyfish
stingray



Coastal Water

Page 1

Living at the bottom of the ocean is not an easy task. There is little food and it is dark and cold. Therefore it takes the marine life a long time to grow. Mainly the bottom dwellers are fish that are poor swimmers, angler fish, starfish, and sand burring animals. In some parts of the ocean the sea bed is not as deep and dark, within those areas more animals live along the sand or rocks. Some of these areas are called barrier reefs or seabed's and they are located closer to shore. By studying shipwrecks and their cargo on the seabed, divers and scientists learn a lot about how people lived long ago.

The deep sea angler-fish has a light dangling in front of it's mouth. It attracts prey in the deep ocean and helps him see in the darkness of the sea.

Barrier reefs or sea-bed's near shore include animals like:

Seahorses
sponges
starfish
tropical fish
anemone
coral
lobster

This flounder is lay-ing at the bottom of the ocean to rest or protect itself from enemies.

Ocean Floor

Cut out the below picture and glue it to the front of your seashore animal book. (B**ooklet #3)**
You can also decorate the outside with plants and other animals.

Booklet #3 Cut along the outside of the rectangle only. Fold along the center line. Glue the design on the front of the book.

BOOKLET #3

FOLD HERE

ANIMALS

Harp Seals Most of the time is spent in the sea or on the ice. Whiskers, short thick white fur with black patches and a black face.

Walruses Lives in the sea near the Arctic ice sheet. Enjoys sun-bathing on the beach. Large, noisy mammal with 2 long tusks and whiskers. It has reddish brown skin.

Polar Bears Powerful swimmers who hunt marine life in the water. They spend much of their time swimming in frigid seas.

Manatee or sea cows These animals are gentle, slow moving, and enjoy living in warm shallow waters. They have gray to brown wrinkled skin.

Sea Otter

These sleek furry animals live along the coastlines in bays and kelp beds. They spend most of their time in the water. They have webbed back feet which they use to swim.

BIRDS

Pelicans The brown pelican has a long, large, flattened bill. They can store fish that they caught in their pouch until they want to eat it. The pelican catches the fish by diving or plunging into the water with its mouth open.

Sea Gulls They fly along the sea looking for food. Most do not live near the sea. They live in many different environments.

Penguins They cannot fly but are excellent swimmers. Most penguins have a white breast and a black back and head. They live in the arctic.

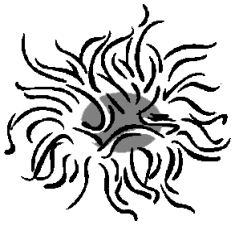
Puffins They have large, triangular bills. They eat mostly small fish.

Egrets
They are a species of heron. They have white feathers.

Cut along the outside of the rectangles only. Glue the inside of the book (left side with wording) inside the booklet # 1 cover. Make sure it is glued in the correct direction, so that when you open the book, you can read the words. Fold it in half on the line and glue it inside your file folder. Color the items if desired.

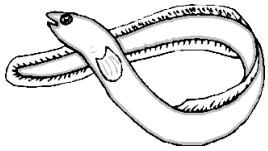
BOOKLET#2

Sea Anemone



It is attached to rocks or coral at one end and at the other has a central mouth surrounded by tentacles armed with stinging cells that paralyze small fish. Color it a bright color like yellow, orange or green.

Electric Eels



Electric Eels are capable of sending a discharge of 600 volts from the nerve cells in their tail. They use it for catching prey or self defense. Color it black and silver.

Coral

Coral reefs house thousands of creatures. They have tiny stinging cells to paralyze and capture their food. Color it a bright color such as pink or orange.

Sting Rays

Sting Rays have flat broad bodies and can change colors to camouflage themselves. Their whip like tail has poison glands and can inflict severe wounds.

Jellyfish

Jellyfish have soft bodies that feel like gelatin. They sting with their tentacles.

BOOKLET#2

Place glue on this side to adhere to the file folder.

Fold on this line

Animals with Stingers

Cut along the outside of the rectangles only. Glue the inside of the book (left side with wording) inside the booklet # 1 cover. Make sure it is glued in the correct direction, so that when you open the book, you can read the words. Fold it in half on the line and glue it inside your file folder. Color the items if desired.

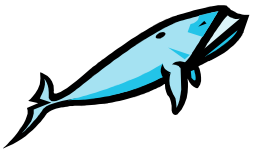
BOOKLET#2

Marine Turtle

Many of the marine turtles are endangered due to the nests of eggs being disturbed before hatching or not making it to the sea after they are hatched. Usually only one out of a 1,000 eggs survive.

Dolphins and Whales

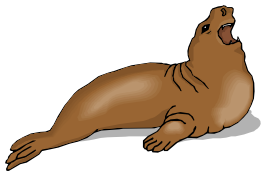
Some are endangered due to pollution in the water they live, caught in fishing nets or hit with boats.



Penguins

They are endangered due to their habitats being destroyed by other animals and the climate change.

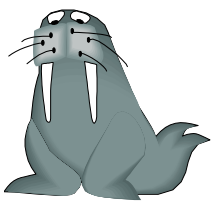
Harbor Seals



Some seals are endangered due to pollution or oil spills near the water they live, caught in fishing nets or hit with boats.

Walrus

Due to the climate change in some Arctic areas they are living on shore rather than closer to the water. Also if a baby calf gets separated from their mother it is hard for them to survive without their family.



BOOKLET#2

Place glue on this side to adhere to the file folder.

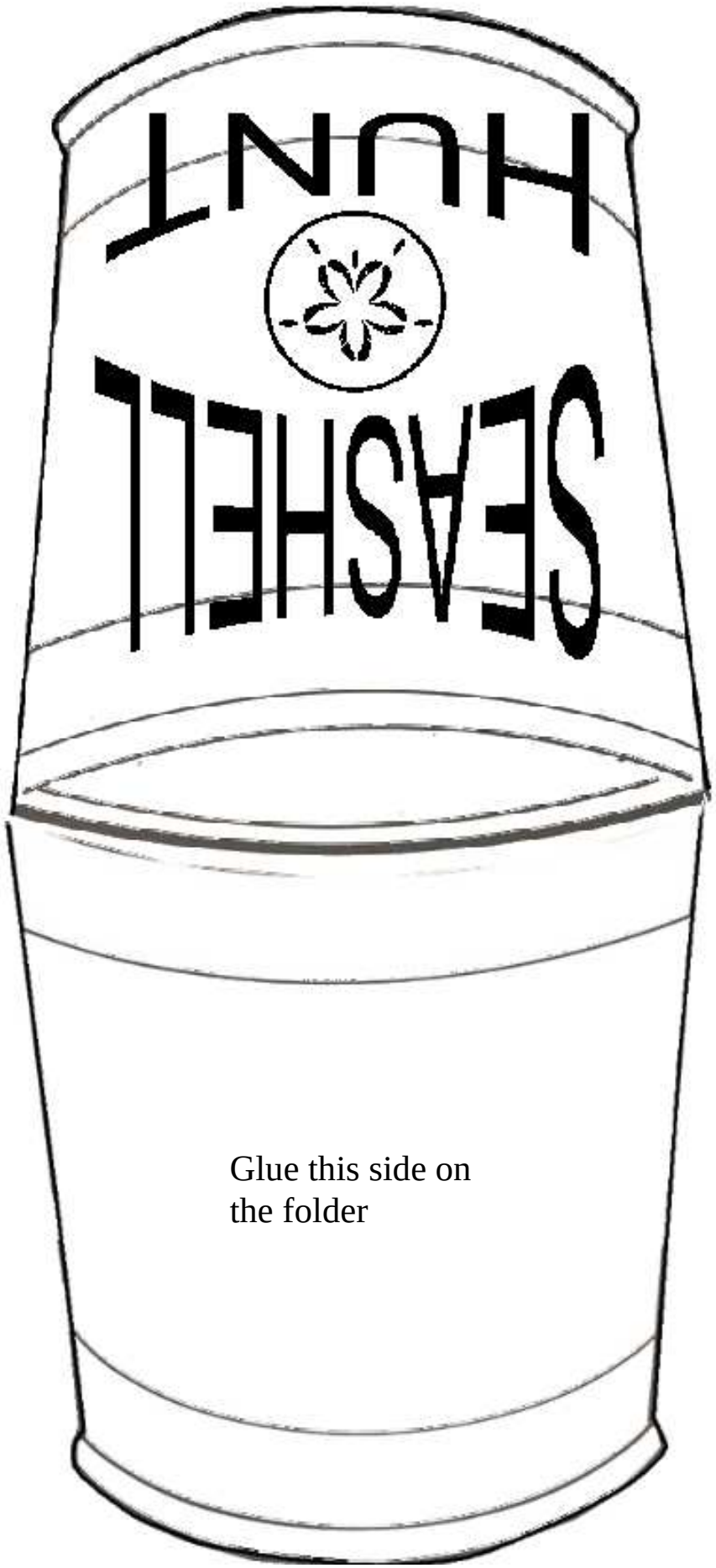
Fold on this line

Endangered Animals

Cut this image out along the solid lines. If you print the sand bucket front to back on the copier then it will line up and you do not have to glue it together.

Otherwise, copy both pages and glue it inside the sand bucket to create booklet # 4. Make sure it is glued in the correct direction, so when you open the book you can read the words.

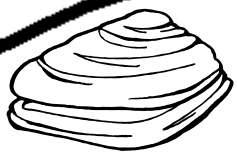
Fold the bucket in half making sure edges are even. Glue it inside your folder.



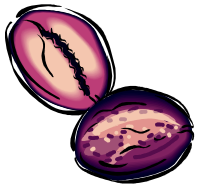
Glue this side on the folder

Auger Shells-

long skinny shells they live near coral or rocks.



Clams- burrow in the sand offshore

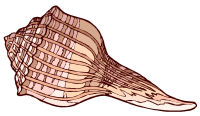


Cowry- These type of shells have been collected for centuries. They live in coral reef or near rocks.

Common Dove shell- Likes to live in shallow water under rocks.

Sand Dollar- circular shaped and flat with a flower design on the top.

Mussel- Clings to rocks.



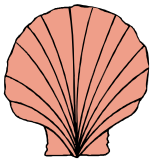
Lighting Whelk- Located on the sand near shore

Turban- A spiral wrapped shell. Lives in shallow reefs or near rocks.

Melongena- Tall spiraled shell with a long open canal. Likes to live in the mud in the Caribbean.

Conch shell- spiral shell lined in pink

Scallop- The variety of colors of this shell ranges in many beautiful colors.



Nautilus- A light-weight spirally coiled shell resembling a hollow tube.

Cut this image out along the solid lines. If you print the sand bucket front to back on the copier then it will line up and you do not have to glue it together.

Otherwise, copy both pages and glue it inside the sand bucket to create booklet # 4. Make sure it is glued in the correct direction, so when you open the book you can read the words.

Fold the bucket in half making sure edges are even. Glue it inside your folder.

Page 33

Color and decorate the inside of your surfboard. Cut along the solid lines except in the center where they are connected. Glue it inside the surfboard titled “People of the sea” Glue on the left flap of your book. **Do not cut the surf boards apart.**

MERMAID

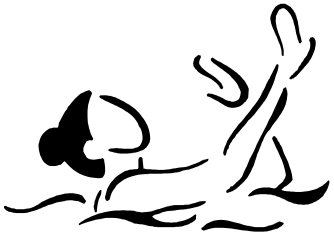
To ride on a wave on a surfboard.

The sport of riding a surfboard with a sail.

Oceanographer- a scientist who studies the sea.

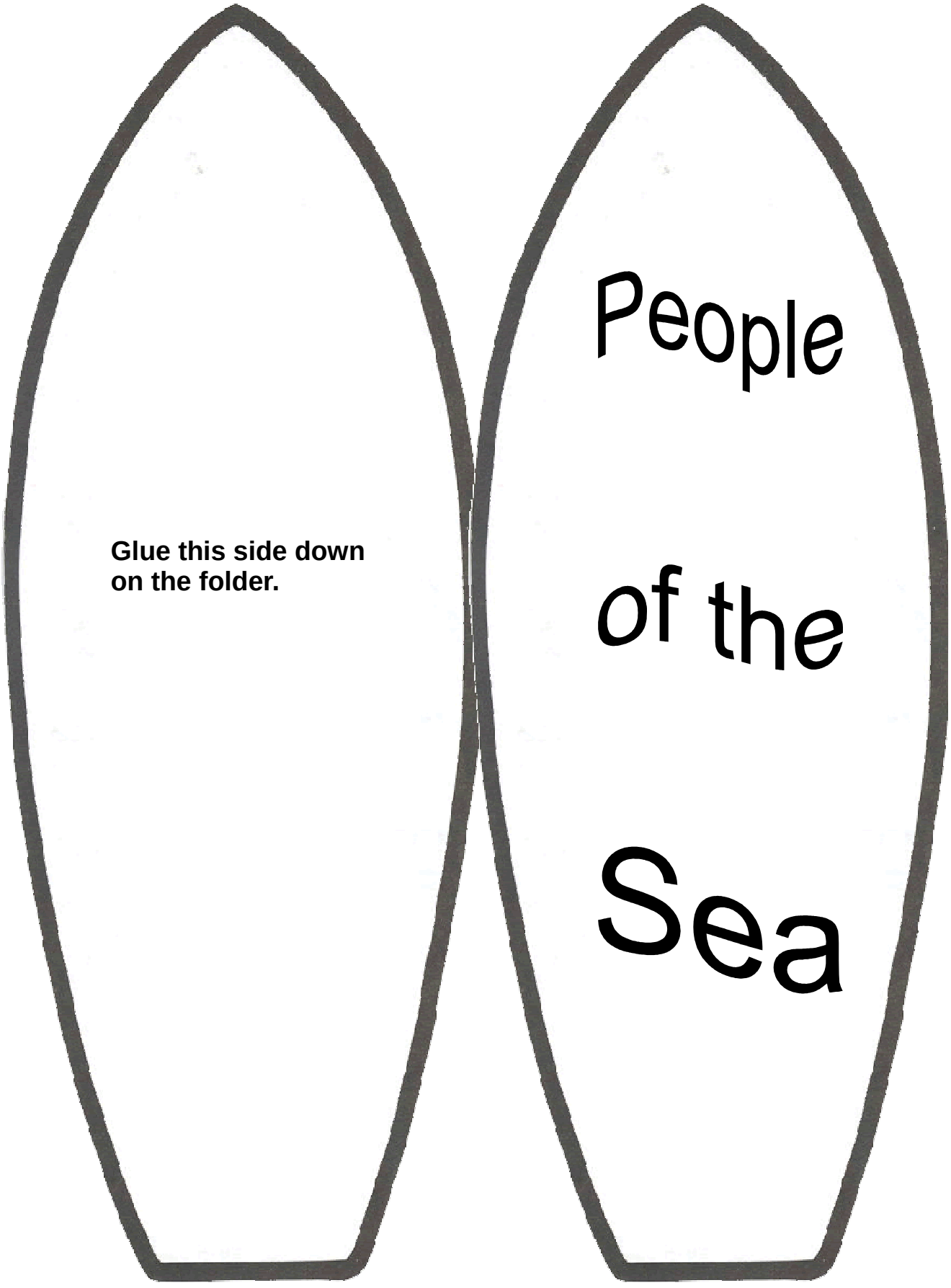
I am a biological oceanographer. I study marine life.

I am a geological oceanographer. I study landforms and rocks.



I am a physical oceanographer. I study movement.

Color and decorate the front of the surfboard. Cut along the solid lines Glue the inside of the surfboard on the reverse side. Place on the left flap of your book. **Do not cut the surf board apart.**



Rules of the Discovering Marine Life Game

Items you will need:
Dice
Individual markers for the players [Have the players choose a marine animal below to use as their game piece, some will not be used. You should only have 4-5 players per game]
Crayons or markers to color in the game board [optional]
Game board and Ocean Question Playing Cards [located in the back of this kit]

Landing on a blank space: If you land on a blank space then you don't do anything. Your turn is ended and it goes to the next person.

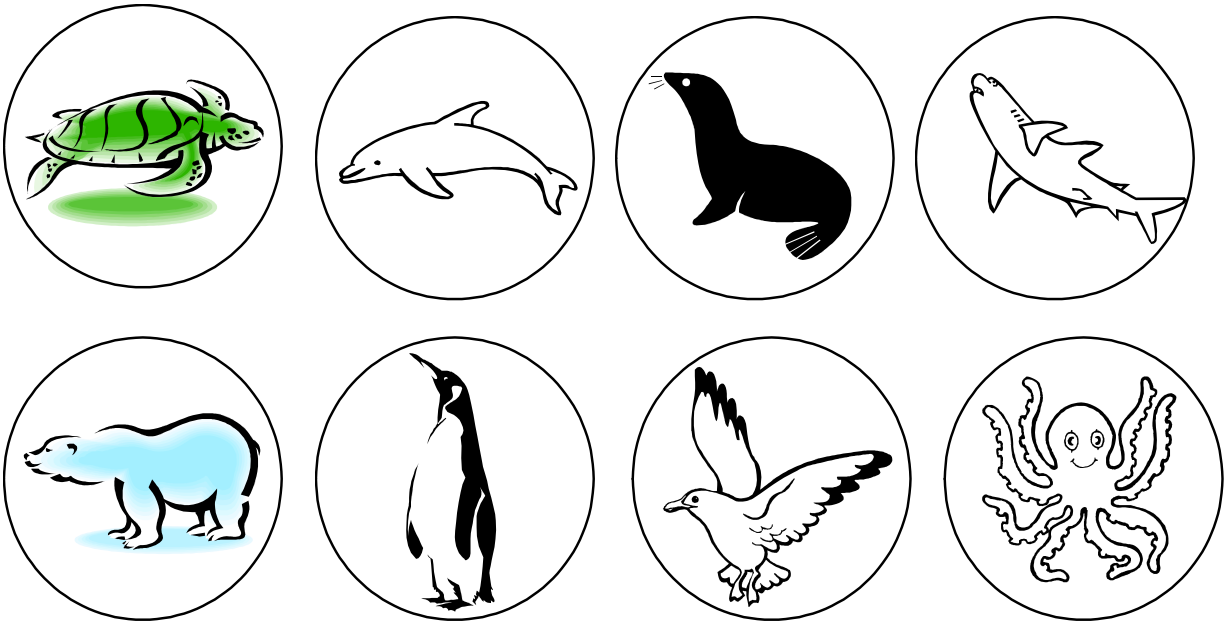
Ocean Game Cards: Copy the cards located in this kit for the game. After the person to the right of them has read the card they need to place it upside down on the bottom of the pile. For extra, you can copy the cards on cardstock for more durability.

Landing on a ? space: If they land on a question mark they draw an ocean card from the stack of cards on the board. They will need to answer the question. If they do not answer correctly, they do nothing. If they answer correctly, they get to move to the next space.

Set-up: The highest roll of the dice goes first and the turns are clockwise there after. Everyone places their markers on the "Start Here" space. Cut out the cards and place them on the card space.

Winning the game: The first person to reach the end spot and answer a question wins. They do not have roll the exact number to win but you have to roll a number large enough to reach the end spot. If only older participants are playing the game then you can raise the goals for older participants.

Game Pieces Cut out each game piece for the participants to choose as their marker. You will not use all the pieces during the game. The suggested number of players is no more than 5.



START

Discovering Marine Life Game

?

Ahead 1

?

Roll Again

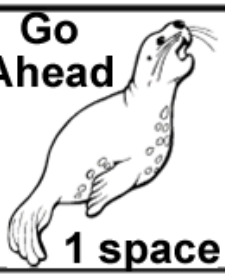
?

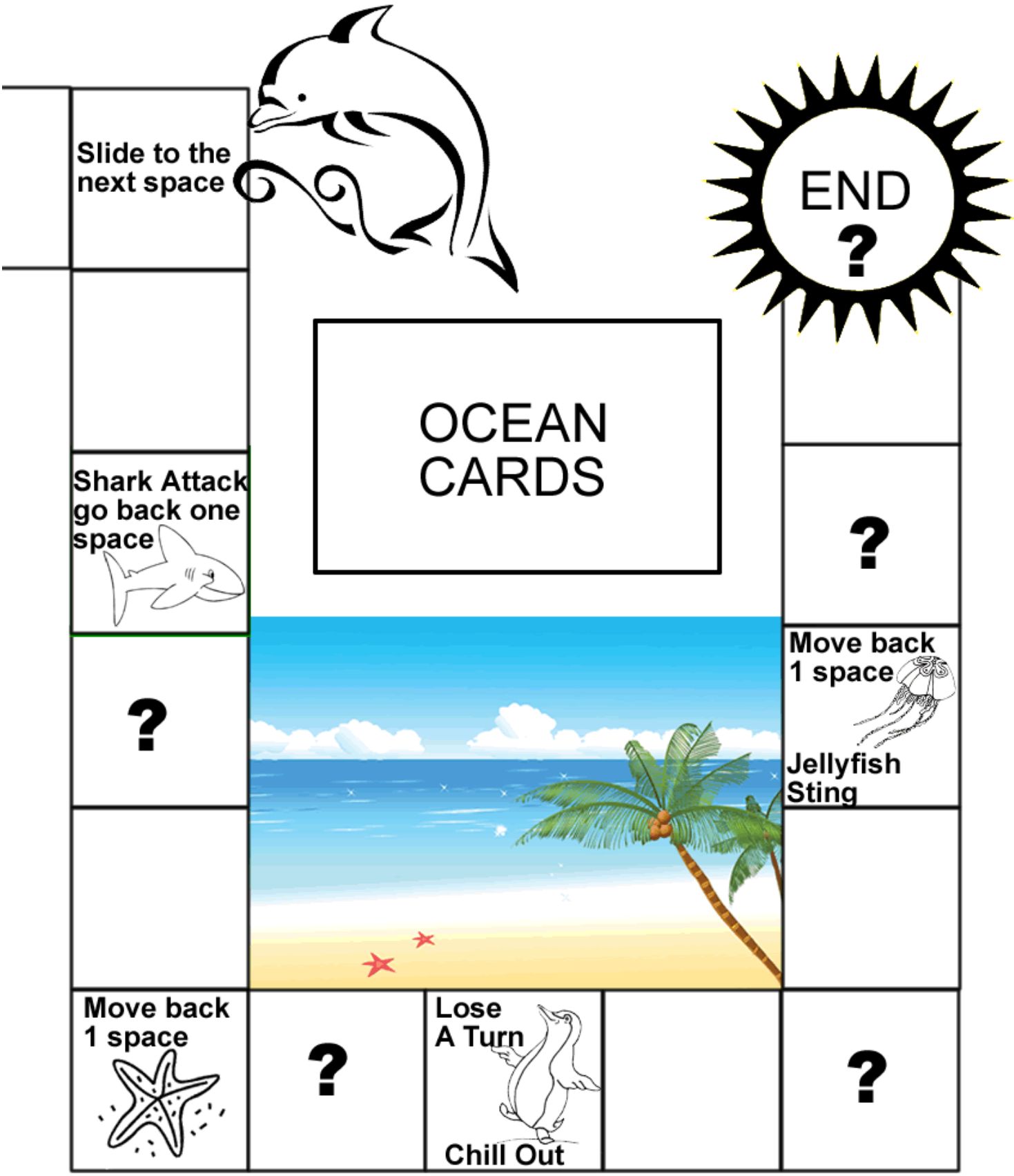
Go ahead 2 spaces

1 space back

?

Go Ahead 1 space




Slide to the next space
END
?
OCEAN CARDS
Shark Attack go back one space
?
?
Move back 1 space
Jellyfish Sting
Move back 1 space
?
Lose A Turn
Chill Out
?

Ocean Playing Cards

Copy and cut out the below game cards. These cards will be placed on the board face down on the space that says OCEAN CARDS. If they answer incorrectly, then their turn ends and they roll their next turn. If they answer correctly, they can move to the next space. After the card is used it is placed on the bottom of the deck.

Name a marine animal that can sting?

Jellyfish, sting ray, etc.

Name an animal or bird that lives near the ocean.

Seal, puffin, seagull, walrus, polar bear, etc.

Name something found on the ocean floor.

Treasure, starfish, etc.

Name a job that takes uses the ocean or marine life.

Zoo, oceanographer, surf instructor, etc.

Name a large marine animal.

Whale, dolphin, seal, etc.

Name an activity for humans in the ocean.

Swim, snorkel, surf…

Name something found on the seashore.

Sea shell, starfish, etc.

Name something found in a cove or reef.

Fish, turtle, coral, etc.

ORDER FORM

Please complete this form and mail it or fax it to:

Patchwork Designs, Inc.
8421 Churchside Drive
Gainesville, VA 20155
(703) 743-9948 PHONE
(703) 743-9942 FAX

Name_____
Address_____
City_____ State_____ Zip_____
Phone ( )_____ Referred By:_____
Email Address: _____
Mastercard/Visa# _____-_____-_____- _____ or Check #_____
Expiration Date:_____ Have you ordered before?_____

Item #	Description	Quantity	Unit Price	Total Price
MARINE	Discovering Marine Life Patch		$1.75	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			$	$
			SUBTOTAL	$
			Regular Shipping & Handling (view chart on the next page)	$0.00
			Special Shipping (next day, priority mail etc)	$0.00
			TOTAL	$

Shipping Chart

If you would prefer Priority Mail, please add $2.00 to the $4.99 or above shipping category.

Next day service is an average cost of $28.00 (USPS determines the pricing according to the zone and weight.)

Patches	
1-5	$3.55
6-20	$4.99
21-30	$5.99
31-50	$6.50
51-70	$6.99
71-100	$9.55
101-150	$10.55
151-200	$13.00
201-400	$15.99
401-500	$17.50
Over 500	Contact us for pricing

Kits or Manuals (shipped Priority Mail)	
1	$6.99
2	$9.25
3-5	$10.75
6-8	$12.75
10-12	$15.75
13-20	$22.25
21-23	$24.00
Over 24	Contact us for pricing

Kits and manuals range from 30 to 62 pages in length (except the Patch Program Book, that is over 100). Therefore if you are ordering more than 2 kits or manuals, please use the above shipping chart. Patches, bracelet kits, and stamps can be added to any order falling within that price range. Otherwise, use the highest shipping amount on the chart according to the items ordered.