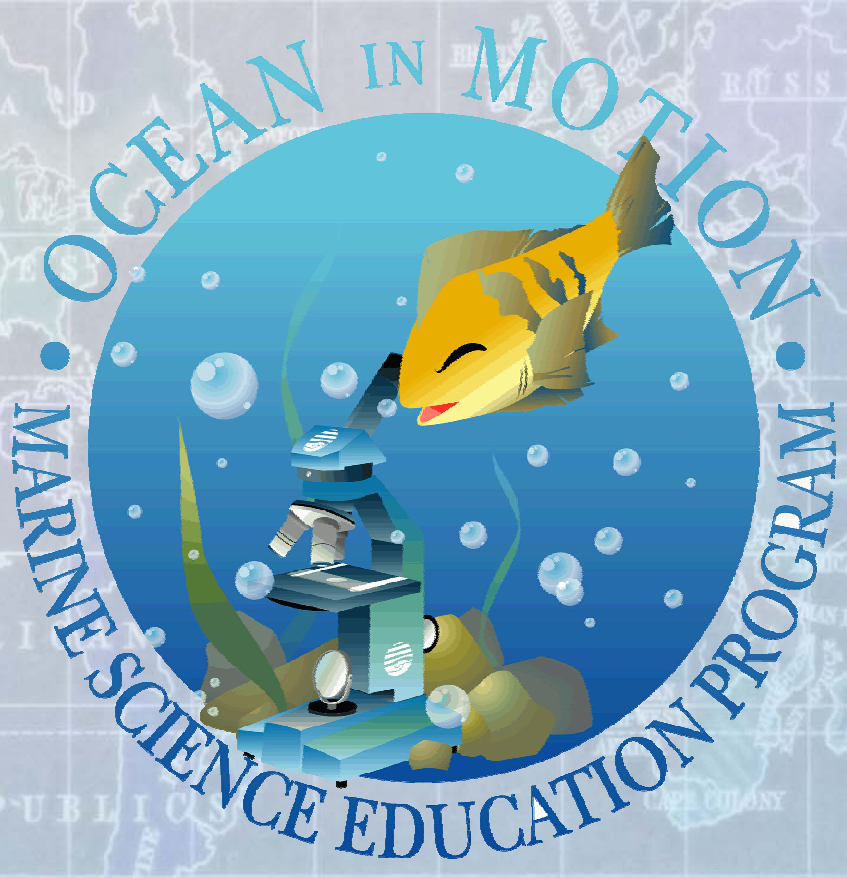
Summer Snorkeling with the San Diego Oceans Foundation



Introductions

Becca Innis, SDOF Program Director (New)
Courtney Gosch, SDOF Program Director (Current)
John Valencia, SDOF Executive Director
Cheryl Barnes, SDOF Ocean In Motion Coordinator
Rachel Rabinor, Outdoor Outreach Director of Programs
Erin Sheehy, Volunteer Coordinator – Outdoor Outreach

San Diego Oceans Foundation

- **Non-profit in San Diego since 1984!**
- **Mission: to promote ocean stewardship through community supported projects**
- **Programs: White Seabass Restocking Project, Canyon Watch, REEF Monitoring Project, Storm Drain Stenciling, Wreck Alley Mooring, Ocean In Motion**
- **4 staff, 700+ volunteers!**

SDOF recruits and trains community members (just like you) to assist with our programs, working at the grass-roots level toward marine conservation efforts.

San Diego Oceans Foundation

OIM in the Classroom

When: January – June

Who: Elementary-age children in San Diego County schools

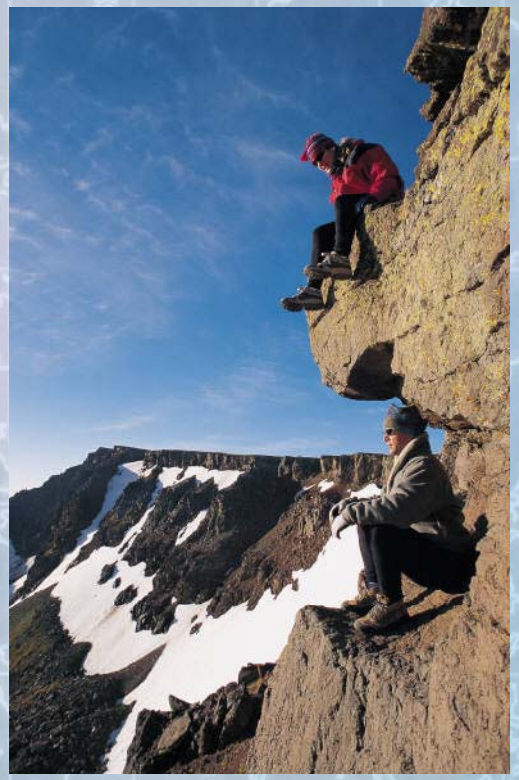
What: Take live marine animals into classrooms and after school programs for kids to touch and explore

- **No volunteers involved**

Safety & Interaction

Erin Sheehy, Outdoor Outreach

- **Who we are**
- **Who we serve**



- ✓ **Live Scan (required for all OIM volunteers)**

OUTDOOR OUTREACH

Ocean In Motion Summer Snorkeling

Why snorkel?

~ 70% of the earth is covered with water.

Snorkeling is the first step to exploring the mysterious world that lies just below the ocean's surface.

- **Educate youth in under-served communities about marine life**
- **Provide a new, FUN experience**
- **Form community connections**

OIM Students

~ 12 per trip

- **Many have never been to the ocean**
- **Some have never swam in the water**
- **OIM is a VERY special experience to them**

*** First priority is for EVERY kid to have FUN!!**

OIM Location

Mission Point (end of Mission Blvd)

Calm entry from beach to bay

Shallow areas along jetty

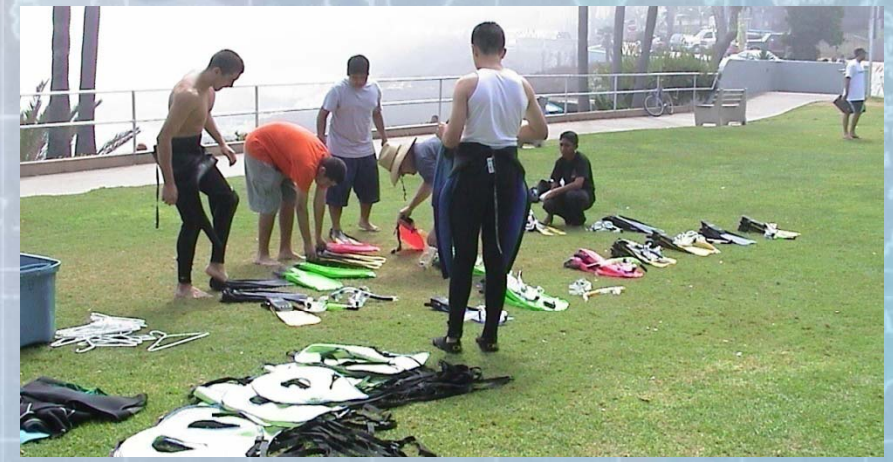
Variety of habitats (sandy, rocky, grass)

LOTS of animals…

Program Overview

1. **Kids are taken to the Birch Aquarium**
2. **Volunteers meet at Mission Point to organize gear and prepare for kids**
3. **Children arrive**
4. **Trip leader**
   - **gives a short overview of local animals and their adaptations**
   - **demonstrates how to use and put on snorkeling gear**

     (mask, snorkel, fins, wetsuit, hood, life vest)
   - **answers questions…**



Program Overview (Cont.)

5. With the help of volunteers, kids are fitted for gear
6. Once everyone is in their gear, we head down to the beach
7. Put fins on at the water's edge
8. Walk into waste deep water
9. Everyone gets wet!
10. Put on mask and snorkel
    (don't forget to spit in your mask)
11. Check mask for fit and leaks
12. Practice floating
13. Work on "sitting up" in the water
14. Once comfortable, groups start snorkeling along the jetty

Program Overview (Cont.)

15. Swim along rocks, pick up animals (handle gently), remind kids of fun facts, ask questions & **HAVE FUN**!
16. Swim back to the beach
    * If time, kids can play.
17. Core Sampling
18. Rinse off gear in showers (no sand, grass, etc)
19. Place gear back in bins

Total water time 1 – 1 ½ hours

- Trip leader gives wrap up (animals & conservation)

Kid Rules (Safety First)

- Keep fins under water
- Stay at a respectful distance from others
- Keep life vest inflated at ALL times
- No “diving” underwater (volunteers only)
- No climbing on rocks

Volunteer Rules

- Follow all instructions given by OIM Coordinator / Trip Leader
- If going into bathrooms with children, 2 adults must be present

- Make sure each child has fun!

Volunteer Responsibilities

- Help unload, organize and load gear
- Assist with gear fitting (both in and out of the water)
- Ensure safety of assigned children
- Respectfully handle animals and teach to the best of your ability

- Have fun!
- Have fun!
- Have fun!

- All gear is available for volunteers, although owning your own mask and snorkel would be helpful.

Gear Fitting

- **Mask**

  Purpose: To provide air space so that you can see.

  Fit: Should stay on your face while inhaling through your nose.

  *** If it doesn't fall off = OK!**

  Tip: Strap should fit high on head.

  Tip: Make sure your hair or hood isn't between the mask and your face (it WILL leak)

- **Snorkel**

  Purpose: Breathing tube to allow you to breathe with your face in water.

  Fit: Should be attached to the left side of your mask.

  Snorkeling Tip: A human head weighs as much as a bowling ball!

  - Just imagine trying to swim while holding a bowling ball up…

  It's much easier to put your face down and let your head float!

Gear Fitting (Cont.)

- **Fins**

  Purpose: To increase your mobility in the water
  (allow you to move faster with less effort).

  Fit: KIDS MUST SIT DOWN to try on fins. Put one fin on and wiggle your foot.
  If the fin flops around = too big; If your toes are sticking out = too small!

- **Wetsuit**

  Purpose: To provide protection against cold temperature, scrapes and cuts.
  Traps water inside that warms with body heat.

  Fit: Wetsuit should be just a little narrower than the child/adult.
  It should fit snugly and be a little difficult to get on.

  Tip: Make sure the zipper is in back!
  Pull on legs like nylons,
  then put in arms.

  - Bend over and move around to get a better fit.

Gear Fitting (Cont.)

- **Hood**
  - **Purpose: You lose most of your body heat through your head.**
    The hood keeps heat in!
  - **Fit: Should be snug (but not restricting) on your head.**
  - **Tip: Put your hood on last, just before zipping up wetsuit.**

- **Life vest**
  - **Purpose: To make it easier to float (and for identification).**
  - **Fit: Make sure straps are loose enough to be comfortable.**
    Blow 4-5 breaths to inflate.

Have kids sit on the grass
(in the SHADE) with all their gear
until the group is ready to go!

Tips

- **Familiarize yourself with snorkel gear & fitting**
  - **Practice on a friend or child**

- **Visit Mission Point**

- **Do some additional research on animals / fun facts to share!**

Commonly Seen Critters

Sand Dollar

Location: In shallow water on top or just below sand
Food source: Plankton and particles in the sand
Predators: None
Adaptations:
* Hard skeleton with little "meat"
* Use spines (called cilia) to bury into sand

Identifying features: Round and flat

Sand dollars get their name from their coin like shape!

Spiny Brittle Star

Location: Lives in rocky areas and kelp forests
Food source: Plankton, small animals
Predators:
Adaptations:

* Will lose an arm to escape predators, then regrow it!
* Mostly nocturnal
* All of their organs are in the center disc, protected by arms.

Identifying features: Five, long spiny arms

These animals can cover the sea floor, up to an inch thick!

Brittle stars are the fastest growing Echinoderm (means spiny skin)

Bat Star

Location: Lives in rocky areas near the low tide zone
Food source: Scavenges on other animals (dead or alive!)
Predators: Birds, sea stars, fish, seals, humans
Adaptations:
* Exoskeleton made up of many armor like plates
* Can regenerate
* Moves along with thousands of little tube feet

Identifying features: Has five arms and can be many different colors

If a bat star is cut in half, each half can grow into a new sea star!

A sea star puts it's stomach outside to surround and digest it's prey!

Purple Sea Urchin

Location: Lives in shallow waters along sea shore
Food source: Plankton, kelp, barnacles, algae
Predators: Birds, sea stars, lobsters, sea otters, humans
Adaptations:

* Spines are used for protection, movement and trapping algae
* Can regenerate broken spines
* Moves along with thousands of little tube feet

Identifying features: Purple spines covering a round husk

Sea Urchins can sense only shadows!

A Sea Urchin is in the same family as the Sea Star

Warty Sea Cucumber

Location: In sea grass and sandy areas
Food source: Algae and detritus
Predators: Fish and humans
Adaptations:

* Can change size by inflating with water (long and skinny or short and fat)
* Uses sticky tube feet to move
* When threatened, spews out internal organs as a distraction
* Can regenerate lost or damaged body parts

Identifying features: Orange or brown colored.

Sea Cucumbers can move 1 ft in 5 minutes!

Are the earthworms of the sea

Wavy Top Turban Snail

Location: Lives in rocky areas

Food source: Algae and corraline algae

Predators: Sea stars, octopus, fish, Kellet's whelk snail

Adaptations:

* Shell becomes covered with algae and invertebrates making it blend in (camouflage)
* Each night snails migrate upwards to escape predators
* Snail can seal itsself inside using it's hard **OPERCULUM**

Identifying features: Large shell with wavy ridges and soft foot

Can live up to 20 years!

One of the largest snails living in Californian waters!

Norris' Top Snail

Location: Found on kelp, grass and rocks
Food source: Brown algae, giant kelp
Predators: Sea stars, fish, other snails, humans (collecting)
Adaptations:

* File like tongue to scrape off algae
* Light colored shell to blend in with kelp
* Moves into tide pools at low tide

Identifying features: Light colored shell with bright orange foot

Can smell pisaster sea stars (major predator)

If flipped on it's back, the snail picks up pebbles with it's foot to change the center of gravity and turn over!

Giant Keyhole Limpet

Location: Lives in rocky areas

Food source: Scrapes algae, tunicates, and sponges off rocks with **RADULA** (rough, tongue-like structure)

Predators: Birds, sea stars, fish, seals, humans

Adaptations:

* During low tide it can clamp down on a rock to minimize water loss
* Moves along rock by rippling foot muscles

Identifying features: Looks like a big eye!

Can live up to 20 years!

Scientists think limpets may produce cancer preventing chemicals!

California Sea Hare

Location: Shallow waters with seaweed and grasses
Food source: Algae and seaweed
Predators:
Adaptations:
* Release a purple ink when threatened
* Large size makes it harder for predators to eat

Identifying features: Soft brown body with two "rabbit ears"

A Sea Hare's color is determined by the type of algae it eats!

Sea Hares die after they lay their eggs.

Navanax

Location: Rocky shores and sandy bottoms
Food source: Slugs, snails, even other Navanax's
Predators: Each other!
Adaptations:
* Very slimy
* Bright coloration to warn predators, but not poisonous (**MIMICRY**)

Identifying features: Brown body with bright yellow and blue markings

All Navanax are boys AND girls at the same time.

They can "smell" the slime trails of potential prey or mates!

Hermit Crab

Location: Found along shorlines and in tidepools
Food source: Algae and detritus
Predators: Fish
Adaptations:
* Finds empty shells to protect it's soft abdomen (Recyclers!)
* As a hermit crab grows, it finds a larger shell to live in
* Water in shell allows hermit crabs to live out of water during low tide.

Identifying features: Legs and antennae sticking out from a shell

They will fight each other for the best shell

Hermit crabs like certain shells better than others

California Spiny Lobster

Location: Found in shallow, rocky areas. Are mostly **NOCTURNAL** (come out at night)

Food source: Scavenge for snails, sponges, kelp, worms and fish

Predators: Many kinds of fish, octopus, sharks and humans

Adaptations:

* Have a hard outer shell for protection (**EXOSKELETON**)
*Antennae are used to sense predators and food

Identifying features: Orange to brown body, 2 set of antennae, 10 legs, What is missing?

Lobsters have been known to live up to 150 years!

As a lobster grows, it must shed it's skeleton (molt).

Halibut

Location: Found on sandy bottoms
Food source: Octopus, fish, shrimp, worms, plankton
Predators: Sea lions, whales, humans
Adaptations:

* Flat fish (lays on it's side)
* Eye rotates through skull to other side as it matures
* Very well camoflaged
* Swims with it's body instead of it's fins

Identifying features: Speckled, sand color body

Halibut are the only flatfish with teeth!

They have two eyes on one side!

Octopus

Location: Likes to hide in caves at all depth (also in cans!)
Food source: Lobsters, crabs, mussels, snails and fish
Predators: Bass and rockfish
Adaptations:
* Move by jet propulsion (water is forced out of it's funnel)
* Releases a cloud of ink when threatened
* Can change color to **CAMOUFLAGE** with surroundings.

Identifying features: Eight tentacles and big, round head

Octopus are the smartest invertebrates!

An octopus can fit through a hole as small as it's eyeball

Kelp Bass

Location: Rocky areas and around kelp
Food source: Small fish, crustaceans, octopus
Predators: Seals, humans
Adaptations:
* Are dark olive color on top and light colored on the bottom (**COUNTERSHADING**) to camoflage with kelp
* A solitary fish

Identifying features: Speckled olive color with square tail

A popular fish in restaurants

Is also known as a calico bass, rock bass, bull bass, kelp salmon, cabrilla, or dinner bass

Opaleye

Location: Swims in shallow water near rocky shorlines
Food source: Algae, small invertebrates and jellyfish
Predators: Other fish, sharks
Adaptations:
* Usually travel in large schools.
* Can tolerate a wide range of temperatures

Identifying features: Greenish body, usually with one yellow spot under **DORSAL FIN**

Opaleye get their name from
their pretty eye color

Painted Greenling

Location: Tide pools, subtidal rocky areas
Food source: Crustaceans, polychaetes, other invertebrates
Predators: Octopus, fish
Adaptations:
* Striped markings serve as camouflage
* Commonly found on strawberry anemones
* Often perch or "lay" on rocks

Identifying features: Long body, pointed snout, red bars

Usually smaller than 6 inches

Male Painted Greenlings get darker during breeding season

Garibaldi

Location: Shallow waters along rocky bottoms and kelp
Food source: Algae, invertebrates, sponges
Predators: Sharks, other fish eat it's eggs
Adaptations:

* Bright orange coloration
* Creating a thumping noise when disturbed
* Can change sex to keep genders balanced

Identifying features: Bright orange color, rounded fins

Are very protective of their nest containing eggs

California state fish!

Bat Ray

Location: Muddy, sandy or rocky bottoms
Food source: Molluscs, crustaceans, small fish
Predators: Sea lions, sharks
Adaptations:
* Teeth are flat for crushing and grinding prey
* Venomous spine in tail for protection
* Pectoral "wings" used for swimming

Identifying features: Two triangular pectoral fins and a long, thin tail

Bat Ray's teeth grow continuously

Bat Rays crush whole clams, then spit out the shells and eat the fleshy inside

2007 OIM Trip Schedule

❖June

Friday, June 6th 2:30 – 6:15 PM
Saturday, June 28th 1:00 – 4:30 PM

❖July

Wednesday, July 9th 11:15 – 2:00 PM
Thursday, July 10th 1:45 – 5:30 PM
Sunday, July 13th 12:45 – 4:30 PM
Tuesday, July 15th 12:45 – 4:30 PM

❖August

Thursday, Aug. 7th 12:45 – 4:30 PM

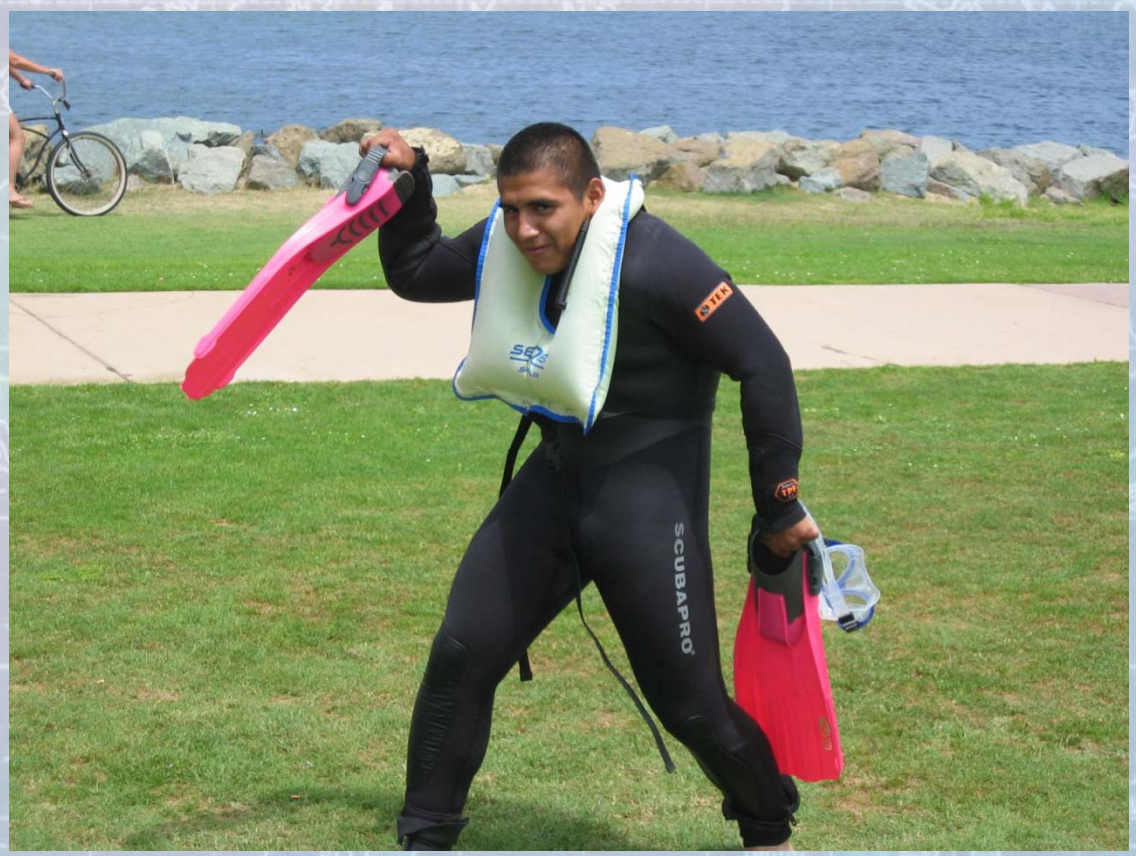
❖September

Saturday, Sept. 6th 12:45 – 4:30 PM
Saturday, Sept. 13th 12:45 – 4:30 PM
Saturday, Sept. 20th 12:45 – 4:30 PM
Saturday, Sept. 27th 12:45 – 4:30 PM

❖October

Wednesday, Oct. 1st 2:30 – 5:30 PM
Thursday, Oct 2nd 2:30 -5:30 PM

Questions?



Group Sessions

- **Break into groups**

Questions

- **Why have you chosen to volunteer for OIM?**
- **What do you hope to gain from volunteering?**
- **Have you had experience volunteering with other agencies/programs?**
- **What are your strengths & weaknesses for this program?**
- **What is your general availability (weekdays/weekends)?**