

SURFING 101



Where to go, what you need, and how to start in
Southern California

Sawyer B Fuller
Caltech Graduate Student, Bioengineering

What is surfing?

- Surfing is like walking on water
 - And doing it awesome

Why surf?

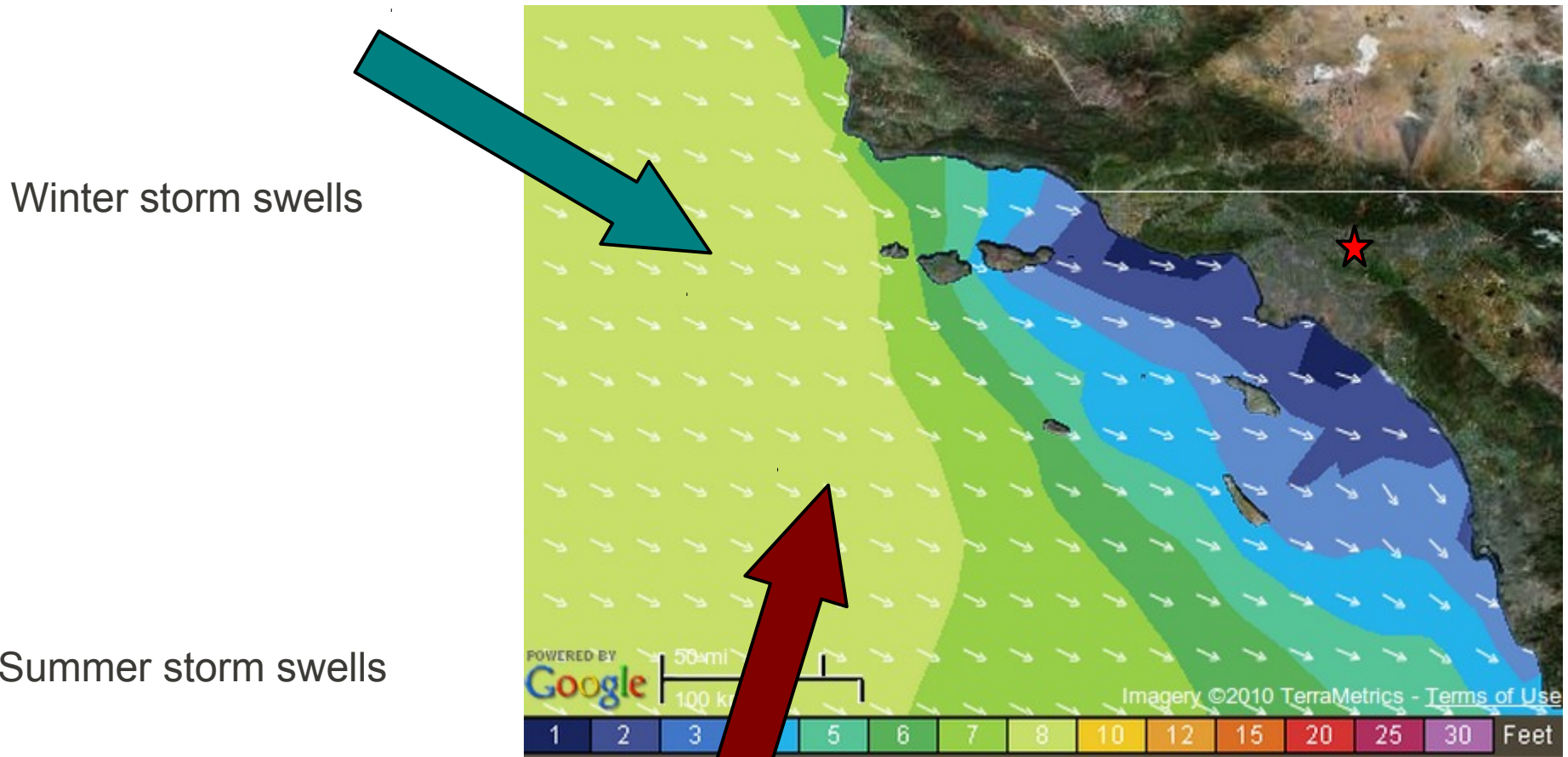
- Gets you in the water
- Good exercise
- Friends
- You get to say
“cowabunga!”



Outline

- About waves
- Boards and gear
- How to catch a wave and stand up
- Good surf spots
- Renting from the Caltech Surf Club

Southern California is a great place to learn to surf



from swellwatch.com January 5, 2011

swells

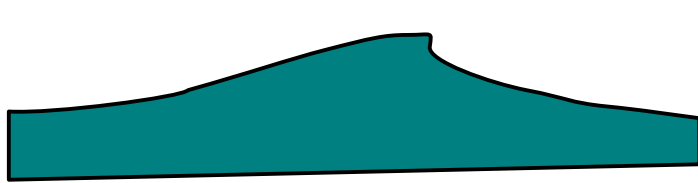
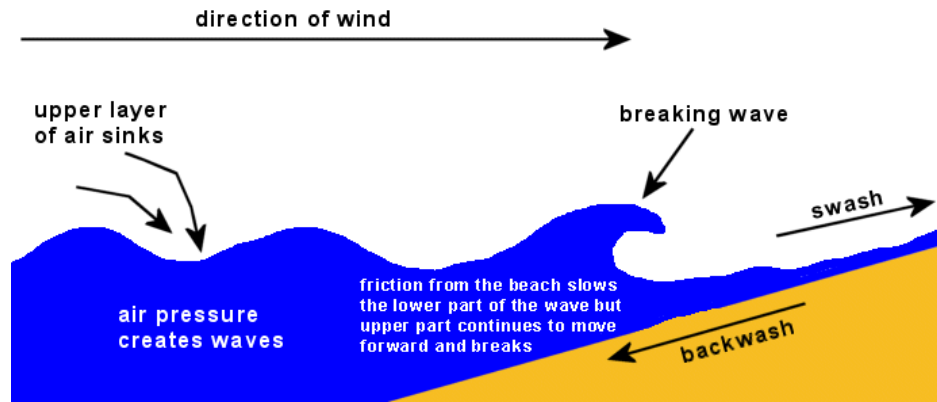


Wind swell
period < 10 seconds
yuck!



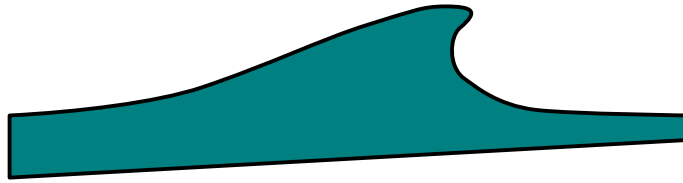
Ground swell
period > 15 seconds
cowabunga!

wave profile



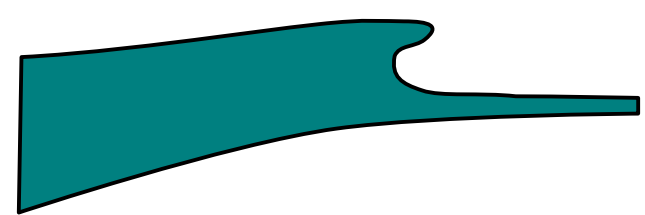
“crumbly”

San Onofre



“hollow”

Malibu Surfrider



“slab wave”

Teahupoo, Tahiti



wave breaking shape



beach break



point break

Bad news waves

- Slab wave + shore break: *avoid*



Santa monica,
venice, manhattan beach
are often like this

The worst



CALIFORNIA CLASSICS

THE WEDGE

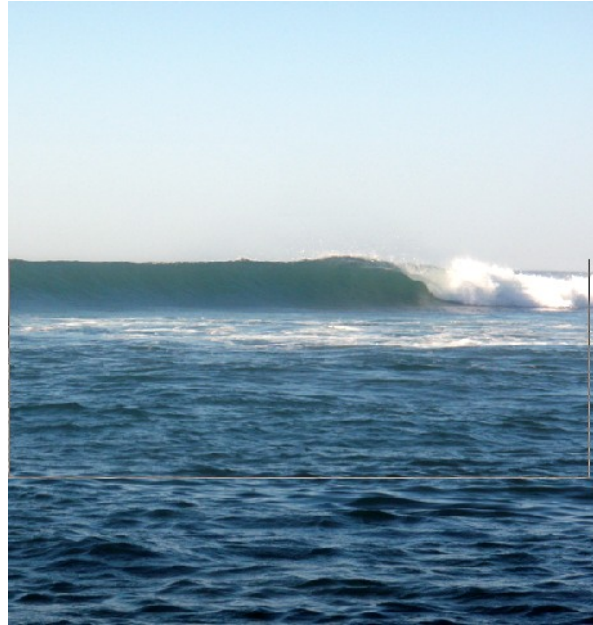
THE RESCUE FROM NEW ZEALAND - SEPTEMBER 1976

Levels of surfing

Beginning: *gentle* beach break
or point break



Intermediate: point break



Advanced: point break



movie



Board types

Beginner:
soft top longboard



Intermediate:
hard top longboard



Advanced:
shortboard



Aggro:
big-wave gun

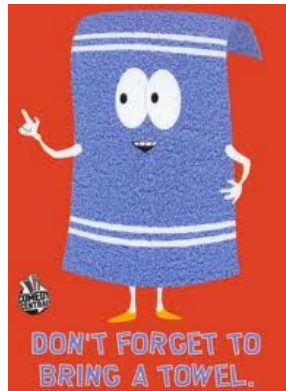


stand-up paddleboard

variants



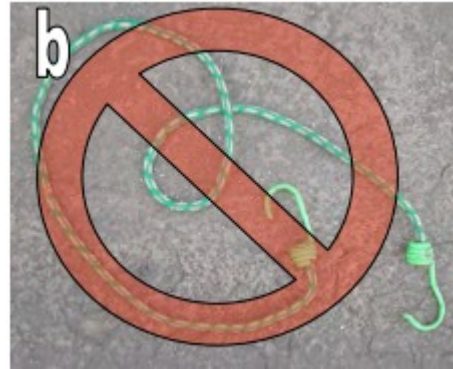
Gear



Tub/bag for wetsuit



Getting your boards to the beach



soft rack



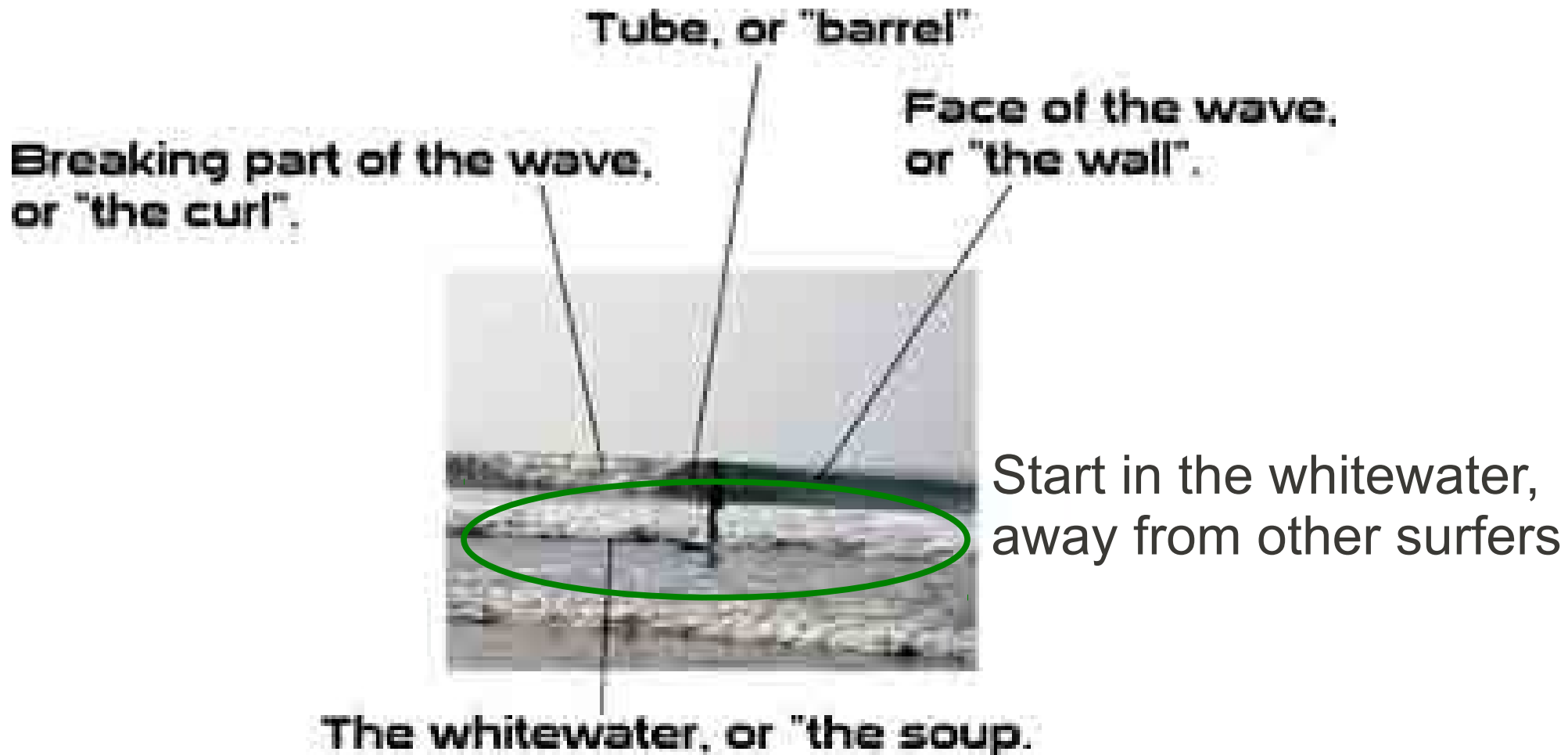
hard rack



goldilocks straps:
not too loose, not too tight, just right!



First “steps” in surfing



How to get out



How to catch your first wave



1. Turn and *square* to the wave *well before* it reaches you.



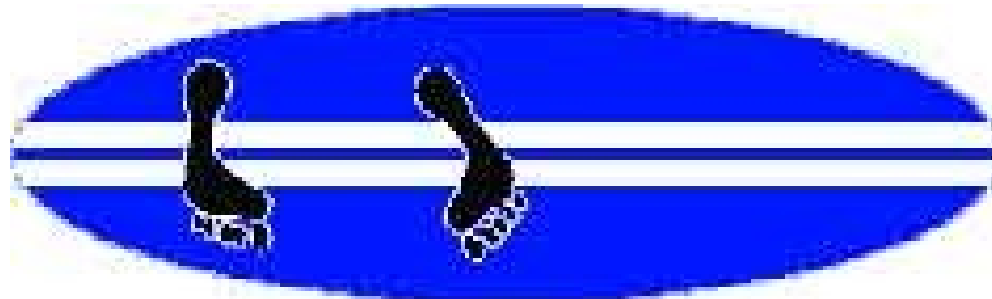
2. Paddle! When you feel the wave spit you out in front of it ...



3. Stand up!

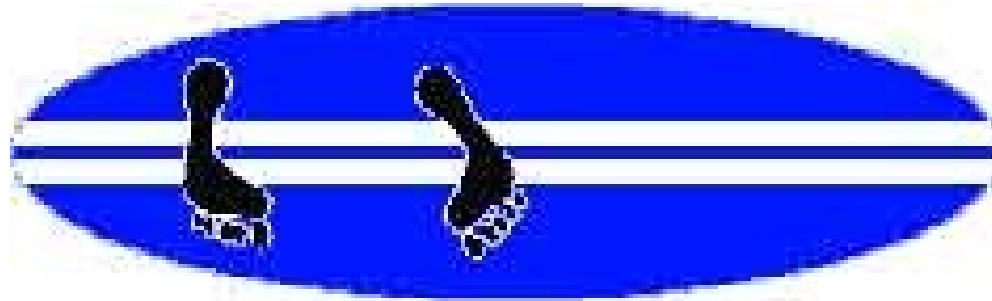
How to stand up

- Feet on centerline
- Practice on the beach first



More advanced: steering

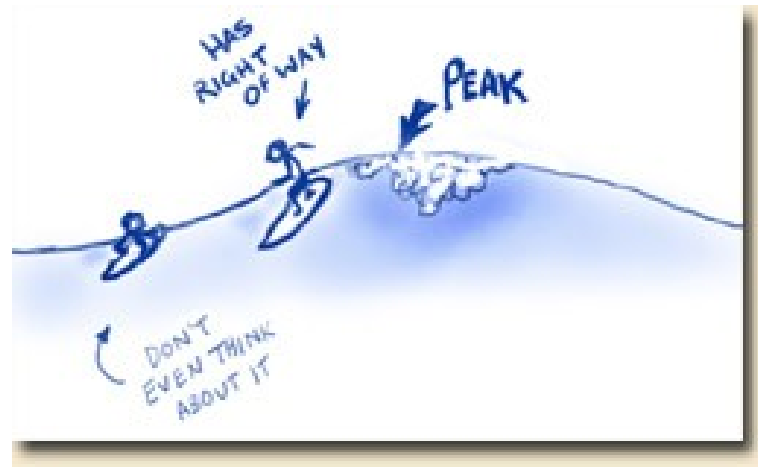
- Lean back to steer (so nose is out of the water)
- Lean forward to accelerate



- To edge hard, stand on that edge

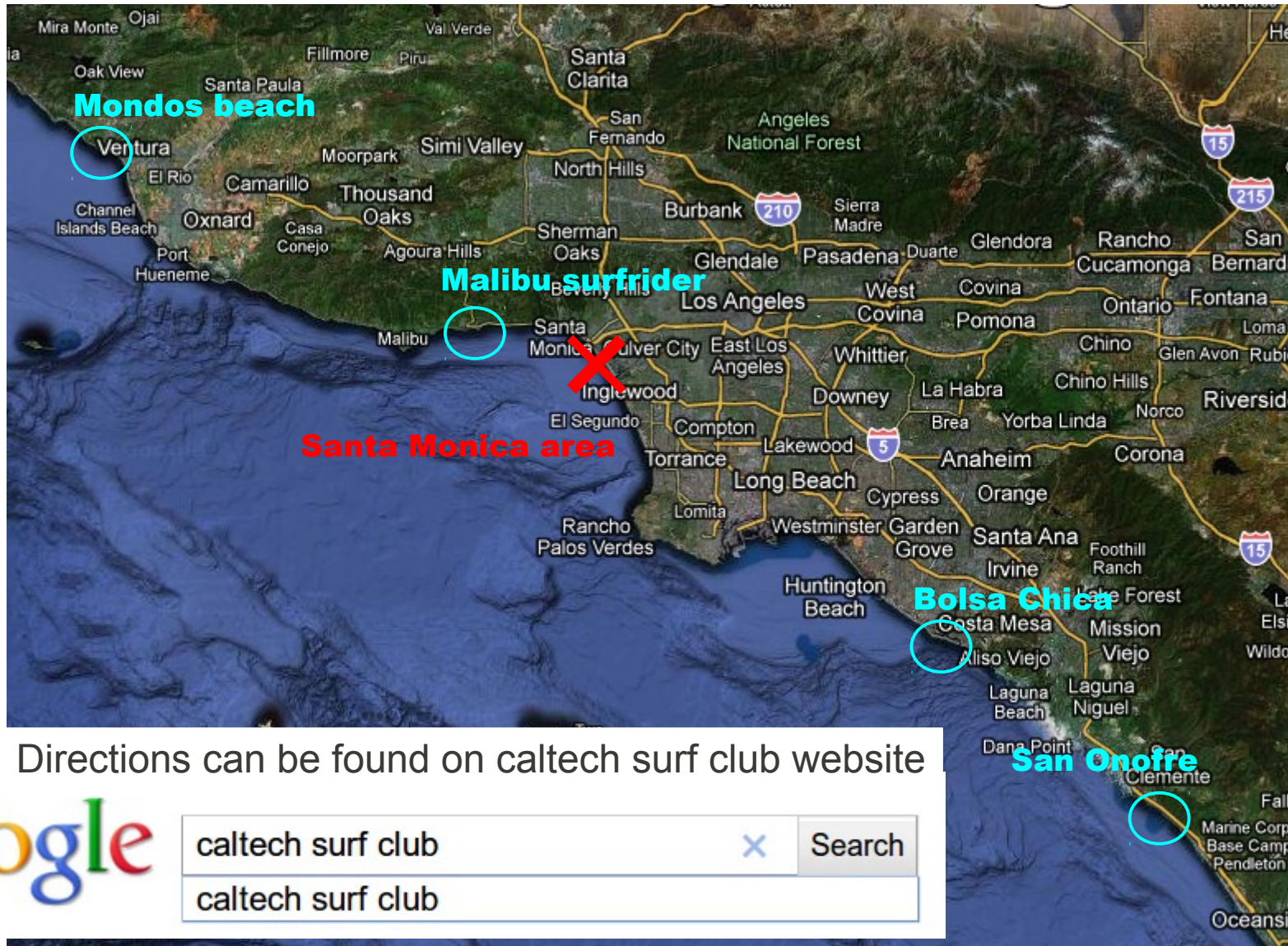
Words of wisdom

- Don't drop in on somebody else's wave



- Control your board
- Don't surf beyond your ability
- Cover your head with your arms when you come up
 - And open your eyes before inhaling
- Avoid surfing for 2-3 days after a big rainfall (nasty runoff)
- Best surf is at low tide, low wind

Where to surf



San Onofre



\$15/car park fee
1:15 drive but no traffic usually
bring a guitar and a grill and
spend the day



Malibu surfrider



NOT beginner friendly

Mondos



Surf club trip August 2010

Free, 1:30 away, beginner friendly

Bolsa chica



\$15, 1:00 away, beginner friendly

Renting from Caltech Surf Club

- \$10/board on weekend, \$5 weekday (cheap!)
 - Comes with a free wetsuit



- Also: soft racks, instructional DVDs



- Open to all Caltech students, alumni, staff, faculty and JPL employees
- Joining: sign up for mailing list, get a tour, get a key



caltech surf club



Search

caltech surf club

Misc

- Best way to start out is to go on a surf club trip!



- Buying a board? talk to Gaylord Campbell, Caltech's local shaper



SURFING 101



Where to go, what you need, and how to start in
Southern California

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I really started surfing at Caltech. Here's what I have learned while here.

What is surfing?

- Surfing is like walking on water
 - And doing it awesome

Why surf?

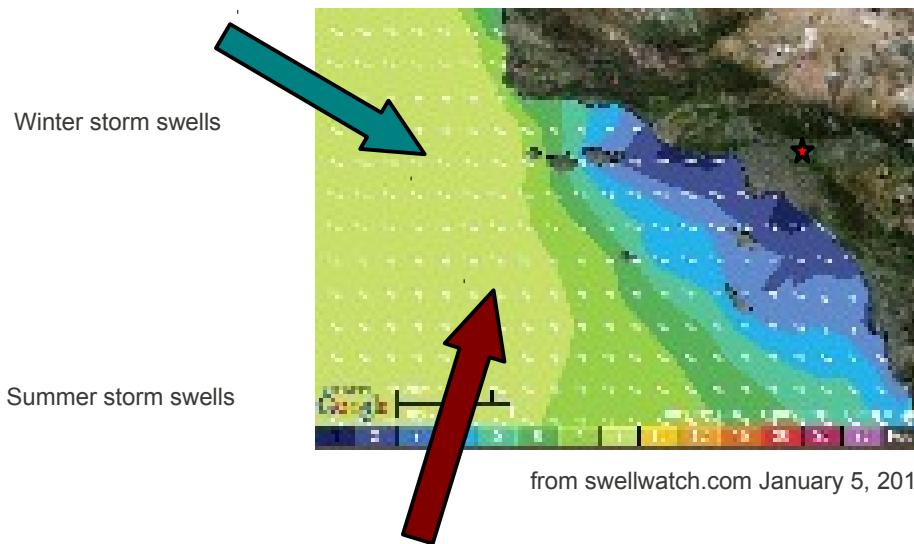
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Outline

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swells



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period < 10 seconds
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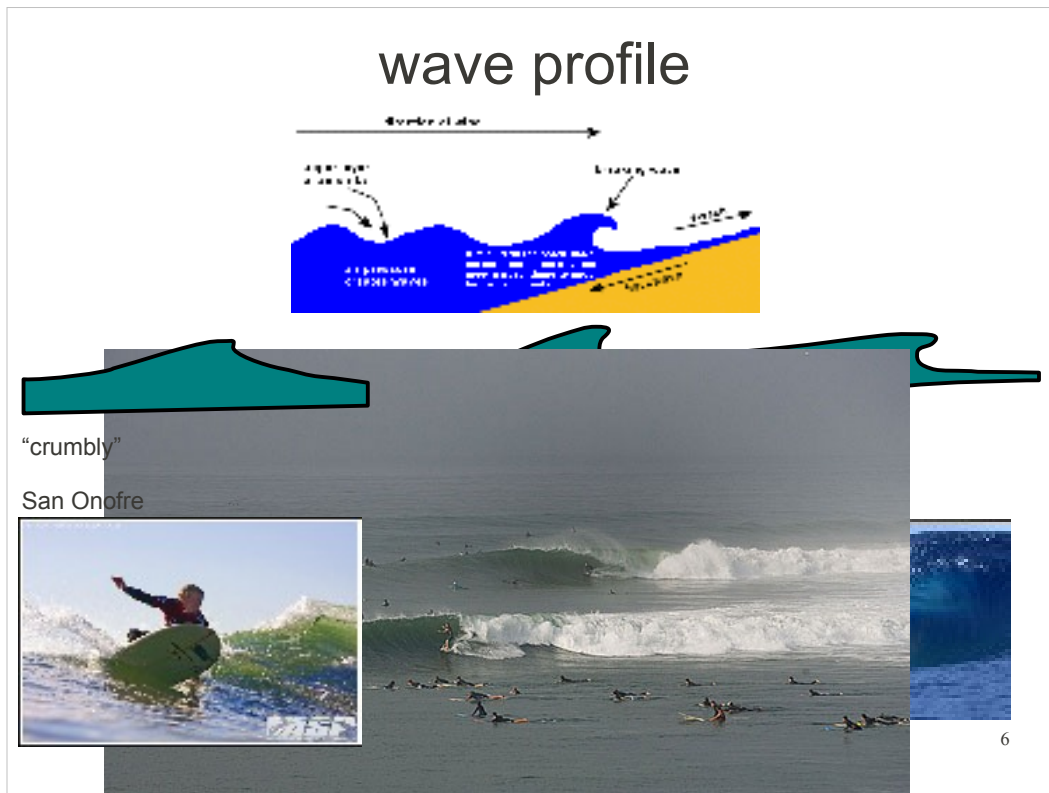


Ground swell
period > 15 seconds
cowabunga!

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Wind swell is choppy and disorganized. This is what it looks like where waves are formed. These waves have short periods. Not so nice to surf on because spray in your face, short rides, and bumpy so it's hard to control your board.

If on the other hand the wave-generating storm is hundreds of miles offshore but it's not windy at the shore, you get groundswell. These waves become organized as they move long distances as you can see from these perfect straight wavefronts. They are characterized by a longer period between crests. Prized by surfers!



Water moves in little circles as a wave passes. As it reaches shore, the bottom slows down and wave rears up. When shallow enough, top is still moving so fast that the wave breaks.

Crumbly waves with gentle bottom are most forgiving; hollow less-so but you can get in a barrel/tube; and slab waves are most fearsome. These waves never really rear up, they're more like open-ocean swells that suddenly reach land. Consequently, they move much faster and are “meaner.”

wave breaking shape



beach break



point break

Beach break waves tend to break all at once, point breaks peel, giving you a much longer ride.

Bad news waves

- Slab wave + shore break: *avoid*

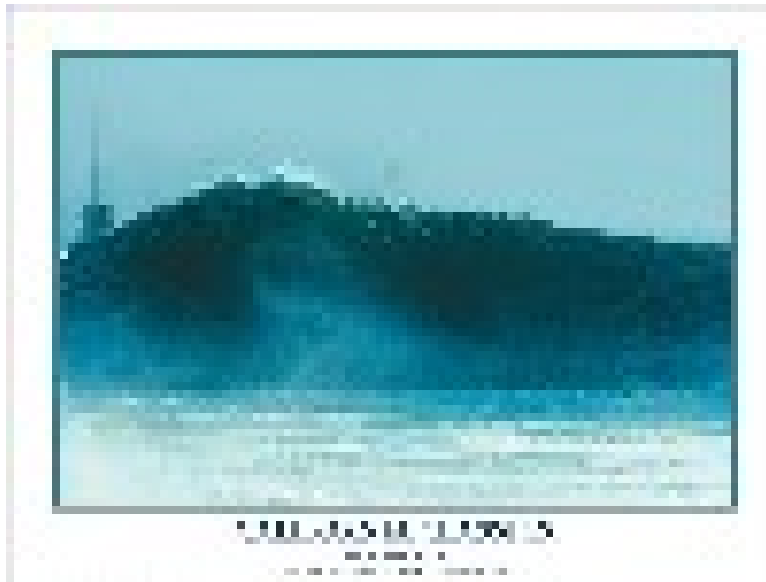


Santa monica,
venice, manhattan beach
are often like this

8

Steep beaches lead to waves breaking directly on the sand. You won't get a ride on these, but you might break your board or significantly hurt yourself. If there's one thing you take away from this talk, it's to avoid trying to surf on a steep beach like this.

The worst



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The wedge in Newport Beach rears up extra-high because it bounces off a jetty as it comes in.

Levels of surfing

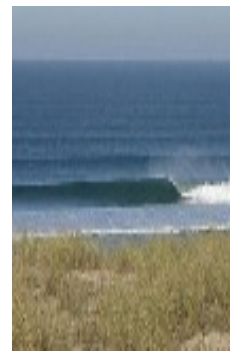
Beginning: *gentle* beach break
or point break



Intermediate: point break



Advanced: point break



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Beginners surf square to the wave and generally in whitewater. As they get better they can ride peeling waves and slightly bigger waves. Advanced go for still bigger, and barrels etc.

Wave heights measure height of face: knee high, waist high (3ft), head high (5-6ft), overhead, double-overhead, etc.

movie



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Vid of intermediate surfer and sets.

Waves come in wave packets or “sets” every 5 minutes, biggest every 20 minutes, and otherwise can be calm between sets.

Board types

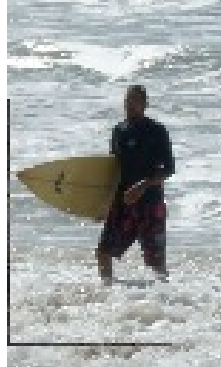
Beginner:
soft top longboard



Intermediate:
hard top longboard



Advanced:
shortboard



Aggro:
big-wave gun



stand-up paddleboard

Start with longboards – harder to work with in the water, but much more stable and easier to catch a wave on. Soft-tops are cheap (as little as \$100) and forgiving.

A hard top is lighter and more maneuverable.

Shortboards are still more maneuverable, but harder to catch waves with and you want waves taller than waist high for them. You basically have to be dropping into a breaking wave to catch it with a shortboard.

For big waves eg. double overhead, there are guns, sort of long narrow shortboards.

And stand-up paddleboards are huge so you can sit way outside and catch everything, but they're not as maneuverable.

variants



Riding a door is Kelly Slater, 10x world champion

Gear



Tub/bag for wetsuit



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Ca water is cold because it comes from Alaska, so you want a wetsuit. You can go without one, but you get cold, consequently tired, and your surfing starts to suck.

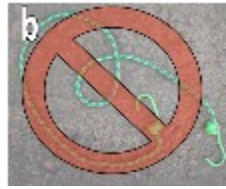
Most people use leashes, but they can catch on things and people, so they can put you in jeopardy too.

I use a tub to put wet wetsuits in my car when returning home; booties are nice for getting over rocks or super cold water.

Getting your boards to the beach



hard rack



soft rack



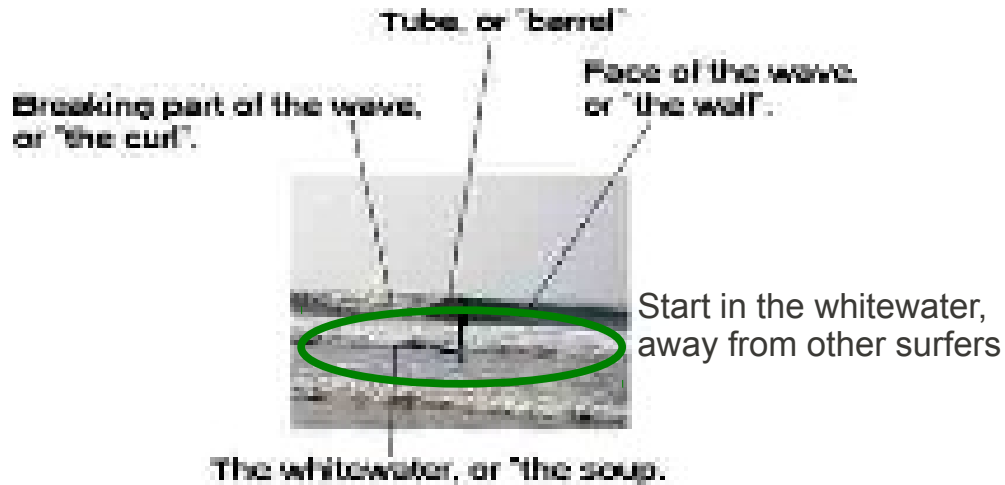
goldilocks straps:
not too loose, not too tight, just right!



Unless you have a van or big truck or camper, you're probably going to need to strap boards to your car. No bungee cords, they're stretchable, which won't work at highway speeds; use straps or if you must, ropes. Pipe insulation from the hardware store is good padding (and cheap, \$2ish for 6') for hard racks, cut it in half for spacers between boards, or use a soft rack if you don't have a hard rack (available from club, make sure to open car doors before strapping it down).

Straps should be tight enough that you can move the car when you push on the boards, but not so tight that you dent the rails. Just right!

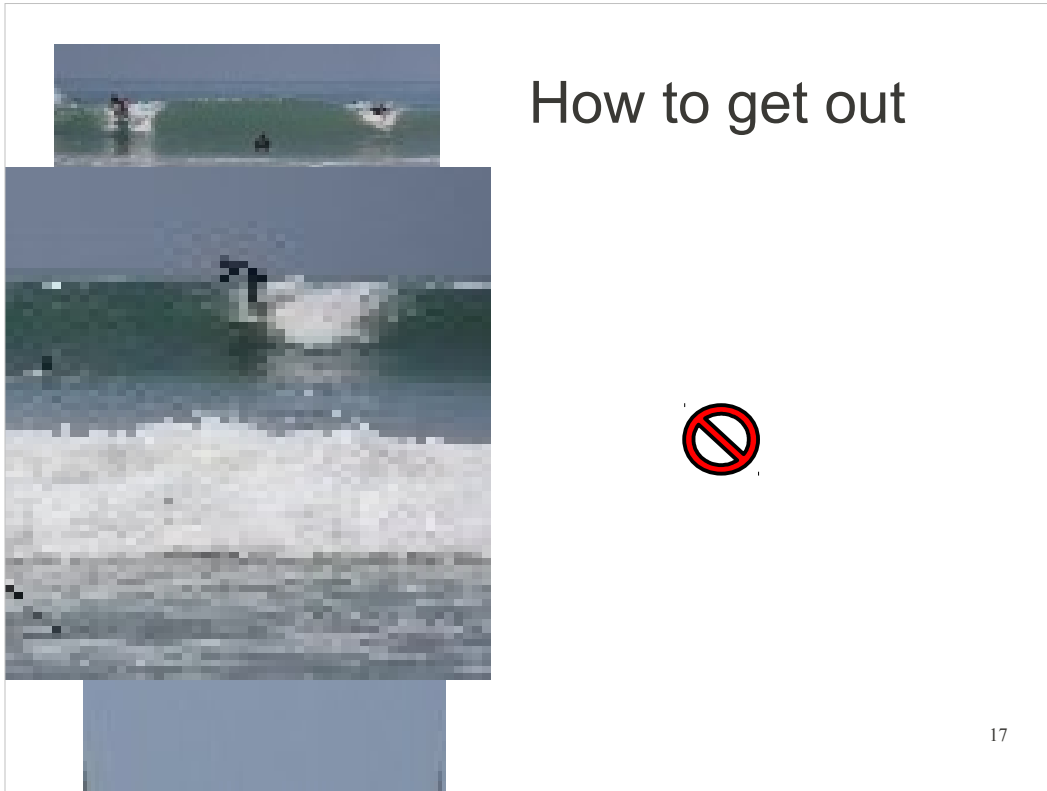
First “steps” in surfing



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Surfing is fun, but people often say it also looks much easier than it is from watching other people. It's also physically demanding, and takes persistence. Here are some tips to get going.

You want to start surfing in the whitewater, away from other surfers.



Try not to put the board between you and the oncoming waves; hold it to your side. Shuffle your feet as you go out to discourage stingrays, and then paddle on your board perpendicular to the waves. A board horizontal between you and oncoming waves will push into you painfully. For bigger waves, you can turtle duck, where you flip under your upside-down board to let the wave pass over you.

How to catch your first wave



1. Turn and **square** to the wave **well before** it reaches you.



2. Paddle! When you feel the wave spit you out in front of it ...



3. Stand up!

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Mistakes people make when starting out: not getting square. Not getting square well before the wave arrives. Not paddling enough. Standing up too soon.

When you get out to where you want to be, rest for a little bit while a few waves pass over you so that you are fresh to catch a wave.

Get square early and start paddling. When it catches you, it will spit you out in front of it and you will feel a lot of speed. Don't mistake that for the lesser bit of speed all waves give you as they pass over you, there is a big difference and you will be able to tell once you actually catch a wave. Only once you have caught it for sure, then you stand up.

How to stand up

- Feet on centerline
- Practice on the beach first



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Stand up in a smooth motion, bringing your forward foot forward. Practice on your board on the beach. The goal is to put your feet on the centerline.

More advanced: steering

- Lean back to steer (so nose is out of the water)
- Lean forward to accelerate



- To edge hard, stand on that edge

When you get a little more advanced, you will want to steer. Some guidelines.

Words of wisdom

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21

Surfing guidelines and etiquette so you dont get yelled at or worse.

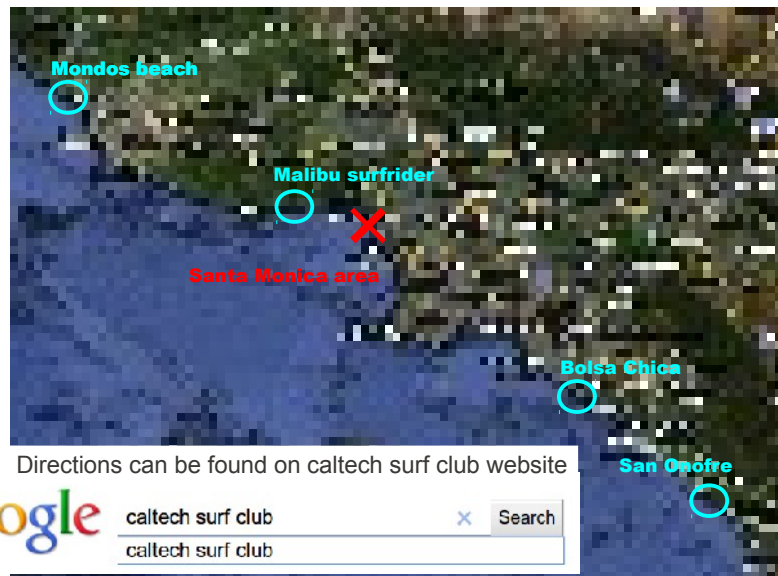
Person first on wave or closer to break has right of way.

Control your board so they dont end up running over it or into it.

If the waves are too big for your experience you have less chance of controlling your board so start on smaller ones. Avoid the crowded point breaks when you are just starting: pull back from the point. Big waves have strong currents; beware!

Misc tips: eyes before mouth when coming up, and cover your head to protect from your board. Avoid surfing after big rains, nasty bacteria from sewage and who knows what else. Best surf is at low tide and when low wind.

Where to surf



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Find directions to these places at surfclub website.
Santa monica area has steep beaches with slab waves breaking directly onto the sand, avoid!

San Onofre



\$15/car park fee
1:15 drive but no
bring a guitar and
spend the day



Great beginner+ spot, beginner friendly, friendly people in general who are really into surfer vibe. You can bring a bbq here.

urfrider



NOT beginner friendly

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One of the birthplaces of surfing, but really crowded, especially in summer.

Mondos



Surf club trip August 2010

Free, 1:30 away, beginner friendly

Bolsa chica



\$15, 1:00 away, beginner friendly

Other great beginner+ spots.

Renting from Caltech Surf Club

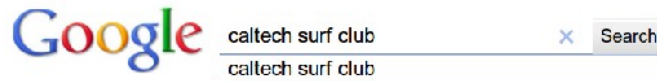
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- Joining: sign up for mailing list, get a tour, get a key



Misc

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- Buying a board? talk to Gaylord Campbell, Caltech's local shaper

Campbell
shapes & designs



Learn with other beginning surfers!