

Lessons from the Alligators: Why are plastic bottles bad for alligators

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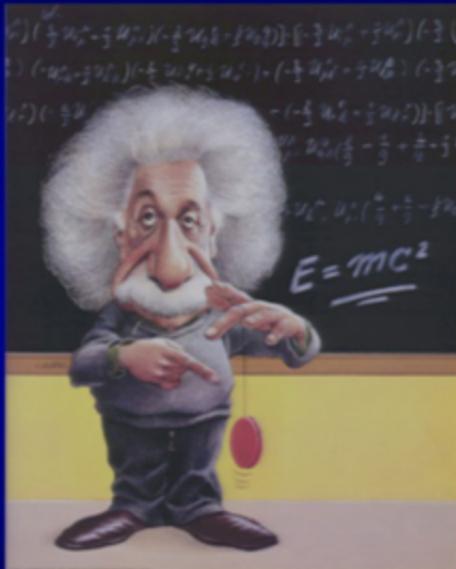
What is a scientist?



Detective



Adventurer



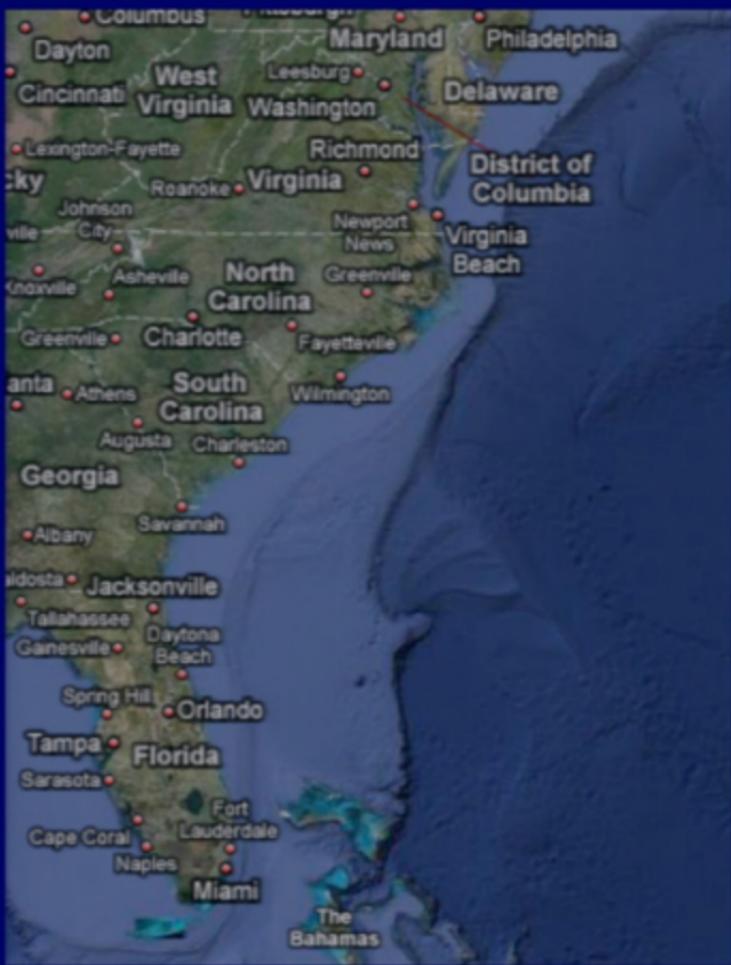
Artist



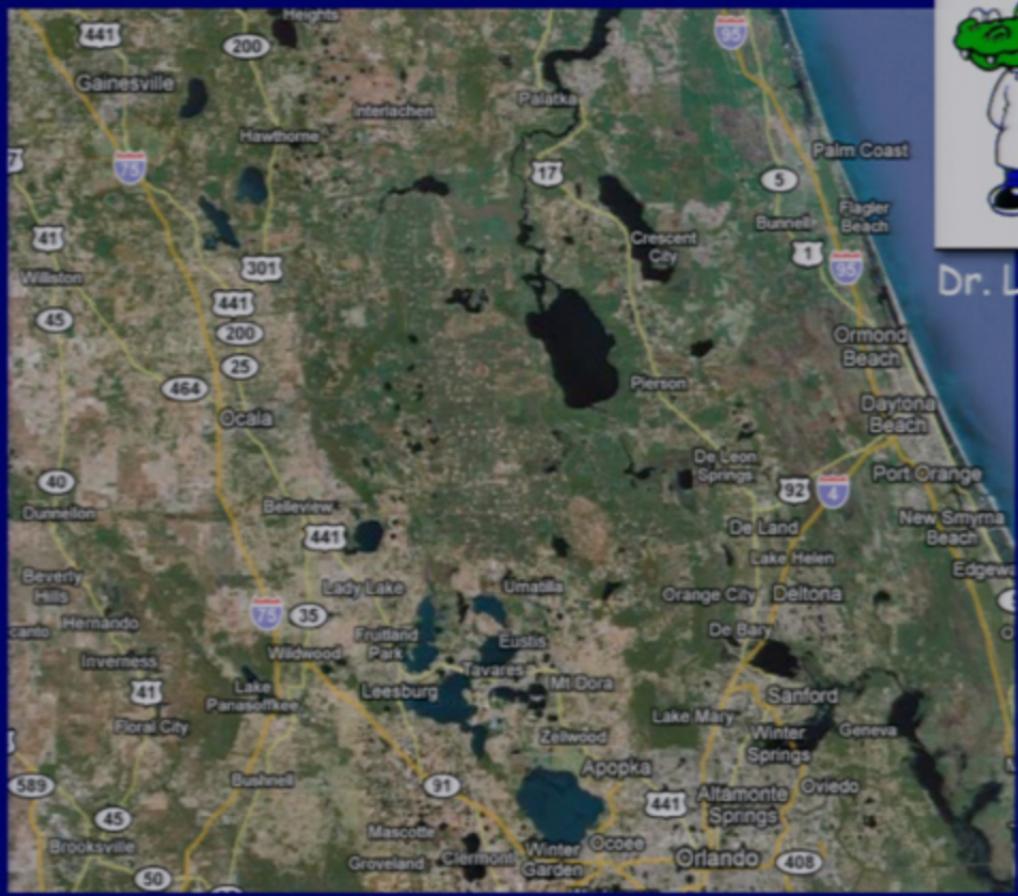
Story Teller

A Story in Three Parts





Dr. Lou, Ph.D.



Dr. Lou, Ph.D.

44 alligators - some big and some small





Scientific Puzzle

- Why are the alligator populations in many Florida lakes so small?













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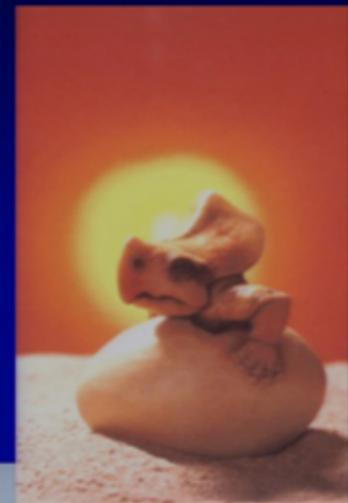


American alligator

- *Alligator mississippiensis*
- Alligator = Spanish - el lagarto
- Species history
 - > 2 million years
 - Alligators and Caimen related
 - Only American and Chinese alligators



Archosaurs



Range of American Alligator



Size



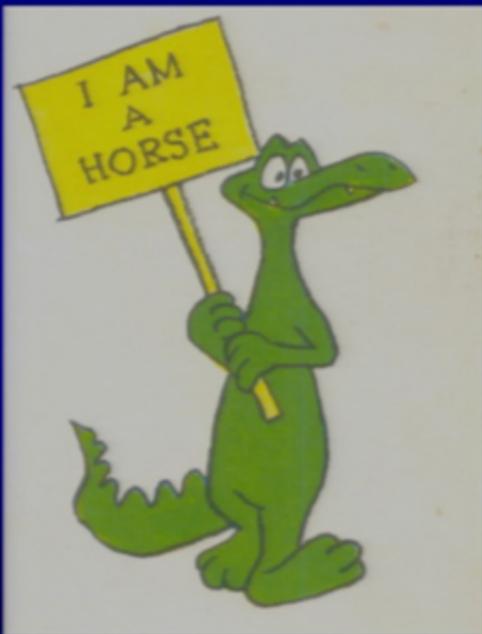
8 inches
20 centimeters



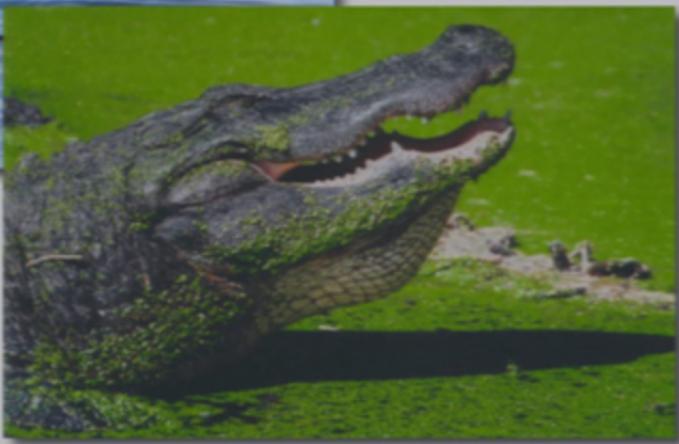
156 inches
13 ft or 4 meter



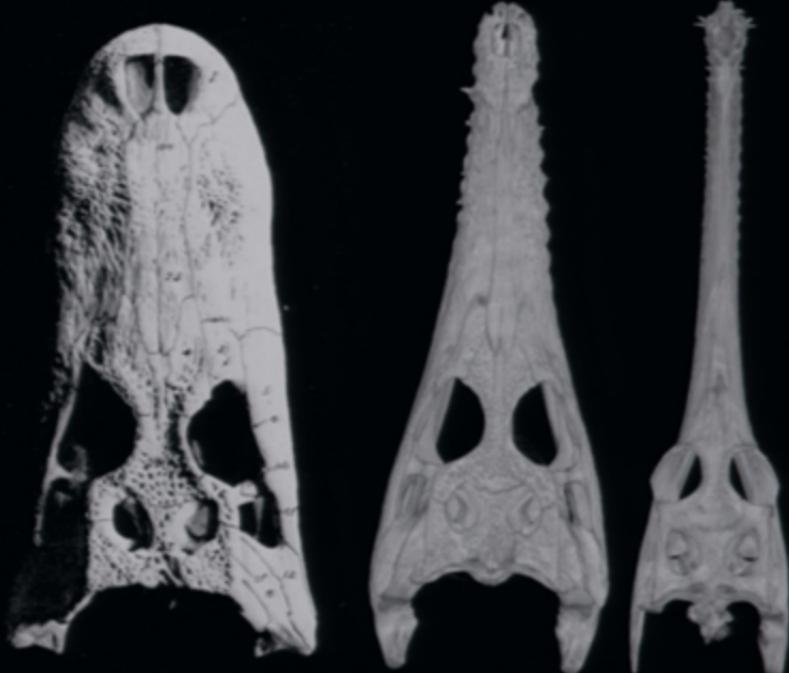
Can you identify a gator?



Gators are not green!



They have a round snout



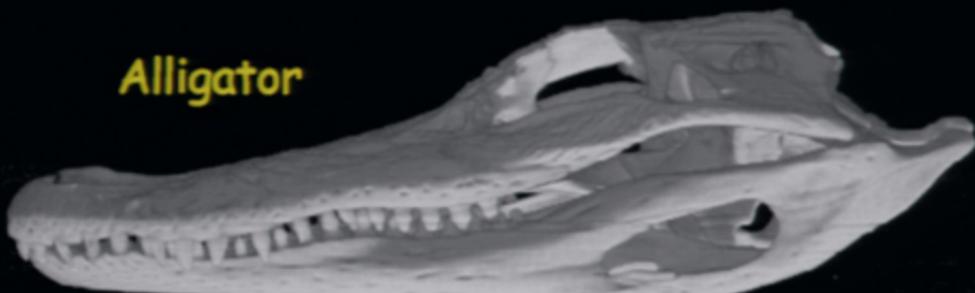
Alligator

Crocodile

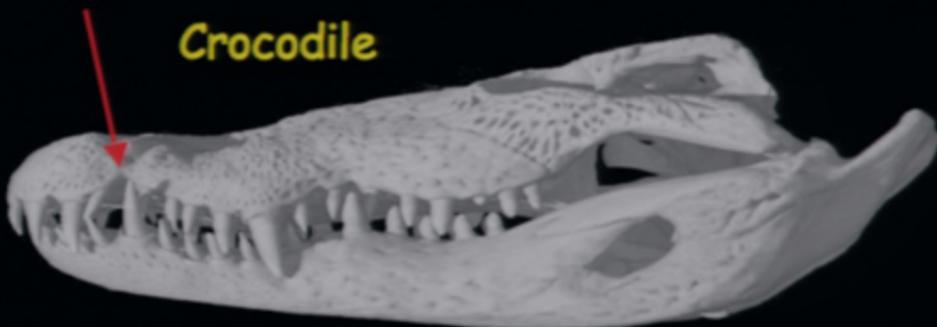
Gharial

Overbites and No Notches

Alligator



Crocodile



They do smile...



but not like a crocodile!



Is this an alligator?



Is this an alligator?



Is this an alligator?



Lygoe



Is this an alligator?

in alligators.

Johan Kleits chairs the Assembly Committee on Revenue and Taxation.

These bills right in the middle of every special interest lobby in the state. All of them want one thing: a tax break.

But Johan Kleits fights for us.

He's proposing Proposition 179 to close tax loopholes for corporations and use the money to pay for a school facilities tax on drugs.

And if they are going to be tax breaks, Johan Kleits is making sure average people get them.

179 also has a Rebuilding Tax Credit, a property tax relief conservation policy so the rock bottom tax loopholes won't benefit people in rural areas that don't have schools. And when the tax breaks were after minor public meetings - UNRCC and School Boardough, Johan stopped them.

Johan also pushes for life insurance policies. He forced trigger activates that have mandatory gene tests, machine guns, and bioterrorism anti-explosives laws.

And when the Children CT, 2000, started giving tax breaks to oil and gas, it was Johan Kleits who was able to get them to cut them off by property taxes.

Johan Kleits. Not afraid of the alligators.















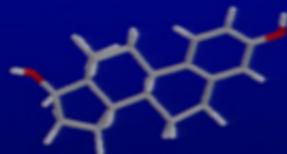
What did we find?



- Males had low testosterone
- Females had low estradiol



testosterone



estradiol



What does this mean?

- Low testosterone and estradiol means.....
 - unhealthy eggs!
 - Bad eggs = fewer baby alligators!









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7 Florida Lakes
50% embryonic mortality
80% early/20% late





4

Mom's food is important.

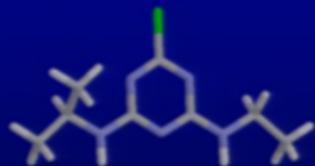


- LJG '07

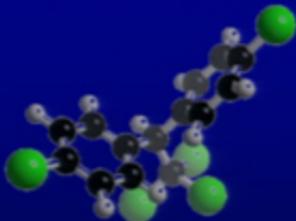


What did we find?

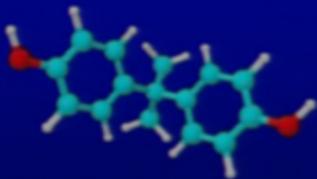
- Eggs had contaminants
 - Caused some eggs to die and make some baby alligators sick



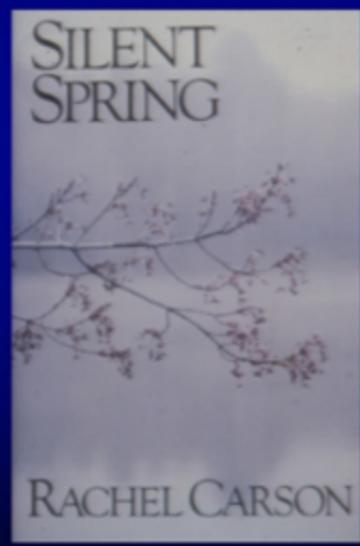
atrazine



ddt



Bisphenol A





SILENT SPRING



RACHEL CARSON



Give a Hoot - Don't Pollute





Who Pollutes?



We all do!



What pollutes our environment?



Oil



Drugs



Plastics



Pesticides



Fertilizer

Every time you use a chemical...
you put it in the environment



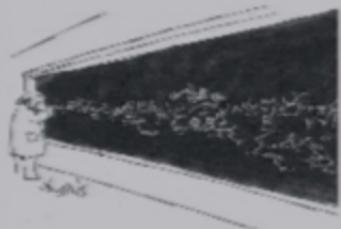
So....think before use



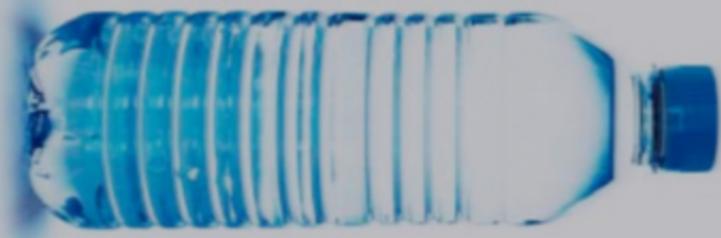
What pollutes our environment?



Plastic Bottles



Plastic Bottles

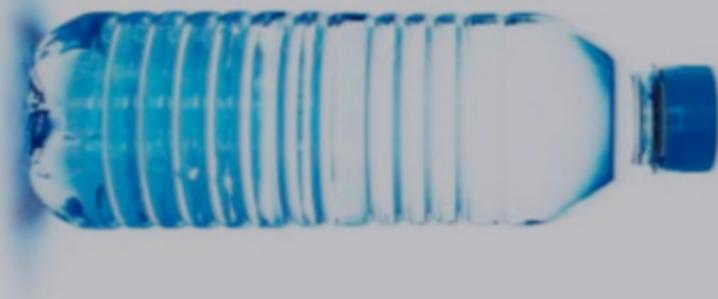


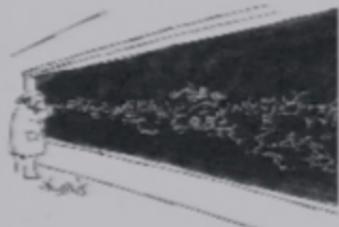


Plastic Bottles



- Americans use 2.5 million plastic bottles/ hour

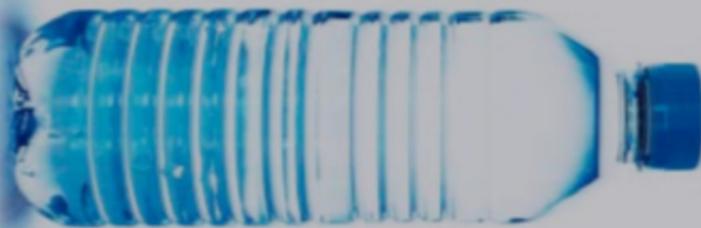




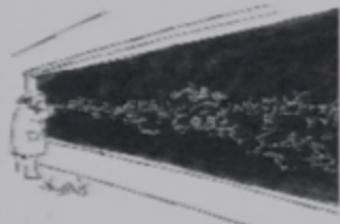
Plastic Bottles



- Americans use 2.5 million plastic bottles/ hour
- 8" bottle



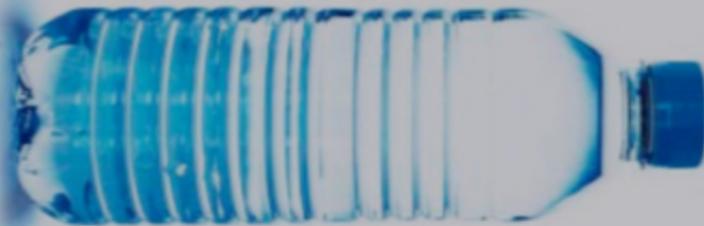
- 315.65 miles/hour or 7575.75 miles/day
- 7575 miles = 35 round trips between Blacksburg and Washington DC



Plastic Bottles



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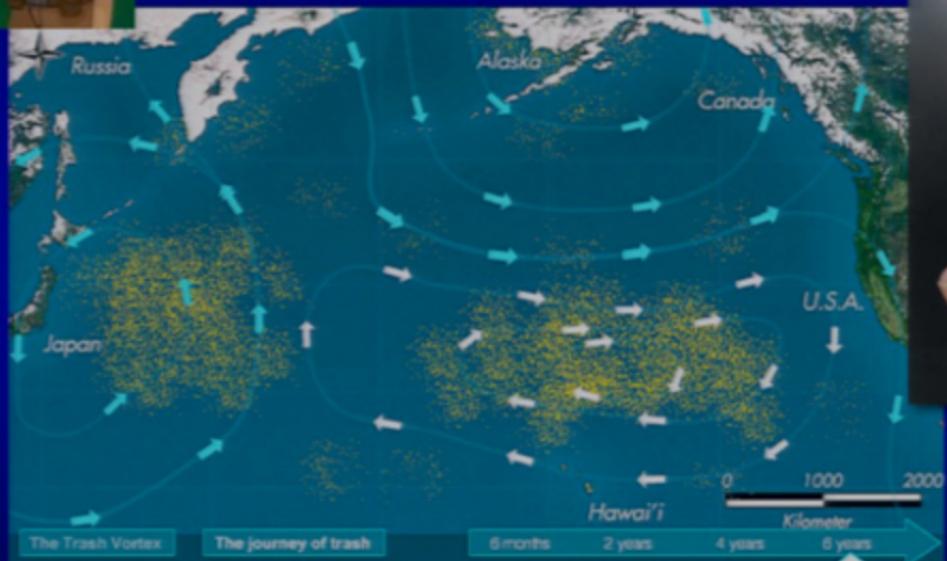
- Only 30% of plastic bottles are recycled

Why is this important?

- Plastics
 - #1 pollutant of the ocean
 - 100,000 marine animals are killed from ocean debris
 - ingestion (eating)
 - Entanglement
 - Plastic is non-biodegradable
 - takes approximately 450 years to decompose



Pacific Ocean Garbage Patch



The animation shows how trash (orange dots) entering the sea from land along the Pacific coast is caught by the gyre. On its way the trash is concentrated and eventually ends up in one of the two shown vortices. As a consequence, in these areas, the surface water contains six times more plastic than plankton biomass (dry weight).

What should you do?

- Each person should recycle 1 bottle a day.



- $400 \text{ kids} \times 1 \text{ bottle} \times 365 \text{ days} = 146000 \text{ bottles}$
or 18.43 miles of plastic
- or....

Or....4171 jackets



Or....4171 jackets



Or....4171 jackets



Or....4171 jackets



Or....4171 jackets



Or....4171 jackets



Or....4171 jackets



Or....4171 jackets



Or....4171 jackets



Or....4171 jackets



So...plastics and alligators??



So...plastics and alligators??



So...plastics and alligators??



So...plastics and alligators??



So...plastics and alligators??



Chemical Pollutant from Plastic

