

A Sea Turtle's Life

Introduction



South Carolina
Aquarium

Reptiles

- Crocodilians (23 species)
- Turtles (> 285 species)
- Snakes and Lizards (> 7200 Species)



Total of over 7300 reptile species in the world?



Reptile Characteristics

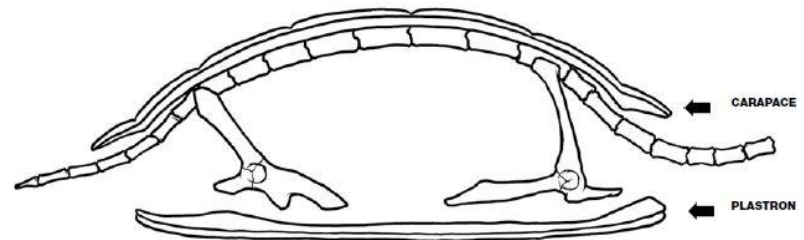
- Cold blooded (ectothermic)
- Lay eggs
- Breathe air with lungs
- Have scaly skin



Turtles



- Order Testudines
- Reptiles with hard, bony (or cartilaginous) shell developed from their ribs
- Shell used for protection
- Carapace – top shell
- Plastron – bottom shell
- Live in many different environments
 - > Land
 - > Fresh water
 - > Brackish water (mixture of fresh and salt)
 - > Salt water



Turtles



Land Turtles

- Claws
- More rounded or dome shaped carapace
- Most don't get very large (exception – Galapagos tortoises)
- Go inside shell for protection
- No salt glands



Fresh and Brackish Water Turtles

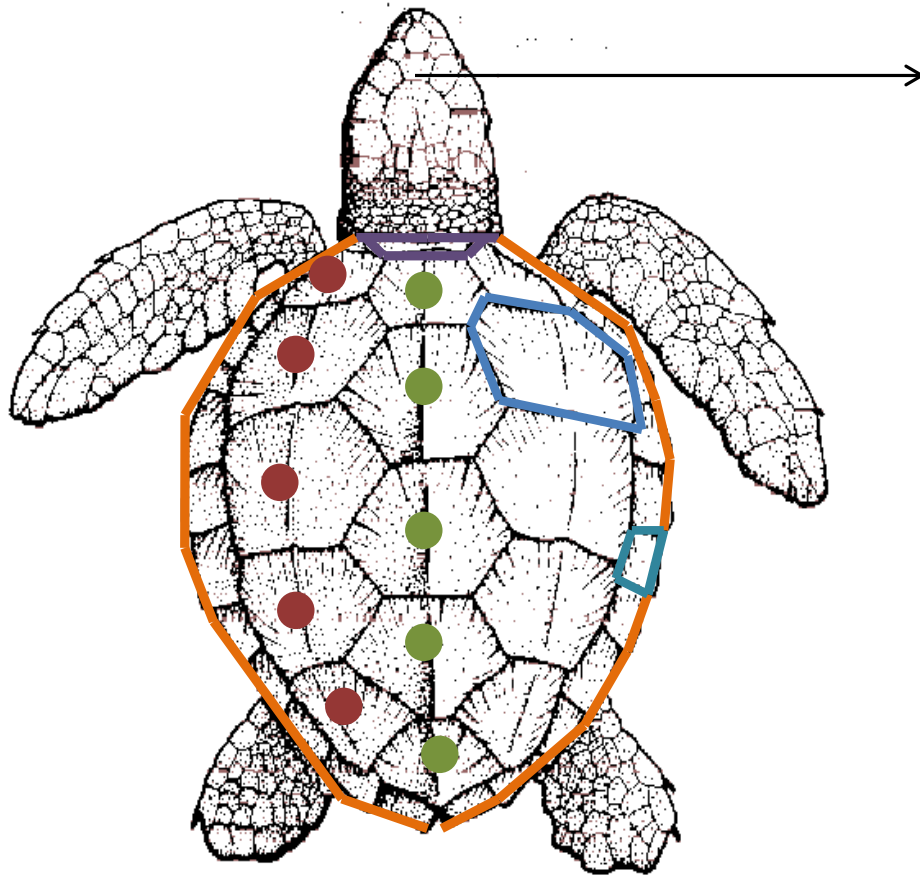
- Webbed feet and claws
- Slightly rounded shell
- Don't get very large
- Go inside shell for protection
- No salt glands



Sea Turtles

- Flippers (some with claws)
- Slightly rounded shell
- Get very large
- Cannot go inside shell for protection (due to large pectoral muscles)
- Salt glands

Sea Turtle External Anatomy



Carapace – top shell

Plastron – bottom shell (not shown)

Scutes – individual shell sections

Prefrontal scale/s – scale/s between eyes, sometimes paired

Nuchal scute – scute directly behind head and neck

Vertebral scutes – center row of scutes

Marginal scute – smaller scutes surrounding entire carapace

Costal scutes – row of scutes between marginal and vertebral, on each side of carapace

Flippers (4)

Head

Eyes

Tail (not shown in picture)

Sea Turtles (7 species)

- Flatback
- Green
- Hawksbill
- Kemp's Ridley
- Leatherback
- Loggerhead
- Olive Ridley

Flatback Sea Turtle (*Natator depressus*)

- Australia – tropical waters close to shore
- Flat carapace
- Gray to pale green in color
- 35 inch carapace
- Carnivorous – jellies, soft inverts
- Conservation - unknown



Green Sea Turtle (*Chelonia mydas*)

- Live in subtropical and tropical water (between 30° N and 30° S latitude)
- Olive brown to black carapace, very beautiful pattern
- 40 inch carapace
- 200-500 lbs
- Largest sea turtle with hard shell
- Herbivorous – sea grasses, sea weeds and algae
- Conservation – endangered globally, threatened in US (fisheries, egg harvesting, human interaction, disease)



Hawksbill Sea Turtle (*Chelonia mydas*)

- Live globally in tropical waters
- Tortoiseshell pattern on carapace with brown, red, black and orange
- Named for their hawk shaped curved beak
- 25-35 inch carapace
- 100-150 lbs
- Primarily eat sponges, but also invertebrates
- Conservation – critically endangered (overharvesting, hunting)



Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)

- Gulf of Mexico and Southeast US
- Olive grey to grey with yellow plastron
- 24-28 inch carapace both in length and width
- 75-100 lbs
- Feed on crabs, shrimp, snails, fish and jellies
- Conservation – the most endangered sea turtle due to egg poaching and fisheries



Leatherback Sea Turtle (*Dermochelys coriacea*)

- Found globally – can live in very cold temperatures
- Leathery carapace (not hard) with 7 ridges running down the length
- Brown to black with spots of pink, white or blue
- Largest sea turtle species
- Can dive very deep (3900 feet) because of leathery shell
- Up to 9 feet in length
- Up to 2000 lbs
- Primarily feed on jellies – cusp on mouth for piercing
- Conservation – critically endangered (fisheries and egg harvesting)



Loggerhead Sea Turtle (*Caretta caretta*)

- Temperate waters globally – usually near shore
- Reddish brown with white carapace, yellow plastron
- 30-42 inches
- 200-400 lbs
- Eat hard shelled prey (crabs, snails) as well as jellies, corals, urchins and sponges
- Conservation – endangered (egg harvesting, fisheries, artificial lights on nesting beaches, pollution)



Olive Ridley Sea Turtle (*Lepidochelys olivacea*)

- Tropical waters of Pacific, Indian and South Atlantic oceans)
- Olive grey to grey
- 24-28 inches both in length and width
- 75-100 lbs
- Feed on shrimp, crabs, urchins, barnacles, corals and jellies
- Conservation – endangered (fisheries, egg harvesting, oil spills and pollution)



South Carolina Sea Turtles

- Can you remember from previous slides which 4 species live off the coast of South Carolina?

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Loggerhead



Green

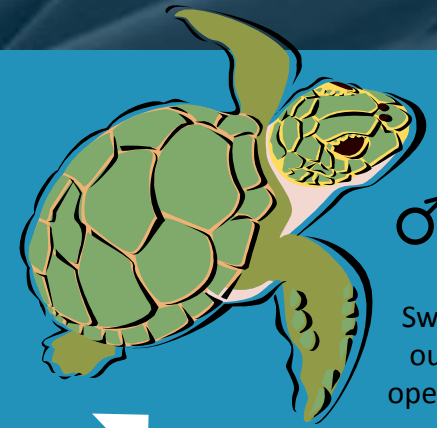
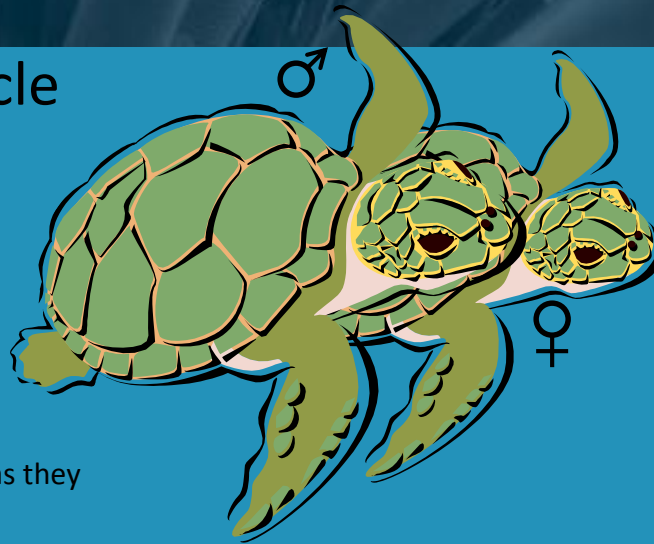
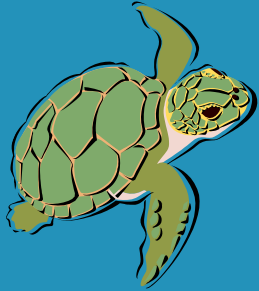


Kemp's Ridley

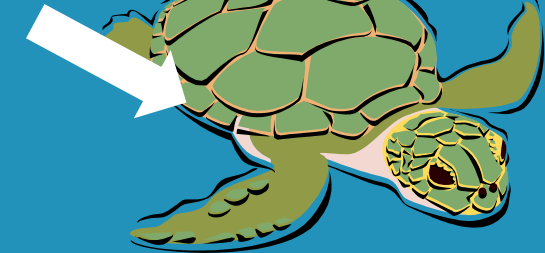


Leatherback

Sea Turtle Life Cycle



Males
Swim back out to the open ocean

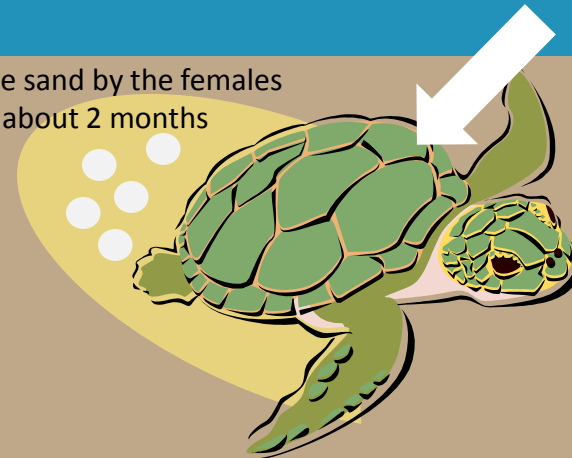


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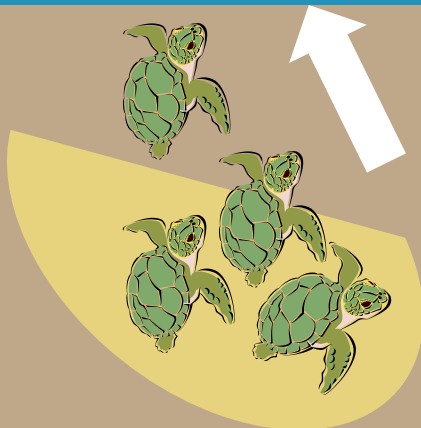
Females
Stay in coastal waters for several weeks, returning to the beaches to lay their eggs before returning to the open ocean



Eggs
Are buried in the sand by the females and hatch after about 2 months



Hatchlings
Hatch after eggs have been incubating for about 2 months; Head out to the ocean



Juveniles (0-5 yrs old)
Sea turtles live in the Sargasso Sea as they continue growing and maturing (see next slide)



Sub-Adults (5-25 yrs old)
Sea turtles live exclusively in the open ocean as they continue growing and maturing



Sargasso Sea

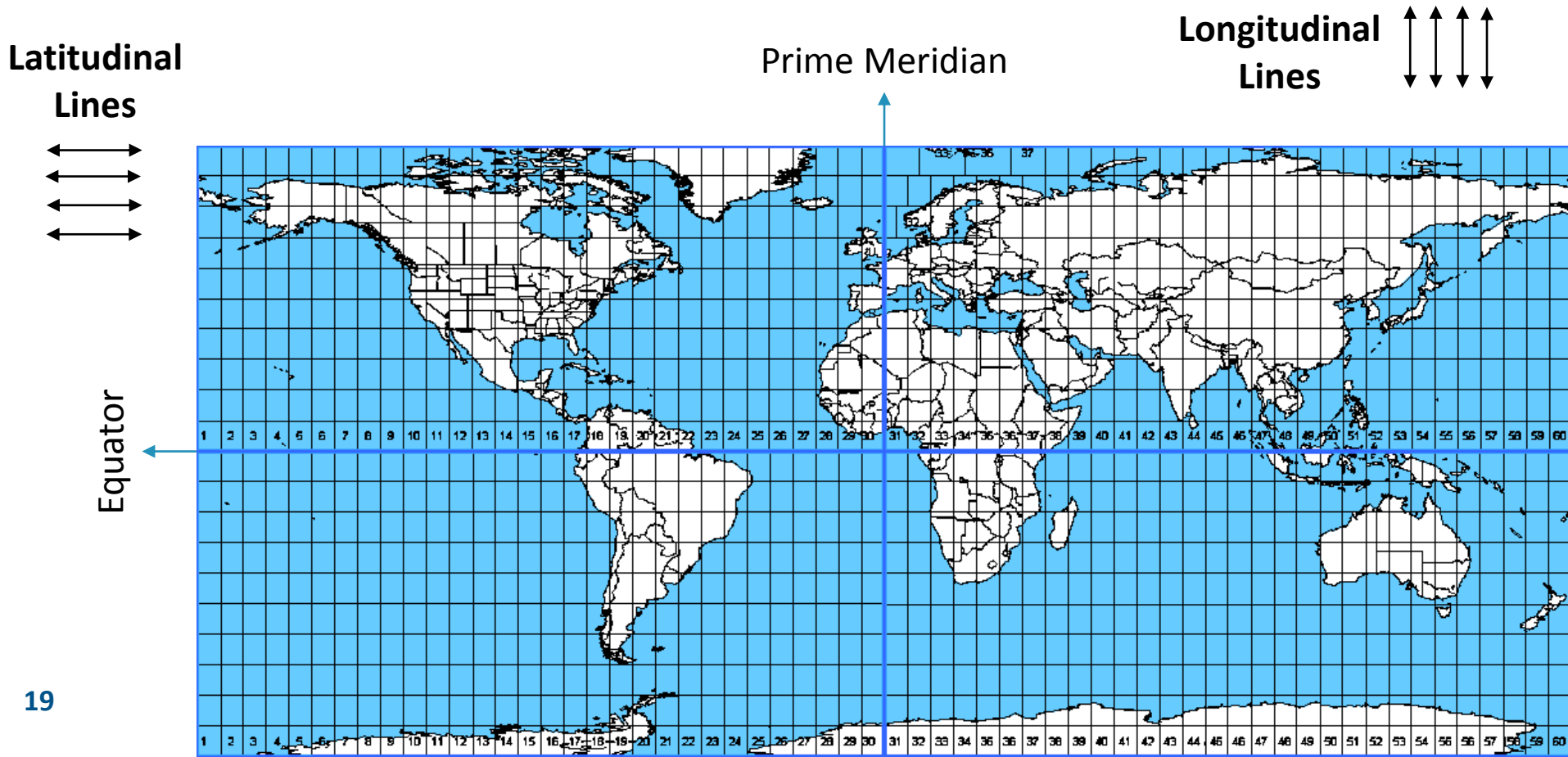
The Sargasso Sea is located in the Atlantic Ocean and covered in sargasso seaweed which provides shelter and food for many animals, including sea turtles. Look close at the above picture to see a Sargassum fish hiding within the Sargassum seaweed.



Latitude and Longitude of the World

Latitude – a point on the earth north or south of the equator

Longitude – a point on the earth east or west of the prime meridian

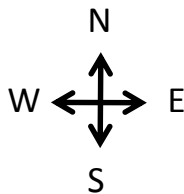
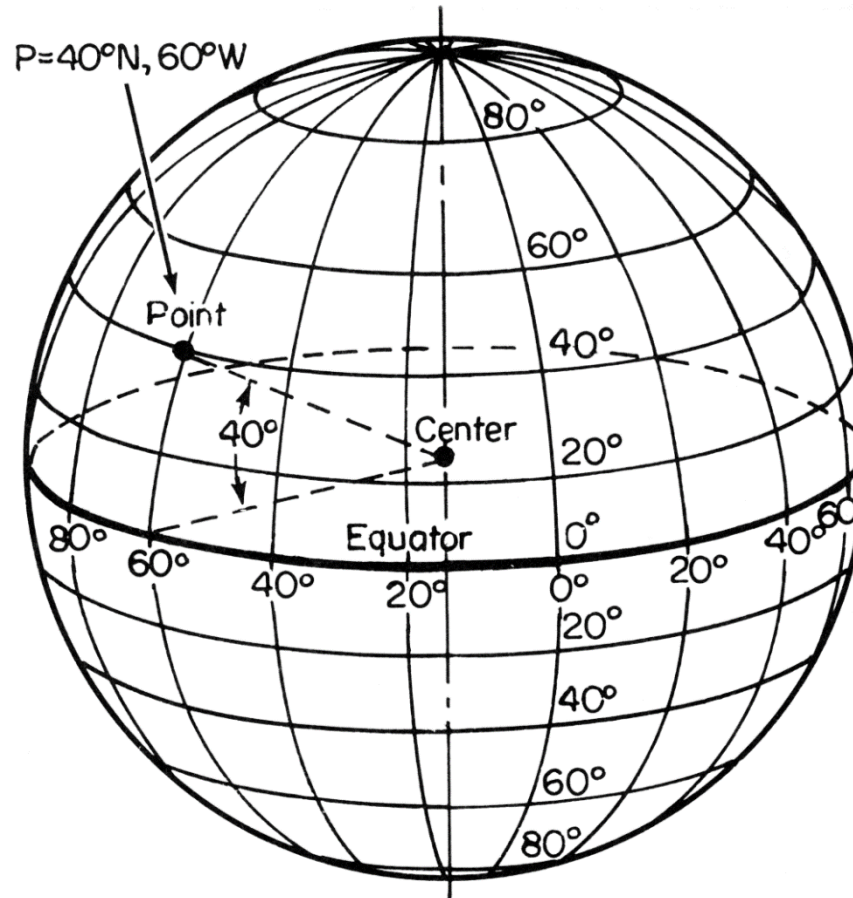


Latitude and Longitude Examples

Example

Point :
(Lat.) 40° North
(Long.) 60° West

Written as:
 $40^{\circ}\text{N}, 60^{\circ}\text{W}$



Try these

1. $20^{\circ}\text{N}, 40^{\circ}\text{W}$
2. $40^{\circ}\text{S}, 40^{\circ}\text{E}$
3. $80^{\circ}\text{S}, 20^{\circ}\text{W}$