

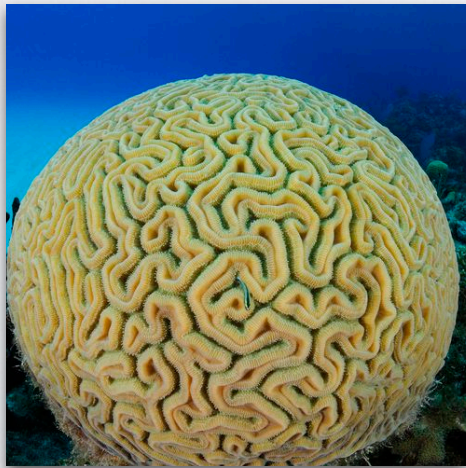
JELLYFISH

What are jellyfish and their characteristics?



JELLYFISH

- Cnidaria [cnidarians] - diverse group of animals that are believed to be from a single common ancestor that had stinging cells



Corals



Sea Anemones



Jellyfish

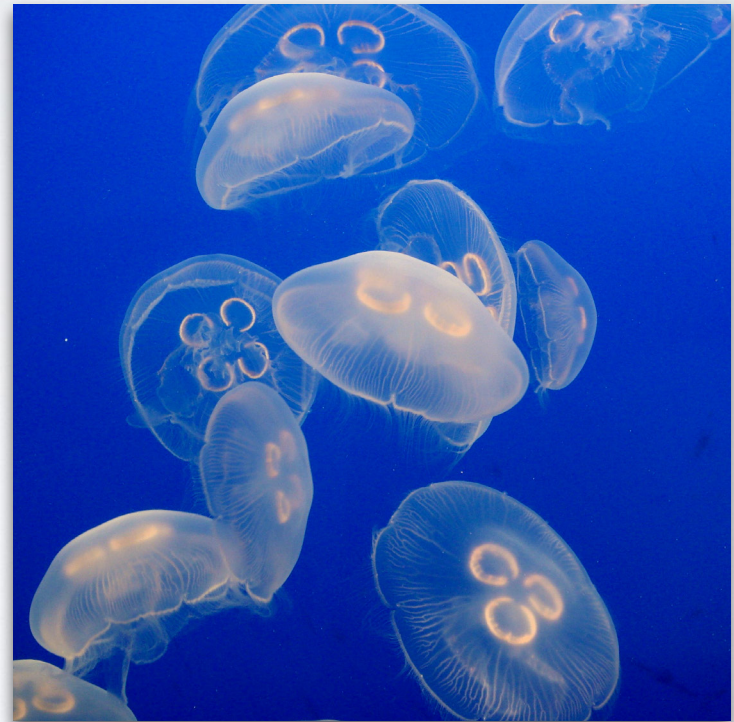
JELLYFISH

- Jellyfish - a free-swimming organism with a jellylike bell that is typically transparent and has stinging tentacles around the edge



JELLYFISH

- Characteristics:
 - Not fish
 - No spine
 - Radial symmetry with a ring of tentacles around a mouth



JELLYFISH

- Characteristics: [continued]
 - Simple nervous system with no specific nerve pathways
 - Nerve network of receptor cells that when one part is stimulated the whole animal responds



JELLYFISH

- Classification: [continued]
 - Medusa - umbrella-shaped structure with hanging tentacles that is composed of two membranes:
 - Epidermis - outer membrane
 - Gastrodermis - stomach skin
 - Mesogleas - low density layer between the two membranes that allow a jellyfish to float

JELLYFISH

- Locomotion [movement]:
 - Can contract the medusa to pulsate through the water
 - Primarily use the winds and tides to move



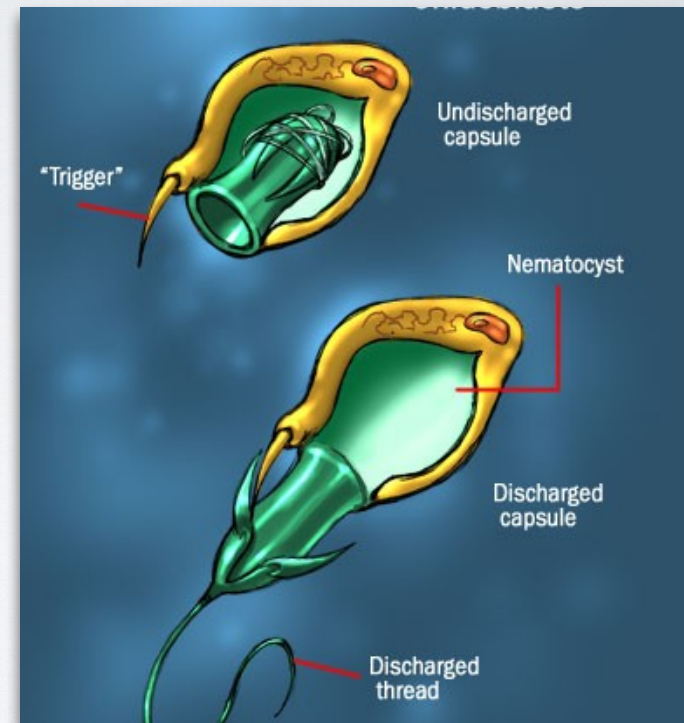
JELLYFISH

- Respiration:
 - Occurs through diffusion of oxygen through membranes
 - Emits CO_2 [waste gas] over the entire jellyfish surface



JELLYFISH

- Feeding:
 - Tentacles contain stinging cells called cnidoblasts
 - Cnidoblasts contain a coiled thread with a barb on the end called a nematocyst
 - This contains a paralyzing toxin





Jellyfish Sting

JELLYFISH

- Feeding: [continued]
 - Constantly replacing hundreds of nemoblasts
 - Once the prey is paralyzed the tentacles bring the prey to the mouth located in the center of the medusa



CORALS

- Fish caught in tentacles

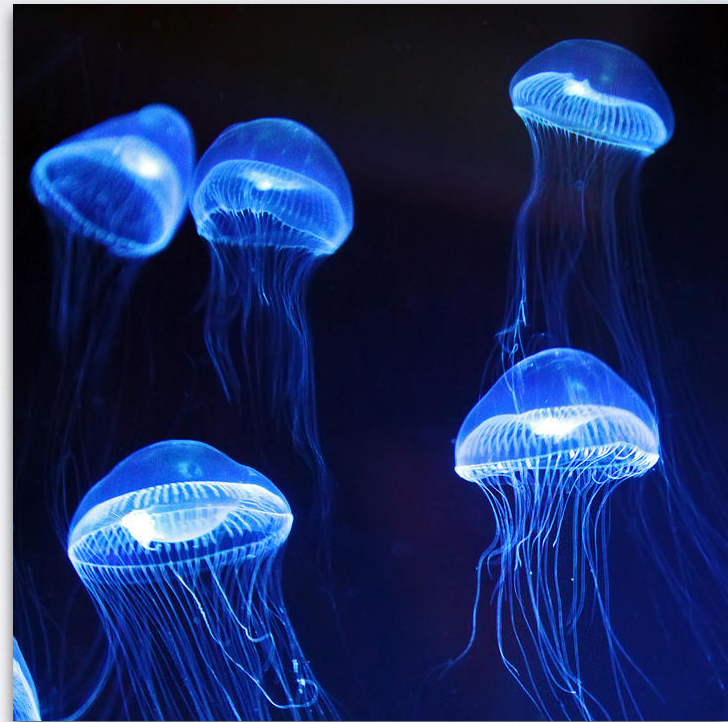




Ouch... Stupid Box Jellyfish!

JELLYFISH

- Digestion:
 - Occurs in a sac like digestive cavity
 - Waste products are discharged through the mouth



JELLYFISH

- Reproduction:
 - Separate sexes and can reproduce sexually and asexually
 - Ovaries and testes are organized in a four-leaf clover pattern in the medusa

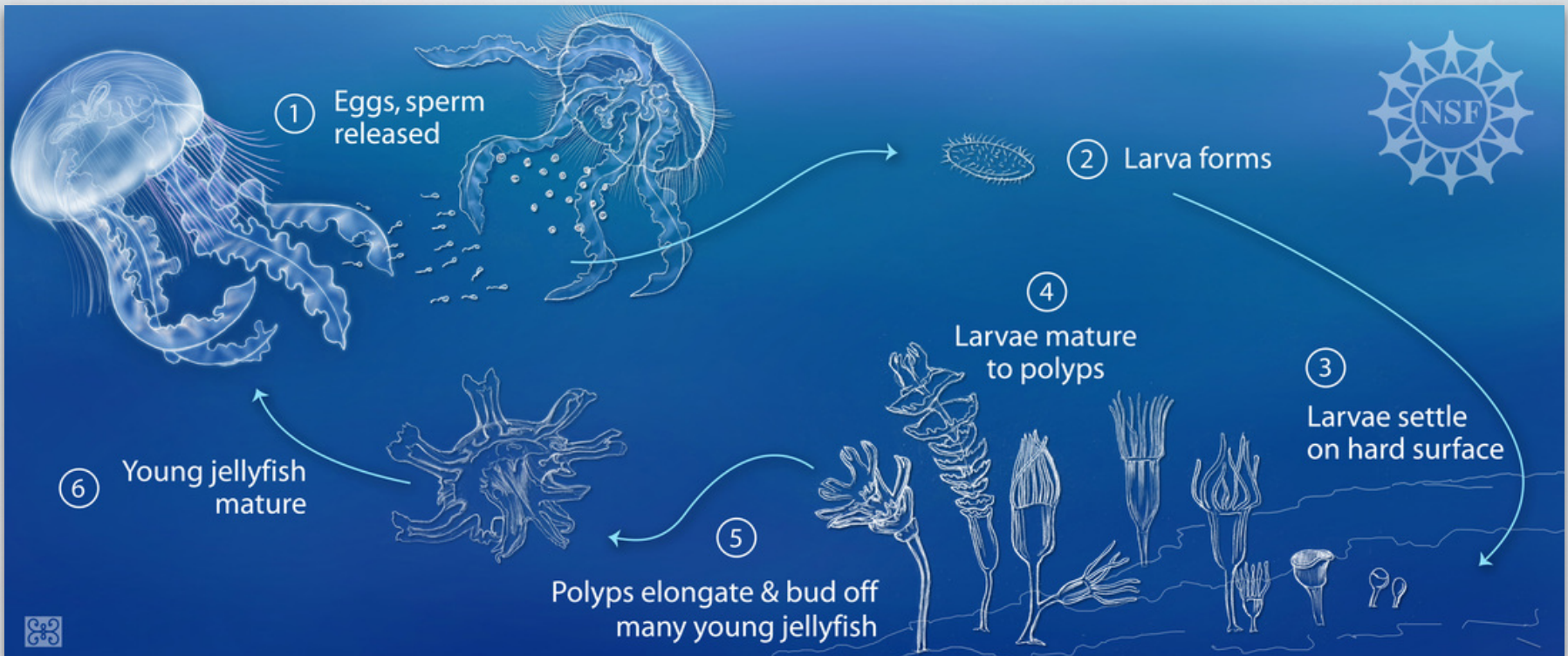


Jellyfish Egg

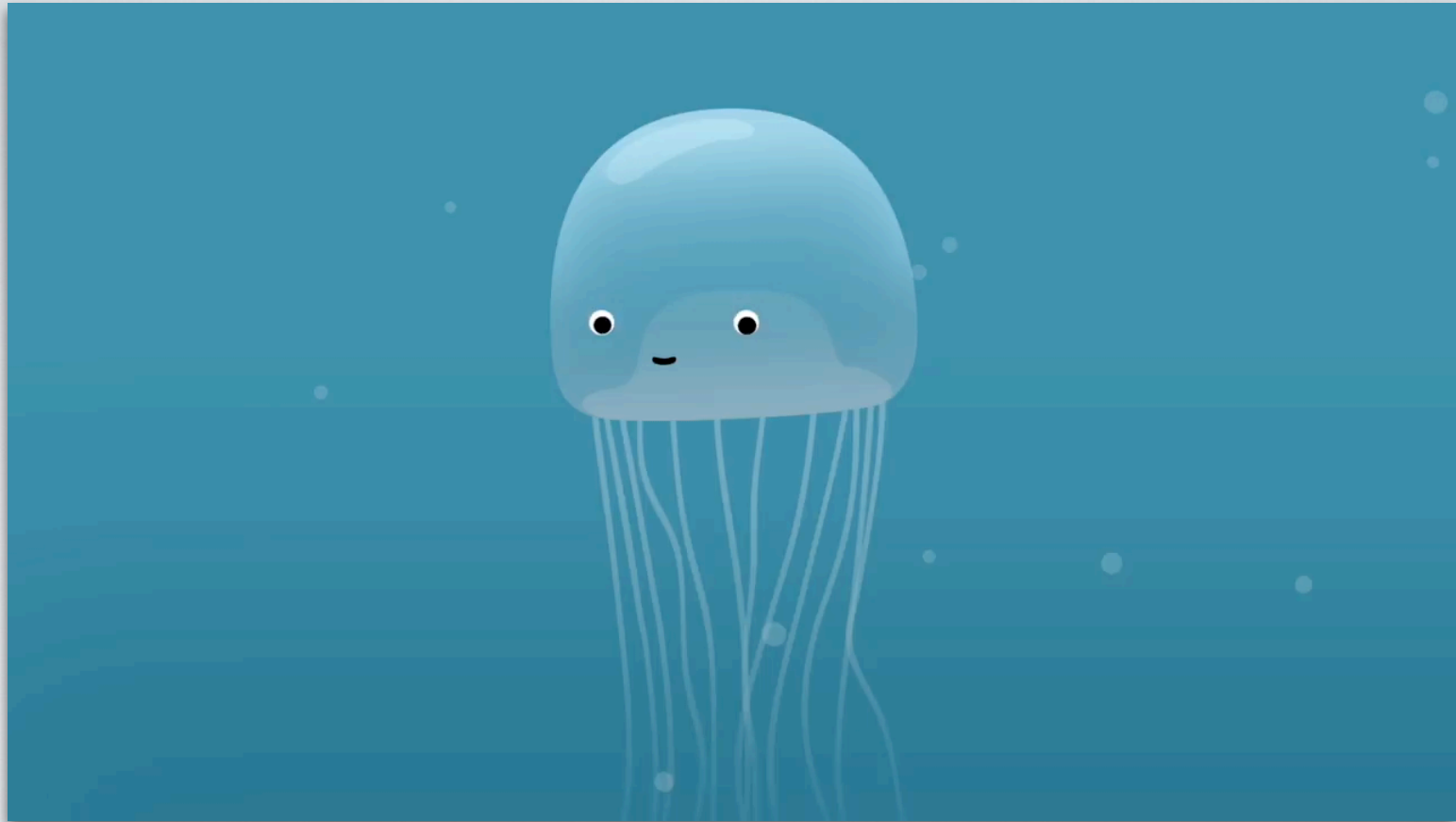
JELLYFISH

- Reproduction: [continued]
 - Some species release eggs and sperm into the water





Life Cycle of a Jellyfish



How Does a Jellyfish Sting?