**LUNGE**

**EXAMPLE:**

**FIN WHALE**

**START:** 10 FT (1ST MINUTE)

2ND STAGE: \( \sim 800 \text{ FT} \)

ONCE AT DEPTH, THEY OPEN THEIR MOUTH

3RD STAGE: GROOVES IN BLUBBER EXPAND

4TH STAGE: MOUTH FULLY OPEN, CAUSES DRAG AND DECELERATION

5TH STAGE: MOUTH IS CLOSING, DRAGS AS WHALE PUSHES FORWARD

6TH STAGE: PUSHES OUT KRILL AND PREPARES FOR NEXT LUNGE

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**FEEDING**

☆ ONE LUNGE TAKES AROUND 6 SECONDS

☆ ONE DIVE YIELDS AROUND 4 LUNGES

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LUNGS COLLAPSE AT DEPTH TO ALLOW IT TO SINK QUICKLY WITHOUT EXERTION
Gray Whale Migration Routes

**EARLY FALL:**
Eastern Gray Whales in the north Pacific begin their annual 2-3 month voyage (6,000 miles) to the warm southern waters of the Baja Peninsula and Gulf of California. Here they mate, give birth, and nurse their calves.

**FEBRUARY:**
Bulls and cows travel north without young. Pregnant and nursing cows stay until May. They stay on roughly the same path every year. Traveling roughly 75 miles per day, this 12,000 mile round trip is believed to be the longest annual migration of any mammal on Earth.

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30-60 second intervals for shallow dives

3-4 minute intervals for deep dives
Toothed vs Baleen Whales

**ORCA WHALE**
- Food: fish, salmon, seals

**BOWHEAD WHALE**
- Skim-feeder, fine-fringe baleen up to 14 ft. long.
- Food: plankton

**BOTTLENOSE DOLPHIN**
- Food: fish, squid

**BLUE WHALE**
- Lunge-feeder, med-fringe baleen up to 80 ft. long.
- Food: small crustaceans

**HARBOR PORPOISE**
- Food: small fish

**GRAY WHALE**
- Bottom-feeder, coarse-fringe baleen up to 20 ft. long.
- Food: crustaceans, small schooling fish

**SPERM WHALE**
- Food: squid
in the last several years, inuit have been much more common stranded events have. Without this food, these amphipods are the main food source gray whales feed amphipods living in the sediment. Because that algae will drop to the seafloor and limited the growth of algae of Arctic sea ice has greatly decreased in the thickness. Climate change increasing Gray Whale Stranding.