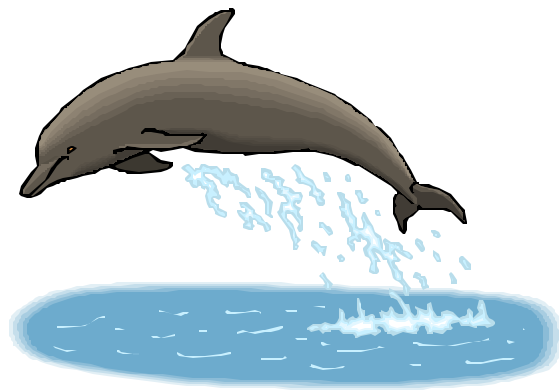


Keeping Warm in the Ocean



Objective

Students will learn how blubber keeps marine mammals warm in their environment.

Background

Marine mammals are warm-blooded. On average, a whale's body temperature is a couple degrees higher than a human's body temperature but varies with each species. Unlike most other marine life, marine mammals maintain a core temperature much higher than their environment. Heat loss is much greater in the water than in the air. Marine mammals have a large layer of body fat called blubber that is used as an insulator to prevent heat loss. Blubber thickness can vary from a couple of inches in smaller whales and dolphins, to over a foot thick in right and bowhead whales.

Materials Needed

- Rubber gloves for each student

- Large baggies
- Ice
- Shortening
- Rubber bands

Activity

1. Have students put a rubber glove on each hand.
2. Fill one baggie with shortening and have each student put one of their gloved hands into the shortening. The other hand will just have a rubber glove.
3. Secure the baggie over the hand with a rubber band.
4. Have the student place both hands into the bucket of ice.

They will feel that the hand with only the glove gets cold quickly, which is how these animals would feel if they didn't have blubber. They will also feel that the hand with the shortening insulates the hand and keeps it from becoming cold. Blubber serves the same function on whales and dolphins.