Reading

Reading Passage 1

You should spend about 20 minutes on **Questions 1-13**, which are based on **Reading Passage 1.**

Leopard seal

A. Named for its spotted coat, ferocity, and superficial resemblance to the spotted "big cat," the leopard seal (Hydrurga leptonyx) is one of five species of "true" or phocid seals that live in Antarctica. Its status as an apex predator of the continent can be compared to that of the tiger in Asia, the lion in Africa and the grizzly bear in North America. Leopard seals are found in circumpolar Antarctica, but there have been sightings as far north as the southern coasts of Australia, New Zealand, South America and South Africa. Population estimates put their number at 220,000 to 440,000 individuals.

B. Leopard seals are the largest of the "true" (having no external ear flaps) Antarctic seals, and can grow to over 11 feet (3.3 meters) in length, with exceptionally large individuals weighing up to 1,300 pounds (590 kg). They are identified by their huge reptilian-like head, large toothy mouth, long neck, arched back and long powerful flippers with webbed digits (fingers and toes). The fur on the back is dark grey, the stomach light grey, and the throat area is white with characteristic black spots. Leopard seals can be confused with Weddell seals, which can also be spotted. Females are slightly larger than males.

C. With the exception of Antarctic fur seals which are "eared" seals, the leopard seal is a true seal like all other Antarctic seals. Even without external ear flaps they do have an ear canal with an external opening on both sides of their head. They can hear as well as humans when outside of the water and even better when underwater. Although it was long believed seals use sonar for navigation and locating food in conditions of low visibility, scientists now believe they use their movement-sensitive whiskers to navigate and to locate much of their prey by following hydrodynamic turbulence trailing from fish, squid, penguins and other seals in dark or murky water.

D. During the Antarctic summer (November–April), leopard seals hunt among the pack

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ice surrounding the Antarctic continent, spending almost all of their time (except for breeding) in the water. In the winter (May–October) they range northward to the sub-Antarctic islands.

E. Solitary by nature, leopard seals come on land (ice) only during the breeding season and then only in pairs or small groups. Pupping generally takes place during November and December. Females dig a hole in the fast ice where they will give birth to a single pup after a 9 to 11-month gestation period (implantation can be delayed by up to two months). The pups weigh about 66 pounds (30 kg) at birth and nurse for about one month. The female protects the pups until they can take care of themselves; males do not participate in parental care. Male leopard seals reach sexual maturity between ages 6 and 7, females between 3 and 7 years of age. Mating generally takes place after the pupping season in February when the females are in estrus. Mating takes place in the water.

F. Leopard seals' acute hearing, sight and smell, coupled with their streamlined bodies that move with agility and speed, have established them as one of the top predators of the Antarctic. While krill are an important food for leopard seals, their diet also includes a significant number of warm-blooded animals, including other seals. The leopard seal's jaw is adapted to a varied diet. Lobes on the sides of the mouth filter krill and their mouths have a remarkable looseness—opening to more than 160 degrees—that enables them to feed on large marine mammals. Their long, sharp teeth are well adapted for cutting and tearing prey. Being a highly-evolved predator, leopard seals eat krill (estimated at 45% of their diet), other seals (30%), penguins (10%), and fish and cephalopods (10%). In summer, leopard seals patrol penguin rookeries, waiting underwater near an ice shelf and snaring the birds just as they enter the water after jumping off the ice. They have also been seen coming up beneath seabirds resting on the water surface and snatching them in their jaws.

G. Unlike other seal species that swim by moving their hind limbs from side to side, leopard seals are graceful swimmers, using long, powerful, simultaneous strokes with their forelimbs. When underwater, their nose closes automatically and doesn't reopen until they surface. They can remain underwater for 15–30 minutes, even sleeping under

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the water and resurfacing for air without waking. As shallow-water hunters, they do not dive deep. On the ice leopard seals are generally quiet. Underwater they produce trills, grunts, low frequency moans and growling noises.

H. Leopard seals may live for 26 years or longer. Their only known natural predators are the orca whale and some large sharks. Leopard seals exhibit a ferocious nature with their prey, but they rarely interact with humans—although visitors to Antarctica are generally warned to keep their distance.

Questions 1-5

Reading Passage 1 has eight sections, **A-H**

Which section contains the following information?

Write the correct letter, **A-H,** in boxes 1-5 on your answer sheet.

1. a change in scientific beliefs about the sense that leopard seals use for underwater navigation
2. Leopard seal's contrasting characteristics in and out of the sea.
3. A reference of body parts that evolve to be able to consume various foods
4. A description about time and place of reproduction of leopard seals
5. A reference of the only natural enemies that can threaten leopard seals

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