

You are going to read an article about polar bears.

Six sentences have been removed from the article. Choose from the sentences (A – H) to fit each gap (1 – 6).

There are two extra sentences which you do not need to use.

For each question, write the correct answer (A – H) in the space provided.

Polar Bears' Adaptation

The polar bear's life cycle is closely tied to sea ice. Polar bears rely on the ice to travel, hunt seals and breed. Some scientists believe polar bears are unlikely to survive if ice-free periods exceed their fasting ability (220 days), especially in areas that lack alternate marine mammal prey.

Polar bears are strong swimmers and divers, a characteristic that allows them to swim from one ice floe to the next. **1** Long swims are especially dangerous to young cubs. Arctic weather can be fiercely cold. As humans, we need protective clothing and/ or shelter to stay warm. Polar bears don't. **2**

In the High Arctic, the sun sets in October and does not rise again until late February. Winter temperatures can plunge to -40°C or -46°C and stay that way for days or weeks. The average January and February temperature is -34°C . Bears are insulated with two layers of fur and a thick layer of body fat. **3**

In the water, they rely more on their fat layer to keep warm; wet fur is a poor insulator. This is why mother bears are reluctant to swim with young cubs in the spring — the cubs just don't have enough fat. Their skin is not the only thing working to keep them warm. **4**

The paws of polar bears are ideal for roaming the Arctic. They measure up to 30 centimetres across, to help polar bears tread on thin ice. When the ice is very thin, the bears extend their legs far apart and lower their bodies to distribute their weight. Polar bear paws are not designed to help just on land. **5**

Black footpads on the bottom of each paw are covered by small, soft bumps known as *papillae*. *Papillae* grip the ice and keep the bear from slipping. Tufts of fur between its toes and footpads can help with security as well. As can their claws. Thick, curved, sharp and strong — each measures more than five centimetres long. **6**

On bitterly cold days with fierce winds, polar bears dig shelter pits in snow banks and curl up in a tight ball. Sometimes they cover their muzzles — which radiate heat with their thickly furred paws and let the snow drift around and over them.

Polar bears have more problems with overheating than they do with cold. That's why they typically walk at a leisurely pace. They can quickly overheat when they run.



- A Their ears are small and round, and their tails short and compact, to conserve the most heat possible.
- B Their bodies thrive in the stark temperatures.
- C This provides enough insulation that their body temperature and metabolic rate doesn't change, even when temperatures reach -37°C .
- D Polar bears use their claws to catch and hold prey and to gain traction on ice.
- E Polar bears look whitest when they are clean and in high-angle sunlight.
- F Polar bears are distinctly different from other bears.
- G But there's a limit to how far they can swim.
- H When swimming, the polar bear's forepaws act like large paddles and its hind paws serve as rudders.