



Polar Bears — Masters of the Arctic

Reading Worksheet — Level F | [tahricteaches.com](https://www.tahricteaches.com)

The polar bear is the world's largest land predator and one of the most powerful animals on Earth. Found only in the Arctic, these massive mammals have spent thousands of years learning to **survive** in one of the planet's harshest environments. Unlike their brown and black bear relatives, polar bears have become uniquely specialised — shaped by evolution to master sea ice, extreme cold, and open ocean waters.

Polar bears have **adapted** in remarkable ways to the frozen world they call home. Their **fur**, although it appears white, is actually hollow and transparent, trapping **warmth** near the body even in temperatures below -50°C . Beneath the **fur** lies a layer of blubber up to 11 centimetres thick, acting as a powerful insulator against the cold. Their enormous, partially webbed paws function like paddles in water and distribute weight evenly across thin ice to prevent them from breaking through.

The polar bear's main prey is the ringed **seal**, and its hunting method is as precise as it is patient. A polar bear's nose can **detect** the scent of a **seal** breathing hole through nearly two metres of solid ice — from over a kilometre away. Bears approach silently, then **float** motionless at the ice edge until the **seal** surfaces for air. The strike is explosive and almost always successful, providing enough energy to fuel the bear for days.

The greatest threat to polar bears comes from **climate** change. As global temperatures rise, Arctic sea ice is beginning to **melt** earlier each spring and refreeze later each autumn. This shrinking platform directly **threatens** the bear's ability to hunt, travel, and reproduce. When solid ice disappears, bears must swim enormous distances between **floating** ice sheets, burning fat reserves they may be unable to replace. Mothers with cubs face by far the greatest risk.

Scientists warn that two-thirds of the world's polar bears could disappear by 2050 if warming continues. Conservation efforts include international hunting bans, protected Arctic zones, and research programs that **detect** and track individual bears using satellite collars. But the single most effective solution remains reducing the carbon emissions that drive **climate** change. The polar bear — perfectly **adapted** to a world of ice and snow — is now a symbol of what we risk losing if we fail to act.

A. Vocabulary

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|------------------|--|
| 1. survive ____ | a. to put in danger; to be likely to cause harm to something |
| 2. adapt ____ | b. to rest or move on the surface of liquid without sinking |
| 3. climate ____ | c. the thick, soft hair that covers the body of certain animals |
| 4. melt ____ | d. the quality or state of being warm; a gentle, comfortable heat |
| 5. threaten ____ | e. to continue to live despite danger or hardship |
| 6. detect ____ | f. to change gradually to suit a new environment or situation |
| 7. fur ____ | g. the typical weather conditions of a region over a long period |
| 8. seal ____ | h. to change from a solid to a liquid because of heat |
| 9. float ____ | i. to discover or notice something that is not easy to see or find |
| 10. warmth ____ | j. a sea mammal with flippers that lives near cold oceans and ice |



B. True or False

1. Polar bears are found only in the Arctic region. ____
2. Polar bear fur is solid white all the way through. ____
3. A polar bear's blubber layer can be up to 11 centimetres thick. ____
4. Polar bears mainly hunt fish caught from rivers. ____
5. A polar bear can detect a seal's breathing hole through two metres of ice. ____
6. Climate change is causing Arctic sea ice to melt earlier each spring. ____
7. Loss of sea ice has little effect on polar bears' ability to hunt. ____
8. Two-thirds of the world's polar bears could disappear by 2050. ____
9. Reducing carbon emissions is important for protecting polar bears. ____



C. Fill in the Blanks

Word Bank: survive, adapt, climate, detect, float

1. Polar bears have _____ to life in one of Earth's harshest environments over thousands of years.
2. A polar bear's nose can _____ the scent of a seal breathing hole through two metres of solid ice.
3. As _____ change causes global temperatures to rise, Arctic sea ice is shrinking rapidly.
4. When the ice melts, bears must swim enormous distances between _____ ice sheets.
5. Without enough sea ice to hunt from, polar bears struggle to feed and _____ through winter.

D. Comprehension Questions

1. How has polar bear fur adapted to help them survive extreme Arctic temperatures?
2. Describe how polar bears find and catch seals.
3. Why is sea ice so critical to a polar bear's survival?
4. What specific threat does a warming climate pose to polar bear mothers with cubs?
5. What conservation actions are scientists and governments taking to protect polar bears?

E. Discussion Questions

1. Polar bear fur is hollow and transparent rather than truly white. What does this adaptation reveal about how evolution solves survival problems, and can you think of another animal with a surprising hidden adaptation?

2. Scientists warn that two-thirds of polar bears could vanish by 2050. What responsibility, if any, do people in non-Arctic countries — like Taiwan — have toward protecting animals that live so far away?
3. If you were designing a polar bear conservation policy, what three priorities would you choose and why? Consider both direct actions (protecting habitat) and indirect ones (addressing climate change).



Answer Key

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A. Vocabulary: 1-e, 2-f, 3-g, 4-h, 5-a, 6-i, 7-c, 8-j, 9-b, 10-d

B. True/False: 1-T, 2-F, 3-T, 4-F, 5-T, 6-T, 7-F, 8-T, 9-T

C. Fill Blanks: 1-adapt(ed), 2-detect, 3-climate, 4-floating, 5-survive

D. Comprehension:

1. Polar bear fur is hollow and transparent, not truly white, which traps warmth from the sun close to the body. Beneath the fur, a layer of blubber up to 11 centimetres thick provides powerful insulation, allowing the bear to stay warm even at -50°C .
2. A polar bear uses its extraordinary sense of smell to detect a seal's breathing hole through nearly two metres of ice from over a kilometre away. It then approaches silently, floats motionless at the ice edge, and strikes the moment the seal surfaces for air.
3. Sea ice serves as the polar bear's hunting platform, resting ground, and travel route. Without solid ice, bears cannot reach the seals they depend on and must swim enormous distances between floating ice sheets, burning irreplaceable fat reserves.
4. When sea ice melts, mothers must swim long distances with their cubs to reach new ice. This burns enormous amounts of energy that may be impossible to replace, putting both the mother and her young at serious risk of starvation.
5. Conservation efforts include international hunting bans, protected Arctic habitat zones, and satellite-collar research programs that track individual bears. However, scientists agree that reducing the carbon emissions driving climate change is the single most important long-term solution.