



The Day Earth Runs From the Sun

Every July, our planet drifts to its farthest point from the Sun, yet summer refuses to cool down. The reason exposes a stubborn misunderstanding about how climate really works.

Each year in early July, Earth reaches a quiet milestone that almost nobody notices. Our planet arrives at aphelion, the single point in its yearly journey where it sits farthest from the Sun. At this moment, the gap between Earth and the Sun stretches to roughly 152 million kilometres, about five million kilometres more than in early January. You might expect the extra distance to bring cooler days. In the northern half of the world, the opposite happens.

This surprising fact points to a common [myth](#)¹ about the seasons. Many people assume that summer arrives because Earth moves closer to the Sun, and that winter comes when it pulls away. If that were true, the whole planet would feel warm and cold at the same time. It does not. When it is summer in Europe, it is winter in Australia. Distance alone cannot explain this, so something else must be shaping our weather.

The real driver is the angle at which Earth leans on its axis, a lean of about 23.5 degrees. This tilt stays [steady](#)² as our planet travels around the Sun, so different regions receive direct sunlight at different times of the year. During a northern summer, the top half of the globe leans toward the Sun. Rays strike the ground more directly, and each patch of land can [absorb](#)³ far more energy. Longer days give that heat more hours to build.

Against this powerful effect, the change in [orbit](#)⁴ distance is remarkably small. The difference between aphelion in July and its opposite point in January alters the amount of sunlight Earth receives by only about seven percent. That gentle shift is easily overwhelmed by the tilt, which is why July stays hot in Madrid while it stays cold in Sydney.

Seven percent may sound tiny, but it does leave a mark. Because the southern half of the planet holds far more ocean, and water is slow to heat and slow to cool, the aphelion effect is [barely](#)⁵ visible in daily life. Still, scientists have measured it. Southern summers, which happen near the closer point in the orbit, tend to be slightly more intense, while northern summers are a touch milder than pure geometry would suggest.

Over vast stretches of time, these orbital details matter enormously. The exact shape of Earth's path is not fixed. It stretches and rounds again across cycles lasting tens of thousands of years. Many researchers believe these slow changes have helped push the planet into ice ages and pull it back out. To [maintain](#)⁶ a stable climate, Earth depends on a delicate balance of tilt, distance, and shape. Aphelion, then, is a small annual reminder of a much larger truth: our climate is a machine with many moving parts, and no single one tells the whole story.

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VOCABULARY — KEY WORDS FROM THE STORY

#	WORD	DEFINITION	EXAMPLE SENTENCE
1	myth <i>noun</i>	An idea or belief that many people accept as true but which is actually false.	"It is a common myth that we only use ten percent of our brains."
2	steady <i>adjective</i>	Staying the same over time; not changing suddenly or shaking.	"She spoke in a calm, steady voice even though she was nervous."
3	absorb <i>verb</i>	To take in a liquid, gas, energy, or information gradually.	"Dark surfaces absorb heat more quickly than light ones."
4	orbit <i>noun</i>	The curved path that a planet, moon, or object follows as it travels around another object in space.	"The satellite completed one orbit of the Earth every ninety minutes."
5	barely <i>adverb</i>	Only just; almost not at all, or by a very small amount.	"The music was so quiet that I could barely hear it."
6	maintain <i>verb</i>	To keep something in the same state or at the same level over time.	"Regular exercise helps you maintain a healthy weight."

COMPREHENSION — ANSWER THE QUESTIONS

QUESTION 1 — MULTIPLE CHOICE

According to the article, why does the northern half of the world experience summer even at aphelion?

- A-) Because Earth is closer to the Sun in July
- B-) Because the northern half is tilted toward the Sun and receives more direct sunlight
- C-) Because the oceans release stored heat in July
- D-) Because Earth moves faster during summer months

QUESTION 2 — MULTIPLE CHOICE

What does the example of summer in Europe and winter in Australia prove?

- A-) That the Sun is hotter in the northern half of the world
- B-) That distance from the Sun alone cannot explain the seasons
- C-) That Australia is always colder than Europe
- D-) That aphelion happens at different times in each country

QUESTION 3 — SHORT ANSWER

The article says the aphelion effect is 'barely visible in daily life' but still matters over long periods. Explain in your own words how something so small can have large consequences over time.

COMPREHENSION ANSWERS

My score today ___ / 3

Q1 Because the northern half is tilted toward the Sun and receives more direct sunlight ✓ Correct (B)

The text states that 'the top half of the globe leans toward the Sun' during a northern summer, so 'rays strike the ground more directly' and the land can absorb more energy. The article directly rejects the idea that distance to the Sun causes the seasons, which rules out the first option.

Q2 That distance from the Sun alone cannot explain the seasons ✓ Correct (B)

The writer uses this contrast to show that if distance controlled the seasons, 'the whole planet would feel warm and cold at the same time.' Because the two regions have opposite seasons at once, the article concludes that 'something else must be shaping our weather.'

Q3 **Answer:** A model answer would explain that a small yearly effect, such as the seven percent change in sunlight, has almost no impact on a single season because the tilt of the Earth is much stronger. However, when this small difference is repeated over tens of thousands of years, and combined with slow changes in the shape of Earth's orbit, it can gradually add up. The article suggests these slow orbital changes have helped push the planet into ice ages and pull it back out. So a tiny yearly signal becomes powerful when it acts steadily across an enormous span of time.

Explanation: A strong answer should (1) recognise that the effect is small in the short term because the tilt dominates, (2) connect the idea to the long orbital cycles lasting tens of thousands of years mentioned in the text, and (3) refer to the ice-age example as evidence. Weaker answers only repeat that the effect is small without explaining the role of accumulated time.

VOCABULARY — TRANSLATION & NOTES

myth

Often used with 'common', 'popular', or 'widespread'. 'Myth' can also mean an old traditional story, so the meaning depends on context.

steady

Contrast with 'unsteady'. Common collocations include 'a steady job', 'a steady pace', and 'steady progress'.

absorb

Used both physically (absorb water, absorb light) and mentally (absorb information). The related noun is 'absorption'.

orbit

Can also be a verb: 'The Moon orbits the Earth'. Common phrases include 'in orbit' and 'enter orbit'.

barely

'Barely' already carries a negative meaning, so do not add another negative word. Say 'I could barely see', not 'I couldn't barely see'.

maintain

Common collocations: 'maintain balance', 'maintain a relationship', 'maintain standards'. The related noun is 'maintenance'.

YOUR TURN — SENTENCE BUILDING

Mastery comes from practice. Write original sentences using today's target vocabulary.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

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