

Science Trivia Questions and Answers

A ready-to-host science trivia round for adult groups, with 24 questions across six themes and a checkable source beside every answer.

Host guide / A4 / Adult trivia / 20–35 minutes

Read the guide privately first if this activity has hidden answers. Print single-sided at Actual size / 100%. Cut only sheets marked CARDS. Keep answer keys with the host.

What you need

- Printed question cards or a host screen
- Pens and a score sheet (optional)
- A timer (optional)
- One host or reader for each team

How to run it

1. Play individually or in teams of two to five; let players pass on any card.
2. Read the prompt and allow about 20–30 seconds for discussion or a written answer.
3. Award one point for a correct answer, accepting equivalent wording and reasonable pronunciation variants.
4. Reveal the answer and read the explanation; keep its source link available for a quick check or later reading.
5. For a shorter round, choose a balanced mix from at least four categories.
6. Skip scoring and the timer for a relaxed conversation round.

How to host this deck

This round works well for a mixed adult group because questions move among space, measurement, Earth, weather, biology, and energy. Split into small teams or let everyone answer individually. The host can read prompts aloud, then reveal one answer at a time. Accept common equivalent wording; the explanations are designed to make the reveal useful even when nobody knows the answer.

Choose a relaxed pace rather than turning the round into an exam.

- For a 10-minute version, take one card from each category, then let the group choose four more.
- For a longer round, use all 24 cards and alternate who reads the explanation.
- Players may pass; do not require anyone to explain a wrong guess.

Scoring and variation

Give one point per correct answer. A team may write its answer down before the reveal, or simply call it out. For a cooperative version, the group can try to answer 18 of 24 together and use missed cards as discussion starters.

Keep the answers visible only after guesses are locked in. The linked source on each card lets a curious player check the underlying fact later.

- Allow a short team huddle before each answer.
- For a tie, ask a hard card and accept the first accurate answer.

- Skip the score sheet if the group prefers casual conversation.

What the categories cover

The astronomy cards focus on instruments and phenomena; measurement cards revisit familiar SI units; Earth science cards distinguish useful geological terms; weather and water cards connect atmospheric measurements with the water cycle; life science cards cover cells and photosynthesis; and energy cards show how natural resources are converted into electricity.

Each answer has a concise explanation and a source link. Some scientific descriptions simplify a larger subject for a social game, so use the sources for deeper reading.

- Astronomy: infrared observation, Webb's orbit, pulsars, gravitational waves.
- Measurement: base units, length, temperature, and luminous intensity.
- Earth and environment: magma, pumice, earthquake scales, humidity, pressure, and water.
- Living systems and energy: DNA, mitochondria, photosynthesis, wind, water, solar, and geothermal power.

CARDS / Science Trivia Questions and Answers

<p>R_TRIVIA_SCIENCE-001 / Astronomy & space</p> <p>What kind of light does the James Webb Space Telescope primarily observe?</p>	<p>R_TRIVIA_SCIENCE-002 / Astronomy & space</p> <p>Webb operates in a halo orbit around which Sun–Earth Lagrange point?</p>
<p>R_TRIVIA_SCIENCE-003 / Astronomy & space</p> <p>A pulsar is a rapidly rotating example of what kind of stellar remnant?</p>	<p>R_TRIVIA_SCIENCE-004 / Astronomy & space</p> <p>Gravitational waves are ripples in what?</p>
<p>R_TRIVIA_SCIENCE-005 / Measurement</p> <p>How many base units are in the International System of Units (SI)?</p>	<p>R_TRIVIA_SCIENCE-006 / Measurement</p> <p>Which SI base unit measures length?</p>

CARDS / Science Trivia Questions and Answers

<p>R_TRIVIA_SCIENCE-007 / Measurement</p> <p>Which SI base unit is used for thermodynamic temperature?</p>	<p>R_TRIVIA_SCIENCE-008 / Measurement</p> <p>Which SI base unit measures luminous intensity?</p>
<p>R_TRIVIA_SCIENCE-009 / Earth science</p> <p>Molten rock below Earth's surface is called what?</p>	<p>R_TRIVIA_SCIENCE-010 / Earth science</p> <p>What is the name for magma after it reaches Earth's surface?</p>
<p>R_TRIVIA_SCIENCE-011 / Earth science</p> <p>What gives pumice its many holes and unusually low density?</p>	<p>R_TRIVIA_SCIENCE-012 / Earth science</p> <p>Earthquake magnitude and intensity describe different things. Which one describes effects at a particular location?</p>

CARDS / Science Trivia Questions and Answers

<p>R_TRIVIA_SCIENCE-013 / Weather & water</p> <p>Which instrument measures relative humidity?</p>	<p>R_TRIVIA_SCIENCE-014 / Weather & water</p> <p>In the water cycle, what process changes liquid water into water vapour?</p>
<p>R_TRIVIA_SCIENCE-015 / Weather & water</p> <p>What is the name for water vapour cooling into tiny liquid droplets, such as in a cloud?</p>	<p>R_TRIVIA_SCIENCE-016 / Weather & water</p> <p>As elevation increases, what generally happens to atmospheric pressure?</p>
<p>R_TRIVIA_SCIENCE-017 / Life science</p> <p>What does the abbreviation DNA stand for?</p>	<p>R_TRIVIA_SCIENCE-018 / Life science</p> <p>Which cell structures are commonly called the cell's energy-producing organelles?</p>

CARDS / Science Trivia Questions and Answers

R_TRIVIA_SCIENCE-019 / Life science

About how many bones are in a typical adult human skeleton?

R_TRIVIA_SCIENCE-020 / Life science

During photosynthesis, plants take in carbon dioxide and water and use light energy to produce sugars and what gas?

R_TRIVIA_SCIENCE-021 / Energy

In a wind turbine, what does the spinning rotor ultimately help drive to make electricity?

R_TRIVIA_SCIENCE-022 / Energy

What resource makes hydropower turbines turn?

R_TRIVIA_SCIENCE-023 / Energy

What does a photovoltaic cell convert directly into electrical energy?

R_TRIVIA_SCIENCE-024 / Energy

Geothermal energy draws on heat from where?

Host answer key

Keep this section separate from player cards. Accept equivalent wording where the meaning matches.

01. Infrared light

Webb is designed to observe infrared wavelengths, which lets astronomers study faint, distant objects and regions obscured by dust.

02. Sun–Earth L2

NASA says Webb orbits the Sun near Sun–Earth L2 rather than sitting exactly at the point; it follows a halo orbit roughly 1.5 million kilometres from Earth.

03. A neutron star

Pulsars are neutron stars whose beams of radiation sweep across Earth as they rotate, like a cosmic lighthouse.

04. Spacetime

Gravitational waves are ripples in spacetime produced by accelerating massive objects; their passage can be detected as tiny changes in distance.

05. Seven

The SI defines seven base units; other units, such as the newton, are built from them.

06. The metre

The metre is the SI base unit for length. Its modern definition is tied to the speed of light.

07. The kelvin

The kelvin is the SI base unit of thermodynamic temperature; Celsius degrees have the same size interval but a shifted zero.

08. The candela

Candela is the SI base unit for luminous intensity in a given direction.

09. Magma

USGS distinguishes magma below the surface from lava after molten rock erupts onto the surface.

10. Lava

The term changes from magma to lava once the molten rock is erupted at the surface.

11. Gas bubbles trapped as volcanic lava cools

Pumice forms when gas-rich lava cools quickly; escaping gas leaves a vesicular, frothy rock that can be light enough to float.

12. Intensity

Magnitude characterizes an earthquake's size, while intensity describes observed shaking and effects at a location; intensity can vary from place to place.

13. A hygrometer

Humidity is the amount of water vapour in air. A hygrometer is an instrument used to measure humidity.

14. Evaporation

Solar energy can change liquid water at Earth's surface into water vapour, which then enters the atmosphere.

15. Condensation

In the water cycle, water vapour cools and condenses into liquid droplets or ice crystals, helping form clouds.

16. It decreases

NOAA explains that air pressure generally falls with altitude because there is less air above pressing down.

17. Deoxyribonucleic acid

DNA is the molecule that carries hereditary information in living organisms; the letters stand for deoxyribonucleic acid.

18. Mitochondria

Mitochondria help convert energy from food into a form cells can use. Cells vary in how many they contain.

19. 206

MedlinePlus's adult skeleton diagram gives the usual count as 206 bones; individual variation and counting conventions can occur.

20. Oxygen

Photosynthesis uses light energy to make sugars from carbon dioxide and water, releasing oxygen as a by-product.

21. A generator

Wind turns the blades and rotor; the turbine's drivetrain transfers that rotation to a generator that produces electricity.

22. Moving or falling water

Hydropower uses flowing or falling water to turn a turbine connected to an electricity generator.

23. Light

Photovoltaic cells use semiconductor materials to convert light directly into electricity.

24. Inside the Earth

Geothermal energy uses heat from within the Earth, including naturally hot water or steam in suitable locations.

Hosting questions

Can we play without keeping score?

Yes. Read the prompt, invite guesses, and use each explanation as a quick learning moment. Players can pass on any question.

Are all questions equally difficult?

No. Cards include easy, medium, and hard labels. A host can remove hard cards or mix them into a final round.

What counts as a correct answer?

Accept equivalent scientific terms and reasonable spelling or pronunciation variations. The host can read the explanation and source if a response is close.

Can this work over video call?

Yes. Share one prompt at a time, let teams discuss in breakout rooms or chat, and reveal the answer when everyone is ready.

References

Supports the fact stated in the linked answer card; see the card explanation for the claim-specific summary.

<https://science.nasa.gov/mission/webb/faqs-full/>

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<https://science.nasa.gov/mission/hubble/science/science-behind-the-discoveries/hubble-pulsars/>

Supports the fact stated in the linked answer card; see the card explanation for the claim-specific summary.

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<https://www.nist.gov/pml/special-publication-330/sp-330-section-2>

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<https://volcanoes.usgs.gov/vsc/glossary/pumice.html>

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<https://medlineplus.gov/ency/imagepages/9065.htm>

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<https://www.energy.gov/cmei/water/how-hydropower-works>

Supports the fact stated in the linked answer card; see the card explanation for the claim-specific summary.

<https://www.energy.gov/cmei/systems/solar-photovoltaic-cell-basics>

Supports the fact stated in the linked answer card; see the card explanation for the claim-specific summary.

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