World Space Week PAKISTAN

04-10 OCTOBER 2026

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WORLD SPACE WEEK 2026

ROCKET REVOLUTION

Space Quest

A Ready-to-Use Resource for Teachers, Schools and Students

Space Quest

The Question Bank

A ready-to-use resource for teachers, schools and students

WORLD SPACE WEEK 2026

Rocket Revolution

4 – 10 October 2026 ·

FOREWORD

About This Resource

Space Quest is a ready-to-use question bank for schools taking part in World Space Week 2026.

Every October, from the 4th to the 10th, the world pauses to look up. Those dates are not arbitrary: 4 October 1957 is the day Sputnik 1 became the first human-made object to orbit the Earth, and 10 October 1967 is the day the Outer Space Treaty was opened for signature. Between the launch that opened the space age and the treaty that promised to keep space peaceful, the United Nations placed the largest space event on Earth.

The theme for 2026 is **Rocket Revolution** — a recognition that the way humanity reaches orbit is changing faster now than at any time since the 1960s. Boosters land and fly again. Engines are printed rather than machined. A satellite the size of a shoebox can do work that once needed a bus-sized spacecraft.

WHY 4 – 10 OCTOBER?

4 October 1957 — Sputnik 1 becomes the first human-made object to orbit the Earth, opening the space age.

10 October 1967 — the Outer Space Treaty is opened for signature, committing humanity to the peaceful use of outer space.

CONTENTS

What Is Inside

ROUND A · SECTION 1 OF 6

Basics of Space Science

Foundational questions on space, gravity and the solar system — the natural starting point for younger students and opening rounds.

50 QUESTIONS

Basics of Space Science

Questions A1 – A50.

A1 What is the name of our galaxy?

A2 How many planets are there in our solar system?

A3 Which planet is known as the Red Planet?

A4 Which is the largest planet in our solar system?

A5 Which is the smallest planet in our solar system?

A6 Which planet is closest to the Sun?

A7 Which planet is known for its prominent rings?

A8 What force keeps planets in orbit around the Sun?

A9 What is a light-year a measurement of?

A10 What is the closest star to Earth?

A11 How long does it take sunlight to reach Earth?

A12 What is the name of Earth's only natural satellite?

A13 What causes the phases of the Moon?

A14 What is a solar eclipse?

A15 What is a lunar eclipse?

A16 What is the term for a large rock orbiting the Sun, smaller than a planet?

A17 What is a comet mostly made of?

A18 What is the belt of asteroids between Mars and Jupiter called?

A19 What is the term for a star that explodes at the end of its life?

A20 What is a black hole?

A21 What is the study of stars, planets, and space called?

A22 What instrument is used to observe distant objects in space?

A23 Who is credited with inventing the first practical telescope for astronomy?

A24 What is the name for a group of stars that forms a recognizable pattern?

A25 What is the Great Red Spot on Jupiter?

A26 Which planet has the most moons discovered so far?

A27 What is the atmosphere of Venus mainly composed of?

A28 Why does Venus have such high surface temperatures?

A29 What are the icy, distant objects beyond Neptune's orbit called?

A30 What dwarf planet was reclassified from full planet status in 2006?

A31 What is the term for the point in an orbit closest to the Sun?

A32 What is the term for the point in an orbit farthest from the Sun?

A33 What causes seasons on Earth?

A34 What is the layer of gases surrounding a planet called?

A35 What gas do humans primarily need to breathe from Earth's atmosphere?

A36 What is microgravity?

A37 What is the term for the path an object follows around another object in space?

A38 What shape are most planetary orbits?

A39 What is the habitable region around a star where liquid water could exist called?

A40 What is the term for a planet outside our solar system?

A41 What is the main gas that makes up the Sun?

A42 What process powers the Sun and other stars?

A43 What is the outermost layer of the Sun's atmosphere called?

A44 What is a meteoroid?

A45 What is a meteor commonly called when seen streaking across the sky?

A46 What do we call a meteoroid that survives its fall and lands on Earth?

A47 What is the term for the imaginary line an object rotates around?

A48 How long does Earth take to complete one rotation on its axis?

A49 How long does Earth take to complete one orbit around the Sun?

A50 What is the name of the theoretical boundary around a black hole from which nothing can escape?

ROUND B · SECTION 2 OF 6

Astronomy and the Universe

Stars, galaxies, cosmology and the deep structure of the universe — for confident students and later rounds.

50 QUESTIONS

B

Astronomy and the Universe

Questions B1 – B50.

B1 What theory describes the origin and expansion of the universe?

B2 Approximately how old is the universe estimated to be?

B3 What is the term for a massive collection of stars, gas, and dust bound by gravity?

B4 What type of galaxy is the Milky Way?

B5 What is the nearest large galaxy to the Milky Way?

B6 What is the invisible substance believed to make up most of the universe's mass?

B7 What is the mysterious force believed to be causing the universe's accelerating expansion?

B8 What is the term for the leftover radiation from the Big Bang?

B9 What is a nebula?

B10 What is the life cycle stage of a star like the Sun after it exhausts its hydrogen fuel?

B11 What does a low-mass star like the Sun eventually become after the red giant stage?

B12 What extremely dense object can form from the collapsed core of a massive star?

B13 What is the brightest star in Earth's night sky?

B14 What is the name of the space telescope launched in 1990 that revolutionised astronomy?

B15 What is the most powerful space telescope launched in 2021, successor to Hubble?

B16 What wavelength of light does the James Webb Space Telescope primarily observe in?

B17 What is the term for the study of the origin and evolution of the universe?

B18 What is redshift used to determine in astronomy?

B19 What is a pulsar?

B20 What is the term for two stars that orbit a common centre of mass?

B21 What are the largest known structures in the universe, formed from chains of galaxy clusters?

B22 What is the Local Group?

B23 What is the term for the boundary of our solar system defined by the Sun's influence?

B24 What spacecraft became the first human-made object to enter interstellar space?

B25 What is the Oort Cloud believed to be?

B26 Which technique measures the distance to nearby stars using the shift in their apparent position as Earth orbits the Sun?

B27 What unit is commonly used to measure distances within the solar system?

B28 What is the term for a star's brightness as it appears from Earth?

B29 What phenomenon causes stars to appear to twinkle?

B30 What is the process by which a new star is born called?

B31 What is an active galactic nucleus powered by?

B32 What is the estimated mass of the supermassive black hole at the centre of the Milky Way relative to the Sun?

B33 What is the name of the supermassive black hole at the centre of the Milky Way?

B34 In what year was the first image of a black hole released?

B35 What galaxy's black hole was imaged in that first-ever photo?

B36 What is the term for radiation emitted uniformly in every direction from a point?

B37 What is a globular cluster?

B38 What are the two main types of galaxies based on shape, besides irregular?

B39 What does blueshift tell astronomers about an object's motion?

B40 What is dark matter's main evidence based on?

B41 What is the Drake Equation used to estimate?

B42 What is SETI an abbreviation for?

B43 What is the term for the imaginary sphere on which celestial objects appear to lie, as seen from Earth?

B44 What is a quasar?

B45 What is a Cepheid variable star used as in astronomy?

B46 What is the estimated diameter of the observable universe?

B47 What is a magnetar?

B48 What is the term for a star system with three or more stars?

B49 What is the cosmological principle in astronomy?

B50 What is the name of ESA's mission that mapped over a billion stars to chart the Milky Way?

ROUND C · SECTION 3 OF 6

Rockets and Space Technology

Propulsion, launch vehicles and the engineering behind spaceflight — the heart of the Rocket Revolution theme.

50 QUESTIONS

Rockets and Space Technology

Questions C1 – C50.

C1 What is the basic scientific law that explains how rockets move forward?

C2 What are the main components of a typical rocket?

C3 What is the term for the substance burned to produce a rocket's thrust?

C4 What are the two main categories of rocket propellant?

C5 What is a multi-stage rocket?

C6 Why do rockets use multiple stages?

C7 What is escape velocity?

C8 What is Earth's escape velocity approximately?

C9 Who is considered the father of modern rocketry, and wrote the rocket equation?

C10 Which American engineer built and launched the first liquid-fueled rocket in 1926?

C11 What was the name of the first artificial satellite, launched by the Soviet Union in 1957?

C12 What German-developed rocket became the basis for early space and missile technology after World War II?

C13 What is thrust in rocketry?

C14 What is the term for a reusable rocket component designed to fly back and land, reducing launch costs?

C15 Which private company pioneered vertical landing of reusable orbital rocket boosters?

C16 What is the name of SpaceX's reusable rocket used for many crewed and cargo missions?

C17 What is the name of SpaceX's next-generation fully reusable rocket system designed for missions to the Moon and Mars?

C18 What is a launch vehicle?

C19 What is the term for the part of a rocket that carries the satellite, crew, or cargo?

C20 What is a fairing on a rocket?

C21 What is the difference between a rocket and a jet engine?

C22 What is an oxidizer used for in a rocket engine?

C23 What common oxidizer is paired with liquid hydrogen in many rocket engines?

C24 What is the term for firing rocket engines to slow a spacecraft for landing or orbit insertion?

C25 What is a sounding rocket used for?

C26 What is the specific impulse of a rocket engine a measure of?

C27 What is an ion thruster?

C28 What is the Kármán line?

C29 What term describes a launch that ends before the vehicle reaches its intended orbit?

C30 What is a gimbal in rocket engine design used for?

C31 What is cryogenic propellant?

C32 What is the term for the trajectory a rocket follows to enter orbit efficiently?

C33 Which agency developed the Space Launch System (SLS), the heavy-lift rocket built for the Artemis Moon missions?

C34 What was the Saturn V rocket used for?

C35 How tall was the Saturn V rocket approximately?

C36 What is hybrid rocket propulsion?

C37 What is the term for the maximum weight a rocket can lift into orbit?

C38 What is staging separation?

C39 What term describes small satellites launched together on a single rocket to save cost?

C40 What is a CubeSat?

C41 What does the phrase 'Rocket Revolution' broadly symbolise in the context of space technology?

C42 What innovation has most reduced the cost of space launches in recent years?

C43 What is 3D printing's growing role in modern rocket manufacturing?

C44 What is the term for a rocket engine that can be shut down and restarted multiple times during a mission?

C45 What is a heat shield used for during spacecraft re-entry?

C46 What is ablative heat shielding?

C47 What term describes small, low-cost rockets designed for launching small satellites?

C48 What is the role of a launch pad in a space mission?

C49 What is telemetry in the context of a rocket launch?

C50 What is the term for the moment a rocket engine ignites and lifts off the pad?

ROUND D · SECTION 4 OF 6

Space Exploration History

The milestones of human spaceflight, from Sputnik 1 to the return of astronauts to lunar orbit.

48 QUESTIONS

Space Exploration History

Questions D1 – D48.

D1 In what year was Sputnik 1 launched, starting the Space Age?

D2 Who was the first human to travel into space?

D3 What country did Yuri Gagarin represent?

D4 Who was the first American in space?

D5 Who was the first person to walk on the Moon?

D6 In what year did the Apollo 11 Moon landing take place?

D7 What was the name of the lunar module that landed on the Moon during Apollo 11?

D8 Who was the second person to walk on the Moon, alongside Armstrong?

D9 Who stayed in orbit around the Moon during the Apollo 11 mission?

D10 What was Neil Armstrong's famous quote upon stepping onto the Moon?

D11 Who was the first woman in space?

D12 What was the name of the first space station?

D13 What was the name of the United States' first space station?

D14 What is the International Space Station commonly abbreviated as?

D15 In what year did the first crew arrive on the International Space Station?

D16 How many countries or space agencies are primary partners of the ISS?

D17 What was the space shuttle program's first orbital flight?

D18 What was the name of the first reusable crewed spacecraft programme by NASA?

D19 What tragic event occurred with the Space Shuttle Challenger in 1986?

D20 What tragic event occurred with the Space Shuttle Columbia in 2003?

D21 What was the first spacecraft to land humans on the Moon and return them safely?

D22 How many Apollo missions successfully landed astronauts on the Moon?

D23 What was the first spacecraft to fly by and photograph Pluto?

D24 What rover was the first to land on Mars successfully?

D25 What is the name of NASA's Mars rover that landed in 2021 and is searching for signs of ancient life?

D26 What was the name of the small helicopter that made the first powered flight on another planet, on Mars?

D27 Which spacecraft became the first to enter orbit around another planet?

D28 What was the first probe to land successfully on Mars and transmit data?

D29 What is the name of NASA's programme aiming to return astronauts to the Moon in the 2020s?

D30 What was the first crewed mission to orbit the Moon without landing?

D31 What historic handshake in orbit occurred in 1975 between two Cold War rivals?

D32 What was the first commercial crewed spacecraft to carry NASA astronauts to the ISS?

D33 What is the name of China's space station, completed in 2022?

D34 What does 'Tiangong' mean in English?

D35 What was the name of China's first crewed spaceflight mission, launched in 2003?

D36 Who was China's first astronaut to travel to space?

D37 What is the term used in China for astronauts?

D38 What was the first spacecraft to successfully land on a comet?

D39 What mission was the first to bring samples back from an asteroid to Earth?

D40 Which spacecraft returned the first photographs of the far side of the Moon?

ROUND D · SPACE EXPLORATION HISTORY

QUESTIONS

D41 What was the Voyager program designed to explore?

D42 In what year were the Voyager 1 and 2 probes launched?

D43 What message or artifact did the Voyager probes carry to represent humanity to any potential extraterrestrial finders?

D44 What was the first artificial object to travel beyond the solar system into interstellar space?

D45 What is the Artemis Accords?

D46 What nation launched the first probe to successfully soft-land on Venus?

D47 What was the name of the first commercial company to launch a privately funded orbital rocket successfully?

D48 What historic event took place in 2021 involving the first fully civilian crew in orbit?

ROUND E · SECTION 5 OF 6

Satellites and Applications

How satellites and space technology serve agriculture, weather, navigation, disaster response and daily life.

41 QUESTIONS

Satellites and Applications

Questions E1 – E41.

E1 What is a satellite?

E2 What are the three common types of Earth orbit used by satellites?

E3 What is special about a geostationary orbit?

E4 At approximately what altitude does a geostationary orbit occur?

E5 What is the main purpose of a communication satellite?

E6 What is the main purpose of a weather satellite?

E7 What system do satellites use to help determine positions on Earth, such as GPS?

E8 What does GPS stand for?

E9 How many satellites, at minimum, does a GPS receiver typically need to determine an accurate 3D position?

E10 What is a remote sensing satellite used for?

E11 What is the term for satellites that continuously monitor Earth's environment and natural resources?

E12 What technology allows satellite images to detect vegetation health and crop conditions?

E13 What is a space probe?

E14 What is the term for a satellite's path decaying and eventually falling back to Earth?

E15 What is space debris?

E16 Why is space debris a growing concern for satellite operators?

E17 What is a constellation of satellites?

E18 What company operates the Starlink satellite internet constellation?

E19 What is the purpose of a relay satellite?

E20 What is telemedicine's connection to satellite technology?

E21 What is the term for the ground infrastructure used to send and receive satellite signals?

E22 What is a transponder on a satellite?

E23 What is the function of solar panels on satellites?

E24 What is the purpose of an attitude control system on a satellite?

E25 What natural resource application benefits from satellite-based remote sensing?

E26 What is disaster management's connection to satellite technology?

E27 What is precision agriculture, aided by satellite technology?

E28 What are the two general categories of satellites based on their purpose?

E29 What is a nanosatellite?

E30 What is the term describing a satellite launched by a smaller nation or company to reduce costs by sharing a rocket ride?

E31 What role do satellites play in disaster early-warning systems?

E32 What is the function of a satellite's onboard computer?

E33 What is spectrum allocation in the context of satellite communication?

E34 What is the primary advantage of Low Earth Orbit satellites for internet services?

E35 What is a direct-to-home (DTH) satellite service used for?

E36 What is the term for satellites specifically designed to study Earth's climate over long periods?

E37 What is the purpose of a launch window in satellite deployment?

E38 What technology allows satellite images to be captured at night or through clouds?

E39 What is the function of a satellite bus?

E40 How does a satellite's orbital altitude affect signal latency?

E41 What is the role of an uplink and downlink in satellite communication?

ROUND F · SECTION 6 OF 6

Space Agencies of the World

The national and international organisations leading humanity's exploration of space, beginning with Pakistan's own.

37 QUESTIONS

Space Agencies of the World

Questions F1 – F37.

F1 What does SUPARCO stand for?

F2 In what year was SUPARCO established?

F3 What does ESA stand for?

F4 How many member states does the European Space Agency have?

F5 What is Russia's national space agency called?

F6 What is China's national space agency called?

F7 What agency oversees China's crewed spaceflight programme, including missions to Tiangong?

F8 What is Japan's national space agency called?

F9 What is the name of the United Arab Emirates' space agency?

F10 What mission did the UAE launch to Mars in 2020?

F11 What agency operates Canada's national space programme?

F12 What is the primary launch site used by NASA for crewed missions in the United States?

F13 What is the primary launch site used by Russia for crewed missions?

F14 What is China's main launch site for crewed missions?

F15 What launch site does China use for its most powerful heavy-lift rockets?

F16 What is the term for a joint venture involving multiple countries cooperating on a space mission?

F17 What organisation coordinates global cooperation and peaceful use of outer space under the United Nations?

F18 What international treaty, from 1967, forms the basis of international space law?

F19 What does the Outer Space Treaty primarily prohibit regarding weapons?

F20 What South Korean agency oversees the country's space programme?

F21 What is the name of the private American company founded by Elon Musk that builds rockets and spacecraft?

F22 What is the name of the private American space company founded by Jeff Bezos?

F23 What term describes a growing sector of privately funded space companies and startups?

F24 What is the term for cooperative agreements between countries for shared use of space infrastructure like the ISS?

F25 Which national space agencies operate alongside ESA membership in Italy, France and Germany?

F26 What is the name of Australia's national space agency?

F27 What year was the Australian Space Agency established?

F28 What organisation coordinates international standards for satellite radio frequencies?

F29 What term describes a space agency whose missions are uncrewed, carried out entirely by spacecraft and probes?

F30 What South American country has a growing national space agency, AEB?

F31 What is Iran's national space agency called?

F32 What is Turkey's national space agency called?

F33 What role does a national space agency typically play in a country's development?

F34 What is the term for facilities where satellites and spacecraft are assembled and tested before launch?

F35 What global event, held every October, celebrates space science and exploration worldwide?

F36 In what year was World Space Week first declared by the United Nations?

F37 What organisation coordinates and promotes World Space Week activities globally?

FOR THE QUIZMASTER ONLY

Answer Key

All 276 answers, in round order. Detail written after a dash is context for the quizmaster — a student needs only the part before it.

276 ANSWERS

ROUND A: BASICS OF SPACE SCIENCE

A1 The Milky Way

A2 Eight

A3 Mars

A4 Jupiter

A5 Mercury

A6 Mercury

A7 Saturn

A8 Gravity

A9 Distance — the distance light travels in one year, about 9.46 trillion kilometres

A10 The Sun

A11 About 8 minutes and 20 seconds

A12 The Moon

A13 The changing angle of sunlight reflected off the Moon as it orbits Earth

A14 When the Moon passes between the Sun and Earth, blocking the Sun's light

A15 When Earth passes between the Sun and the Moon, casting a shadow on the Moon

A16 An asteroid

A17 Ice, dust, and rocky material

A18 The Asteroid Belt

A19 A supernova

A20 A region of space with gravity so strong that nothing, not even light, can escape it

A21 Astronomy

A22 A telescope

A23 Galileo Galilei — he did not invent the telescope, but he was the first to turn an improved one on the night sky and publish what he saw

A24 A constellation

A25 A giant, long-lasting storm

A26 Saturn — over 270 confirmed moons, far more than any other planet

A27 Carbon dioxide

A28 A strong greenhouse effect caused by its thick carbon dioxide atmosphere

A29 Kuiper Belt Objects

A30 Pluto

A31 Perihelion

A32 Aphelion

A33 The tilt of Earth's axis as it orbits the Sun

A34 The atmosphere

A35 Oxygen

A36 A condition of very weak apparent gravity, such as in orbit, where objects and people float freely

A37 An orbit

A38 Elliptical (oval-shaped)

A39 The habitable zone (or Goldilocks zone)

A40 An exoplanet

A41 Hydrogen

A42 Nuclear fusion

A43 The corona

A44 A small rocky or metallic body traveling through space

A45 A shooting star

A46 A meteorite

A47 Its axis

A48 About 24 hours (one day)

A49 About 365.25 days (one year) — the extra quarter-day is why we add a leap day every four years

A50 The event horizon

ROUND B: ASTRONOMY AND THE UNIVERSE

B1 The Big Bang theory

B2 About 13.8 billion years

B3 A galaxy

B4 A barred spiral galaxy

B5 The Andromeda Galaxy

B6 Dark matter

B7 Dark energy

B8 The Cosmic Microwave Background

B9 A giant cloud of gas and dust in space, often where stars are born

B10 It becomes a red giant

B11 A white dwarf

B12 A neutron star

B13 Sirius, in the constellation Canis Major

B14 The Hubble Space Telescope

B15 The James Webb Space Telescope

B16 Infrared

B17 Cosmology

B18 That distant galaxies are moving away from us (the expansion of the universe)

B19 A rapidly rotating neutron star that emits regular pulses of radiation

B20 A binary star system

B21 Superclusters and galaxy filaments

B22 The group of galaxies that includes the Milky Way and Andromeda

B23 The heliosphere

B24 Voyager 1

B25 A distant, spherical shell of icy objects surrounding the solar system, a source of long-period comets

B26 Parallax (the stellar parallax method)

B27 The astronomical unit (AU), the average Earth-Sun distance

B28 Apparent magnitude

B29 Turbulence in Earth's atmosphere bending starlight

B30 Star formation — the gravitational collapse of a cold cloud of gas and dust until its core is hot and dense enough for nuclear fusion to begin

B31 A supermassive black hole at the galaxy's centre

B32 About 4 million times the mass of the Sun

B33 Sagittarius A*

B34 2019

B35 The black hole in galaxy M87

B36 Isotropic radiation

B37 A dense, spherical collection of thousands to millions of old stars bound by gravity

B38 Spiral and elliptical galaxies

B39 That it is moving towards us — its light is compressed to shorter, bluer wavelengths

B40 Its gravitational effects on the motion of galaxies and stars, which cannot be explained by visible matter alone

B41 The number of active, communicative extraterrestrial civilisations in the galaxy

B42 Search for Extraterrestrial Intelligence

B43 The celestial sphere

B44 An extremely luminous active galactic nucleus powered by a supermassive black hole

B45 A "standard candle" — its regular pulsation reveals its true brightness, allowing astronomers to measure distances to other galaxies

B46 About 93 billion light-years across

B47 A type of neutron star with an extremely powerful magnetic field

B48 A multiple star system

B49 The idea that the universe is roughly the same (homogeneous and isotropic) when viewed on a large enough scale

B50 Gaia

ROUND C: ROCKETS AND SPACE TECHNOLOGY

C1 Newton's Third Law of Motion (for every action, there is an equal and opposite reaction)

C2 Payload, fuel (propellant), engine, and structural frame/body

C3 Propellant

C4 Solid propellant and liquid propellant

C5 A rocket built of separate sections (stages) that are jettisoned once their fuel is used, reducing weight

C6 To reduce the mass the rocket must carry as it climbs, improving efficiency and reaching higher speeds

C7 The minimum speed needed for an object to break free of a planet's gravitational pull without further propulsion

C8 About 11.2 kilometres per second — roughly 40,000 kilometres per hour

C9 Konstantin Tsiolkovsky — his 1903 rocket equation still governs how every launch vehicle is designed

C10 Robert Goddard

C11 Sputnik 1

C12 The V-2 rocket

C13 The forward force produced by a rocket engine expelling exhaust gases

C14 A reusable booster (or reusable first stage)

C15 SpaceX

C16 Falcon 9

C17 Starship

C18 A rocket used to carry a payload from Earth's surface into space

C19 The payload

C20 The protective nose cone that shields the payload during launch through the atmosphere

C21 A rocket carries its own oxidizer and can operate in the vacuum of space, while a jet engine relies on atmospheric oxygen

C22 It combines with fuel to enable combustion, since there is no atmospheric oxygen in space

C23 Liquid oxygen

C24 A retro-burn (or deceleration burn)

C25 Carrying scientific instruments for suborbital research into the upper atmosphere and near space

C26 The efficiency of a rocket engine, indicating how effectively it converts propellant into thrust

C27 A form of electric propulsion that accelerates ions to produce low but highly efficient thrust, often used in deep-space missions

C28 The internationally recognised boundary of space, about 100 kilometres above sea level

C29 A launch failure — in the industry, a "loss of mission"

C30 Steering the rocket by pivoting the engine nozzle to direct thrust

C31 Propellant, such as liquid hydrogen or liquid oxygen, that must be stored at extremely low temperatures

C32 A gravity turn

C33 NASA

C34 Launching the Apollo missions that carried astronauts to the Moon

C35 About 111 metres (363 feet)

C36 A system combining a solid fuel with a liquid or gaseous oxidizer

C37 Payload capacity

C38 The process of jettisoning a spent rocket stage during ascent

C39 Rideshare (or co-manifested) launches

C40 A small, standardised satellite built in modular cube-shaped units, often used for low-cost missions and education

C41 The rapid transformation of rocketry through reusability, falling launch costs, new materials and far wider access to space — the theme of World Space Week 2026

C42 Reusable rocket boosters

C43 It allows rapid, cost-effective production of complex rocket engine parts and components

C44 A restartable (or throttleable and re-ignitable) engine

C45 Protecting the spacecraft from the intense heat generated by friction with the atmosphere

C46 A protective material designed to burn away gradually, carrying heat away from the spacecraft during re-entry

C47 Small-lift (or microlaunch) vehicles

C48 It is the structure from which a rocket is fueled, prepared, and launched

C49 Data transmitted from the rocket or spacecraft to ground control, such as speed, altitude, and system status

C50 Liftoff (or launch)

ROUND D: SPACE EXPLORATION HISTORY

D1 1957

D2 Yuri Gagarin, in 1961

D3 The Soviet Union

D4 Alan Shepard

D5 Neil Armstrong

D6 1969

D7 The Eagle

D8 Buzz Aldrin

D9 Michael Collins

D10 "That's one small step for man, one giant leap for mankind." Armstrong later said he intended "for a man"

D11 Valentina Tereshkova

D12 Salyut 1, launched by the Soviet Union in 1971

D13 Skylab

D14 The ISS

D15 2000

D16 Five — NASA, Roscosmos, ESA, JAXA and the Canadian Space Agency

D17 STS-1, flown in 1981

D18 The Space Shuttle

D19 It broke apart shortly after launch, killing all seven crew members

D20 It disintegrated during re-entry, killing all seven crew members

D21 Apollo 11

D22 Six (Apollo 11, 12, 14, 15, 16, and 17)

D23 New Horizons

D24 Sojourner, carried by the Mars Pathfinder mission in 1997

D25 Perseverance

D26 Ingenuity

D27 Mariner 9, which entered Mars orbit on 13 November 1971. The first spacecraft to orbit Venus was Venera 9, in 1975

D28 Viking 1, in 1976

D29 The Artemis programme. Artemis II carried a crew around the Moon in April 2026 — the first crewed lunar voyage since 1972

D30 Apollo 8

D31 The Apollo-Soyuz Test Project, a joint US-Soviet docking mission

D32 SpaceX's Crew Dragon

D33 Tiangong

D34 'Heavenly Palace'

D35 Shenzhou 5

D36 Yang Liwei

D37 Taikonauts

D38 Philae, part of the European Rosetta mission, in 2014

D39 Japan's Hayabusa, which returned grains from asteroid Itokawa in 2010

D40 Luna 3, launched by the Soviet Union in 1959

D41 The outer planets of the solar system and beyond

D42 1977

D43 The Golden Record

D44 Voyager 1, which crossed into interstellar space in 2012

D45 An international set of principles guiding cooperative and peaceful exploration of the Moon and beyond, led by NASA

D46 The Soviet Union, with Venera 7 in 1970

D47 SpaceX, with the Falcon 1 in 2008

D48 SpaceX's Inspiration4 mission

ROUND E: SATELLITES AND APPLICATIONS

E1 An object that orbits a planet or other body in space, either natural (like the Moon) or artificial (human-made)

E2 Low Earth Orbit (LEO), Medium Earth Orbit (MEO), and Geostationary Orbit (GEO)

E3 A satellite there orbits at the same rate as Earth's rotation, appearing fixed over one location

E4 About 35,786 kilometres above the equator

E5 To relay television, telephone, internet, and other data signals across long distances

E6 To observe and monitor Earth's atmosphere, clouds, and weather patterns

E7 Global Navigation Satellite Systems

E8 Global Positioning System

E9 Four satellites

E10 Collecting data about Earth's surface, such as land use, agriculture, and environmental changes, from orbit

E11 Earth observation satellites

E12 Multispectral and hyperspectral remote sensing

E13 An uncrewed spacecraft sent to explore and gather data about other bodies in space

E14 Orbital decay (or reentry)

E15 Defunct human-made objects, such as old satellites and rocket parts, that remain in orbit around Earth

E16 It can collide with active satellites and spacecraft, causing damage or destruction

E17 A group of satellites working together in coordinated orbits to provide continuous coverage, such as for internet or navigation

E18 SpaceX

E19 To transmit signals or data between two points that do not have a direct line of sight, such as between ground stations and other spacecraft

E20 Satellites can enable remote healthcare consultations and data transfer in areas lacking terrestrial infrastructure

E21 A ground station

E22 A device that receives, amplifies, and retransmits signals, often used in communication satellites

E23 To convert sunlight into electrical power for the satellite's systems

E24 To maintain and adjust the satellite's orientation in space

E25 Monitoring of forests, water resources, minerals, and land use changes

E26 Satellites help track natural disasters like floods, storms, and wildfires, and support relief coordination

E27 Farming techniques that use satellite data to optimise planting, irrigation, and resource use for higher crop yields

E28 Scientific/research satellites and applications satellites (such as communication, navigation, and Earth observation)

E29 A very small satellite, typically weighing between 1 and 10 kilograms

E30 A rideshare payload

E31 They detect and track hazards like cyclones, tsunamis, and floods, providing critical lead time for warnings

E32 To manage the satellite's systems, process data, and execute commands from ground control

E33 The assignment of specific radio frequency bands for satellites to avoid interference with other signals

E34 Lower latency (signal delay) due to their closer proximity to Earth

E35 Broadcasting television signals directly to household satellite dishes

E36 Climate monitoring (or environmental) satellites

E37 A specific time period during which a rocket must launch to reach its intended orbit efficiently

E38 Synthetic Aperture Radar (SAR)

E39 The main body structure of a satellite that houses its subsystems and supports the payload

E40 The higher the orbit, the longer the delay — a geostationary satellite adds far more latency than one in low Earth orbit

E41 An uplink sends signals from the ground to the satellite, and a downlink sends signals from the satellite back to the ground

ROUND F: SPACE AGENCIES OF THE WORLD

F1 The Space & Upper Atmosphere Research Commission — Pakistan's national space agency

F2 1961 — Pakistan established SUPARCO as one of the earliest space agencies in the developing world

F3 The European Space Agency

F4 23 member states, since Slovenia joined in January 2025

F5 Roscosmos

F6 The China National Space Administration (CNSA)

F7 The China Manned Space Agency (CMSA)

F8 The Japan Aerospace Exploration Agency (JAXA)

F9 The UAE Space Agency

F10 The Hope Probe (Al-Amal)

F11 The Canadian Space Agency (CSA)

F12 Kennedy Space Center, Florida

F13 The Baikonur Cosmodrome, in Kazakhstan

F14 The Jiuquan Satellite Launch Center

F15 The Wenchang Space Launch Site, on Hainan Island

F16 An international collaboration (or multinational mission)

F17 The United Nations Office for Outer Space Affairs (UNOOSA)

F18 The Outer Space Treaty, opened for signature on 10 October 1967 — the date that closes World Space Week each year

F19 The placement of nuclear weapons or weapons of mass destruction in orbit or on celestial bodies

F20 The Korea AeroSpace Administration (KASA), established in 2024

F21 SpaceX

F22 Blue Origin

F23 The commercial (or private) space industry

F24 International space partnerships (or space cooperation agreements)

F25 ASI in Italy, CNES in France and DLR in Germany

F26 The Australian Space Agency

F27 2018

F28 The International Telecommunication Union (ITU)

F29 A robotic space programme

F30 Brazil (the Agência Espacial Brasileira)

F31 The Iranian Space Agency (ISA)

F32 The Turkish Space Agency

F33 It leads research, satellite development, launches, exploration, and applications of space technology for national benefit

F34 Integration and testing facilities

F35 World Space Week, held every 4–10 October

F36 1999 — the United Nations General Assembly declared it on 6 December that year

F37 The World Space Week Association (WSWA