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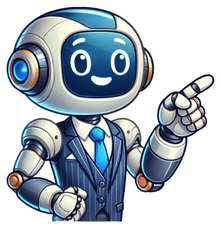

Image gallerySkip image galleryImage source, Moxley / Weather WatcherImage caption, The eclipse was clear to see in this image taken by Moxley in Winterborne Kingston, DorsetImage source, Tora / Weather WatchersImage caption, Tora captured the partial eclipse in Chinnor, OxfordshireImage source, Stacey JohnsImage caption, A dent in the outline of the sun can be seen in this picture taken in Gosport by Stacey JohnsImage source, EJWWest / Weather WatchersImage caption, This image was taken by EJWWest in Sandhurst, BerkshireImage source, New Squids on the Block / Weather WatchersImage caption, New Squids on the Block in Basingstoke submitted this image to BBC Weather WatchersImage source, Craig Rich / Weather WatchersImage caption, Craig Rich took this photo of the partial solar eclipse in Wareham, Dorset1 of 6Slide 1 of 6, Partial eclipse of the sun - a chunk is missing out of the orange disc against a black background, The eclipse was clear to see in this image taken by Moxley in Winterborne Kingston, DorsetPeople from across the south of England have been sharing their photos of the partial solar eclipse.The phenomenon was visible across Europe, north-western Africa, Greenland, Iceland and parts of the north-eastern US and eastern Canada.It began at 10:07 GMT in the UK and ended at midday.About 30% to 50% of the sun was obscured by the moon at its peak, at about 11:00.Do you have a story BBC Dorset should cover? from NASAs Heliophysics Education Activation Team (NASA HEAT) and the Astronomical Society of the Pacific/Night Sky Network Have you ever wondered about what the Sun is made of? Or why do you get sunburned on even cloudy days? NASAs new Explore the Sun toolkit brings the wonders of solar science to you, offering answers to these questions and more! A collaboration between NASAs Heliophysics Education Activation Team (NASA HEAT) and the Astronomical Society of the Pacifics Night Sky Network program, this resource was developed for informal educators, amateur astronomers, and astronomy enthusiasts alike, providing engaging activities for anyone eager to learn more about our nearest star. Whether youre hosting a solar viewing event or an indoor presentation, the Our Dynamic Sun toolkit provides easy-to-use materials designed to spark curiosity. Each card in the set pairs NASA images with clear explanations for each topic: What color is the Sun? (hint: its not yellow!) How does the Sun affect us here on Earth? When will the Sun die? These cards not only answer common questions the public may have, but also highlight how NASAs solar research helps us understand space weather, solar storms, and their impacts on our daily lives. Bring the Suns story to your community and inspire the next generation of explorers. You can download this free Our Dynamic Sun toolkit here: Pallab GhoshScience Correspondent@BBCPallabGwndaf HughesScience videographerNever before seen pictures of the Suns south poleThe first ever video and images of the Sun's south pole have been sent back to Earth by the European Space Agency's Solar Orbiter spacecraft.The new images will enable scientists to learn how the Sun cycles between periods of raging storms and quiet times.This is important because intense solar activity can affect satellite communication and knock out power grids on Earth.The new images show a shimmering bright atmosphere which in parts reaches temperatures of a million degrees Celsius. Interspersed are darker clouds of gas, which although much cooler, are still a searing one hundred thousand degrees.The pictures are the closest and most detailed ever taken of the Sun and will help scientists learn how the star that gives us life on Earth actually works, according to Prof Carole Mundell, ESA's Director of Science"Today we reveal humankind's first-ever views of the Sun's pole," she says."The Sun is our nearest star, giver of life and potential disruptor of modern space and ground power systems, so it is imperative that we understand how it works and learn to predict its behaviour".How the Suns magnetic fields shape the SunFrom Earth, the Sun is so bright that it appears like a featureless disc. But at different frequencies and using special filters, scientists can see it in its true form: as a dynamic fluid ball, with magnetic fields twisting and turning on the surface and conjuring up flares and loops of gas into its atmosphere.It is these magnetic fields that determine when the Sun rages and spits out particles toward the Earth.Scientists know that the Sun has a quiet period when the magnetic fields are ordered, with our star having a fixed magnetic north and south pole. This is a phase when the Sun is not able to produce violent explosions, but these fields then become complex and chaotic as they reorientate with the north and south poles flipping approximately every 11 years.During the chaotic period the Sun tries to reduce its complexity and violence spills out, as bits of the Sun hurtle toward the Earth. These solar storms can damage communications satellites and power grids, though they can also cause beautiful auroras in the sky.According to Prof Lucie Green of UCL, it has been hard to predict this activity with computer models of the Sun because there has been no data on the migration of the magnetic fields towards the poles. But that has now changed"We now have the missing piece of the puzzle," she told BBC News."The reversal of the polar magnetic fields on the Sun has been one of the big open questions in science and what we will be able to do with Solar Orbiter is measure for the first time the really important fluid flows that grab pieces of the magnetic field across the Sun and transport them to the polar regions".ESASolar Orbiter has taken the closest and most detailed pictures of the Sun.The ultimate goal is to develop computer models of the Sun so that this so-called space weather can be predicted. Accurate forecasts will enable satellite operators, power distribution companies, as well as aurora watchers, to better plan for intense solar storms."This is the Holy Grail of solar physics," says Prof Christopher Owen, who specialises in solar wind studies using data from the spacecraft."Solar Orbiter will enable us to get to the bottom of some of the basic science of space weather. But a little more work needs to be done before we get to the point where we see signals on the Sun that we can rely on to predict eruptions that might hit the Earth".ESAEach colour represents a different element at a layer on the Sun. From Left to right: Hydrogen, Carbon, Oxygen, Neon and MagnesiumSolar Orbiter also has captured new images of chemical elements at different layers of the Sun and their movement. These have been taken using an instrument called SPICE, which measures the specific frequencies of light, called spectral lines, which are sent out by specific chemical elements hydrogen, carbon, oxygen, neon and magnesium at known temperatures.For the first time, the SPICE team has tracked spectral lines to measure how fast clumps of solar material are moving. These measurements can reveal how particles are flung out from the Sun in the form of solar wind. The Sun is the star at the centre of our solar system. It is an almost perfect sphere of super-hot gases whose gravity holds the solar system together. The energy produced by the Sun is essential for life on Earth and is a driving force behind the Earths weather. Age:4.6 Billion Years Type:Yellow Dwarf (G2V) Diameter:1,392,684 km Equatorial Circumference:4,370,005.6 km Mass:1.99 10^30 kg (333,060 Earths) Surface Temperature:5,500 C The Sun is all the colours mixed together, this appears white to our eyes. The Sun is composed of hydrogen (70%) and Helium (28%). The Sun is a main-sequence G2V star (or Yellow Dwarf). The Sun is 109 times wider than the Earth and 330,000 times as massive. The Suns surface area is 11,990 times that of the Earths. The distance between the Earth and the Sun is an Astronomical Unit (AU) One million Earths could fit inside the Sun.A hollow Sun would fit around 960,000 spherical Earths. If squished inside with no wasted space, then around 1,300,000 would fit inside. The Suns surface area is 11,990 times that of the Earths.The Sun contains 99.86% of the mass in the Solar System.The mass of the Sun is approximately 330,000 times greater than that of Earth. It is almost three quarters Hydrogen, whilst most of the remaining mass is Helium.The Sun is an almost perfect sphere.There is a 10-kilometre difference between the Suns polar and equatorial diameter. This means it is the closest thing to a perfect sphere that has been observed in nature.The Sun will consume the Earth.When the Sun has burned all its Hydrogen, it will continue to burn helium for 130 million more years. During this time, it will expand to the point that it will engulf Mercury, Venus, and the Earth. At this stage it will have become a red giantThe Sun will one day be about the size of Earth.After its red giant phase, the Sun will collapse. It will keep its enormous mass with the approximate volume of our planet. When this happens, it will have become a white dwarf.The temperature inside the Sun can reach 15 million degrees Celsius.Energy is generated at the Suns core, by nuclear fusion, as Hydrogen converts to Helium. Hot objects expand, the Sun would explode if it were not for its enormous gravitational force. The temperature on the surface of the Sun is closer to5,600degrees Celsius.Light from the Sun takes eight minutes to reach Earth.The Sun is an average distance of 150 million kilometres from the Earth. Light travels at 300,000 kilometres per second. Dividing one by the other gives us an approximate time of 500 seconds (or eight minutes and 20 seconds). Although this energy reaches Earth in a few minutes, it will already have taken millions of years to travel from the Suns core to its surface.The Sun travels at 220 kilometres per second.The Sun is 24,000-26,000 light years from the galactic centre. It takes the Sun 225-250 million years to complete an orbit of the centre of theMilky Way.The distance from the Sun to Earth changes throughout the year.This is because the Earth travels on an elliptical orbit around the Sun. The distance between the two bodies varies from 147 to 152 million kilometres.The Sun is middle-aged.At around 4.6 billion years old, the Sun has already burned off about half of its store of Hydrogen. It has enough left to continue to burn Hydrogen for approximately 5 billion years. The Sun is currently a type of star known as a Yellow Dwarf.The Sun has a very strong magnetic field.Magnetic energy released by the Sun during magnetic storms causes solar flares. We see these as sunspots. In sunspots, the magnetic lines twist and they spin, much like a tornado would on Earth.The Sun generates solar wind.The wind is a stream of charged particles. This travels at approximately 450 kilometres per second through the solar system. Solar wind occurs when the magnetic field of the Sun extends into space.Sol is the Latin for SunThis is where the word solar comes from, which is used to describe things that are derived from, related to, or caused by the Sun Sun size compared to Earth, Neptune, Uranus, Saturn and Jupiter Sunspots are areas of the Suns surface that appear darker than the surrounding areas, this is because they are cooler. They form in areas of strong magnetic activity that inhibit heat transfer. When the magnetic fields near sunspots cross, tangle or are reorganised, an explosion of energy can be released. Intense solar flares can interfere with radio communications on Earth. NameDistance from SunLength of YearClassification Mercury57,909,227 km88 Earth daysPlanet Venus108,209,475 km225 Earth daysPlanet Earth149,598,262 km365.24 daysPlanet Mars227,943,824 km1.9 Earth yearsPlanet Ceres413,700,000 km4.6 Earth yearsDwarf Planet Jupiter778,340,821 km11.9 Earth yearsPlanet Saturn1,426,666,422 km29.5 Earth yearsPlanet Uranus2,870,658,186 km84.0 Earth yearsPlanet Neptune4,498,396,441 km164.8 Earth yearsPlanet Pluto5,874,000,000 km248.0 Earth yearsDwarf Planet Haumea6,452,000,000 km283.3 Earth yearsDwarf Planet Makemake6,850,000,000 km309.9 Earth yearsDwarf Planet Eris10,120,000,000 km560.9 Earth yearsDwarf Planet Sources: First Published: June 2012Last Updated: May 2020Author: Chris Jones Home United Kingdom England Chinnor Check out today's and tomorrow's sunrise and sunset times in Chinnor, England, United Kingdom, as well as the whole calendar for July 2025. First light at 4:32:54 am Sunrise time: 5:13:33 am Sunset time: 9:06:50 pm Last light at 9:47:29 pm Moon set on Jul 24 at 08:26 PM Moon will rise on Jul 25 at 04:34 AMMoon phase: New Moon (0%) First light at 4:34:34 am Sunrise time: 5:14:58 am Sunset time: 9:05:26 pm Last light at 9:45:50 pm Moon will rise on Jul 25 at 04:34 AM Moon will set on Jul 25 at 08:47 PMMoon phase: Waxing Crescent (2%) Chinnor, England Latitude: 51.701771 Longitude: -0.911610 Time zone: UTC+1 BST Shortest day in Chinnor, England The shortest day of the year will be in 5 months, during the winter solstice on December 21, 2025, with a daylight length of 7 hours and 52 minutes. Longest day in Chinnor, England The longest day of the year was 1 month and 4 days ago, during the summer solstice on June 20, 2025, with a daylight length of 16 hours and 45 minutes. Sunrise and sunset times, civil twilight start and end times as well as solar noon, and day length for every day of July in Chinnor. The day length shortens by 1 hour, 7 minutes over the course of July 2025 in Chinnor, England - from 16 hours, 39 minutes on the first day to 15 hours, 32 minutes on the last day. Tue, Jul 1 4:02:32 am 4:47:49 am 9:27:22 pm 10:12:39 pm 16h 39m 33s 16h 39m 33s 1:07:36 pm 74.8 2:48:55 am 11:26:16 pm 1:00:01 am 1:00:01 am 7h 21m 12s (32%) Wed, Jul 2 4:03:24 am 4:48:34 am 9:27:00 pm 10:12:10 pm 16h 38m 26s -1m -7s 1:07:47 pm 74.7 2:50:15 am 11:25:19 pm 1:00:01 am 1:00:01 am 7h 22m 20s (42%) Thu, Jul 3 4:04:19 am 4:49:20 am 9:26:35 pm 10:11:37 pm 16h 37m 15s -1m -11s 1:07:58 pm 74.6 2:51:40 am 11:24:16 pm 1:00:01 am 1:00:01 am 7h 23m 35s (51%) Fri, Jul 4 4:05:17 am 4:50:10 am 9:26:08 pm 10:11:00 pm 16h 35m 58s -1m -17s 1:08:09 pm 74.5 2:53:09 am 11:23:08 pm 1:00:01 am 1:00:01 am 7h 24m 53s (61%) Sat, Jul 5 4:06:18 am 4:51:01 am 9:25:37 pm 10:10:20 pm 16h 34m 36s -1m -22s 1:08:19 pm 74.4 2:54:43 am 11:21:55 pm 1:00:01 am 1:00:01 am 7h 26m 18s (70%) Sun, Jul 6 4:07:22 am 4:51:55 am 9:25:03 pm 10:09:36 pm 16h 33m 8s -1m -28s 1:08:29 pm 74.3 2:56:21 am 11:20:37 pm 1:00:01 am 1:00:01 am 7h 27m 49s (78%) Mon, Jul 7 4:08:29 am 4:52:52 am 9:24:26 pm 10:08:49 pm 16h 31m 34s -1m -34s 1:08:39 pm 74.2 2:58:04 am 11:19:14 pm 1:00:01 am 1:00:01 am 7h 29m 24s (86%) Tue, Jul 8 4:09:38 am 4:53:50 am 9:23:46 pm 10:07:58 pm 16h 29m 56s -1m -38s 1:08:48 pm 74.1 2:59:49 am 11:17:47 pm 1:00:01 am 1:00:01 am 7h 31m 5s (92%) Wed, Jul 9 4:10:50 am 4:54:51 am 9:23:03 pm 10:07:03 pm 16h 28m 12s -1m -44s 1:08:57 pm 74 3:01:39 am 11:16:15 pm 1:00:01 am 1:00:01 am 7h 32m 51s (96%) Thu, Jul 10 4:12:05 am 4:55:54 am 9:22:17 pm 10:06:06 pm 16h 26m 23s -1m -49s 1:09:05 pm 73.9 3:03:31 am 11:14:40 pm 1:00:01 am 1:00:01 am 7h 34m 41s (99%) Fri, Jul 11 4:13:22 am 4:56:58 am 9:21:28 pm 10:05:05 pm 16h 24m 30s -1m -53s 1:09:13 pm 73.7 3:05:26 am 11:13:00 pm 1:00:01 am 1:00:01 am 7h 36m 37s (100%) Sat, Jul 12 4:14:41 am 4:58:05 am 9:20:37 pm 10:04:01 pm 16h 22m 32s -1m -58s 1:09:21 pm 73.6 3:07:25 am 11:11:17 pm 1:00:01 am 1:00:01 am 7h 38m 37s (99%) Sun, Jul 13 4:16:03 am 4:59:14 am 9:19:42 pm 10:02:54 pm 16h 20m 28s -2m -4s 1:09:28 pm 73.4 3:09:25 am 11:09:31 pm 1:00:01 am 1:00:01 am 7h 40m 42s (95%) Mon, Jul 14 4:17:26 am 5:00:24 am 9:18:45 pm 10:01:43 pm 16h 18m 21s -2m -7s 1:09:35 pm 73.3 3:11:29 am 11:07:41 pm 1:00:01 am 1:00:01 am 7h 42m 52s (90%) Tue, Jul 15 4:18:52 am 5:01:37 am 9:17:45 pm 10:00:30 pm 16h 16m 8s -2m -13s 1:09:41 pm 73.1 3:13:34 am 11:05:48 pm 1:00:01 am 1:00:01 am 7h 45m 5s (82%) Wed, Jul 16 4:20:19 am 5:02:50 am 9:16:42 pm 9:59:14 pm 16h 13m 52s -2m -16s 1:09:46 pm 73 3:15:41 am 11:03:52 pm 1:00:01 am 1:00:01 am 7h 47m 24s (73%) Thu, Jul 17 4:21:48 am 5:04:06 am 9:15:37 pm 9:57:55 pm 16h 11m 31s -2m -21s 1:09:51 pm 72.8 3:17:50 am 11:01:53 pm 1:00:01 am 1:00:01 am 7h 49m 46s (62%) Fri, Jul 18 4:23:19 am 5:05:23 am 9:14:29 pm 9:56:33 pm 16h 9m 6s -2m -25s 1:09:56 pm 72.6 3:20:00 am 10:59:52 pm 1:00:01 am 1:00:01 am 7h 52m 12s (51%) Sat, Jul 19 4:24:51 am 5:06:41 am 9:13:19 pm 9:55:09 pm 16h 6m 38s -2m -28s 1:10:00 pm 72.4 3:22:12 am 10:57:48 pm 1:00:01 am 1:00:01 am 7h 54m 42s (39%) Sun, Jul 20 4:26:25 am 5:08:01 am 9:12:06 pm 9:53:42 pm 16h 4m 5s -2m -33s 1:10:03 pm 72.3 3:24:25 am 10:55:42 pm 1:00:01 am 1:00:01 am 7h 57m 16s (28%) Mon, Jul 21 4:28:01 am 5:09:22 am 9:10:50 pm 9:52:12 pm 16h 1m 28s -2m -37s 1:10:06 pm 72.1 3:26:39 am 10:53:33 pm 1:00:01 am 1:00:01 am 7h 59m 55s (19%) Tue, Jul 22 4:29:37 am 5:10:45 am 9:09:33 pm 9:50:40 pm 15h 58m 48s -2m -40s 1:10:09 pm 71.9 3:28:55 am 10:51:23 pm 1:30:37 am 12:49:40 am 8h 2m 35s (10%) Wed, Jul 23 4:31:15 am 5:12:08 am 9:08:13 pm 9:49:06 pm 15h 56m 5s -2m -43s 1:10:10 pm 71.7 3:31:10 am 10:49:10 pm 1:42:18 am 12:38:03 am 8h 5m 20s (4%) Thu, Jul 24 4:32:54 am 5:13:33 am 9:06:50 pm 9:47:29 pm 15h 53m 17s -2m -48s 1:10:11 pm 71.4 3:33:27 am 10:46:56 pm 1:50:56 am 12:29:27 am 8h 8m 8s (1%) Fri, Jul 25 4:34:34 am 5:14:58 am 9:05:26 pm 9:45:50 pm 15h 50m 28s -2m -49s 1:10:12 pm 71.2 3:35:44 am 10:44:40 pm 1:58:12 am 12:22:12 am 8h 10m 59s (0%) Sat, Jul 26 4:36:15 am 5:16:25 am 9:03:59 pm 9:44:09 pm 15h 47m 34s -2m -54s 1:10:12 pm 71 3:38:02 am 10:42:22 pm 2:04:37 am 12:15:47 am 8h 13m 54s (2%) Sun, Jul 27 4:37:57 am 5:17:53 am 9:02:30 pm 9:42:25 pm 15h 44m 37s -2m -57s 1:10:11 pm 70.8 3:40:20 am 10:40:03 pm 2:10:29 am 12:09:54 am 8h 16m 51s (5%) Mon, Jul 28 4:39:40 am 5:19:21 am 9:00:59 pm 9:40:40 pm 15h 41m 38s -2m -59s 1:10:10 pm 70.5 3:42:38 am 10:37:42 pm 2:15:54 am 12:04:26 am 8h 19m 52s (11%) Tue, Jul 29 4:41:23 am 5:20:51 am 8:59:26 pm 9:38:53 pm 15h 38m 35s -3m -3s 1:10:08 pm 70.3 3:44:56 am 10:35:20 pm 2:21:00 am 11:59:16 pm 8h 22m 55s (18%) Wed, Jul 30 4:43:08 am 5:22:21 am 8:57:51 pm 9:37:04 pm 15h 35m 30s -3m -5s 1:10:06 pm 70.1 3:47:15 am 10:32:57 pm 2:25:50 am 11:54:21 pm 8h 26m 1s (26%) Thu, Jul 31 4:44:52 am 5:23:52 am 8:56:14 pm 9:35:13 pm 15h 32m 22s -3m -8s 1:10:03 pm 69.8 3:49:33 am 10:30:32 pm 2:30:27 am 11:49:38 pm 8h 29m 9s (35%) We're always improving this website! Enjoy this beautiful gallery of images of the sunset and sunrise at Chinnor, England. All images provided by our fantastic community of photographers! The followin graph shows sunrise and sunset times in Chinnor, England for every day of the year. There are two jumps in the graph that represent the hour change for Daylight Saving Time (DST) in Chinnor, England. New Moon Astro. Twilight00:00 00:33 Night00:33 01:46 Astro. Twilight01:46 03:32 Nautical Twilight03:32 04:32 Civil Twilight04:32 05:15 Daylight05:15 21:04 Civil Twilight21:04 21:46 Nautical Twilight21:46 22:46 Astro. Twilight22:46 23:59See full month's SunYear 2025 Moon PhasesSee full month's MoonAdvertising The centre of the solar system around which all the planets, moons, comets and asteroids orbit, the Sun's heat and light are essential for life. Explore facts about the biggest and hottest object in the solar system.Equator circumference: 4,379,000kmRadius: 695,700kmTemperature: 5,973C to 15,000,000CAverage orbital speed around the Milky Way: 720,000km/h (200km/s)Star type: Yellow dwarfAverage time taken to rotate on axis: 27 Earth daysNumber of planets: 8The Sun is the biggest object in our solar system, with a distance of 695,508 from to surface. It contains 99.86% of the mass of the entire solar system and could contain roughly 1.3 million Earths.The Sun is an average-sized star. Some stars are just a tenth of its size, while others are more than 700 times bigger. Due to its huge mass and strong gravity, the Sun is a sphere.How hot is the Sun?The core is the hottest part of the Sun, at 15 million degrees Celsius. This is hot enough to sustain thermonuclear when hydrogen atoms are fused together to form larger helium atoms. This releases an extraordinary amount of energy which in turn is released as heat and light.The energy produced at the core takes up to a million years to reach the outer layer known as the convective zone. At this the temperature drops to around two million degrees Celsius. By the time it gets to the surface the temperature is down to a much cooler 5,973C - but it's still hot enough to boil diamonds.In the Sun's atmosphere, known as the corona, the temperature begins to rise again to roughly two million degrees Celsius. As from the core of the Sun grows wider, the temperature would be expected to drop. This dramatic increase in temperature in the atmosphere is one of the star's biggest mysteries.The Sun at different ultraviolet wavelengths, (l-r) the bright spots are 60 00080 000C, 1 million, 1.5 million and 2 million degrees SOHO/ESA/NASAThe Sun is a ball of gas and plasma - around 91% of it is hydrogen gas. Under intense heat and gravitational force this is fused into helium during nuclear fusion.When the plasma is heated to the temperatures seen on the Sun, it contains so much energy that the charged particles can escape the star's gravity and blow out into space. This is called solar wind - under certain conditions, when it hits Earth's atmosphere it can cause auroras, such as the Northern Lights.In addition to hydrogen and helium, scientists have detected at least 65 other elements in the Sun. The most abundant of these include oxygen, carbon, nitrogen, silicon, magnesium, neon, iron, and sulphur.Does the Sun rotate?Yes. Even though the Sun is not solid like Earth, it still has a rotation as the plasma swirls around its surface. On average, it takes 27 Earth days for the Sun to rotate once on its axis, but different parts move at different speeds. The equatorial regions take just 24 days to rotate and the polar regions more than 30. What are sunspots? Sunspots are cooler parts of the Sun's surface, and occur in the photosphere. The temporary splodges across the surface appear darker to us than the warmer plasma surrounding it.These cooler spots can be up to 50,000 kilometres across. They are thought to be caused by interactions with particularly strong regions of the underlying magnetic field, which slightly reduce the radiation coming up from the core, cooling the surface. Sunspots are cooler regions of the Sun's surface SOHO/ESA/NASASolar flares are the largest explosive events in the entire solar system. They occur when the magnetic fields associated with the sunspots convert energy into heat and accelerating particles, ejecting it into space.They are by a burst of photons - or light - at almost every wavelength. Scientists usually measure the ultraviolet rays, X-rays gamma-rays coming from the solar flares. These typically show up as bright flashes on the surface of the and can last from just a couple of minutes to a few hours. What type of star is the Sun?The Sun is currently a yellow dwarf. Like all stars, it began as a contracting nebula - effectively a cloud of dust and gas.As each particle has its own tiny gravitational pull, the dust and gas began to coalesce into a protostar. As this mass is pulled together and collapses in on itself it generates heat. If it becomes big enough it will eventually get sufficiently hot to fuse hydrogen into helium. This was how the Sun formed.The celestial object then enters its main sequence stage, during which the outward pressure of nuclear fusion is balanced by the inward pressure of the stars own gravity. The Sun is currently in this stable phase. A solar flare as seen in high energy X-rays NASA/JPL-Caltech/GSFCIt won't. When all of the hydrogen in its core is burned up, it exits the main sequence stage.As a relatively small star, the outer layers of the Sun will collapse in on themselves, creating temperatures hot enough to fuse helium into carbon. At this the pressure will cause the star to rapidly expand outward to form a red giant.For the Sun, this is expected to occur in about five billion years. It is likely to engulf Mercury and Venus - and potentially even the Earth.It will eventually shrink to become a planetary nebula with a white dwarf at its core.Where is the Sun in the Milky Way?There are an estimated 100 billion galaxies in the known universe. The Sun and its eight planets, including Earth, reside in one known as the Milky Way. Our galaxy is around one quintillion or 100,000 light years.The Sun is in a spiral arm of the Milky Way called the Orion Spur. This branches off from the galaxy's Sagittarius arm. The Sun and our solar system are orbiting around the of the Milky Way at a speed of 720,000 per hour. It takes 230 million years to make one complete orbit. A total solar eclipse seen from Casper, Wyoming (US) ESA/MP Ayucar, CC BY-SA 3.0 IGOSometimes the Moon comes between the Sun and Earth. If all three are aligned, the Moon can block the Sun entirely, casting a shadow on Earth and causing a solar eclipse. This is because even though the Sun is 400 times larger than the Moon, the Moon is 400 times closer to Earth.Solar eclipses occur roughly every six months, but total solar eclipses, in which the Sun is completely obscured by the Moon, are much rarer. They tend to occur around every two years, although often in remote areas of the Earth. These total eclipses can last for as little as a few seconds, but never longer than seven minutes.Find out about solar eclipses and when to see the next oneDue to its extreme temperatures studying the Sun with spacecrafts is incredibly difficult. We have to rely on observations using telescopes and cameras on Earth satellites.However, in 2020 the European Space Agency and NASA launched the Solar Orbiter, which will enter an elliptical orbit of the Sun allowing unprecedented observations. After taking three and a half years to reach the Sun, it will begin a seven year mission to study the stars solar wind, magnetic fields, and plasma. It will orbit as close as 42 million kilometres from the Sun's surface, closer even than Mercury. Discover more about the natural world beyond Earth's stratosphere.Blast offFind out in our latest exhibition! Snap a selfie with a piece of Mars, touch a fragment of the Moon and lay your hands on a meteorite older than our planet.Open nowBook your tickets to Space

Where is sri lanka in india map. Where is sri lanka located in india. Where is sri lanka in india. Where is lanka located now. Where is lanka. Which country is lanka. Lanka in which state. Where is sri lanka located.