Planets Images

A selection of images which can be displayed as part of the activity, e.g. printed & laminated for the table, or stuck up on the wall.

All images can be used free of charge for educational and informational use.

Credits & Descriptions (titles correspond to file-name)

The Blue Marble
Source: NASA Visible Earth Catalogue, globe_west_2048
Credit: NASA
This spectacular “blue marble” image is the most detailed true-color image of the entire Earth to date. Using a collection of satellite-based observations, scientists and visualizers stitched together months of observations of the land surface, oceans, sea ice, and clouds into a seamless, true-color mosaic. Much of the information contained in this image came from a single remote-sensing device-NASA’s Moderate Resolution Imaging Spectroradiometer, or MODIS. Flying over 700 km above the Earth onboard the Terra satellite, MODIS provides an integrated tool for observing a variety of terrestrial, oceanic, and atmospheric features of the Earth. The thin blue haze of the atmosphere can just be seen.

Earth from Space
Source: Science Photo Library, E050/0404
Credit: KEVIN A HORGAN/SCIENCE PHOTO LIBRARY
Satellite image of the Earth showing the continent of Europe at the centre and North Africa at the bottom.

The Water Planet
Source: NASA Image of the Day Gallery
Credit: NASA
Viewed from space, the most striking feature of our planet is the water. In both liquid and frozen form, it covers 75% of the Earth’s surface. It fills the sky with clouds. Water is practically everywhere on Earth, from inside the planet’s rocky crust to inside the cells of the human body.
This detailed, photo-like view of Earth is based largely on observations from MODIS, the Moderate Resolution Imaging Spectroradiometer, on NASA’s Terra satellite.

Clouds in the Atmosphere
Source: Science Photo Library, E110/0044
Credit: PHOTO LIBRARY
GOES satellite image of cloud patterns forming weather systems over the ocean. The Earth's atmosphere can be seen as a blue haze around the edge of the planet. GOES (Geostationary Operational Environmental Satellite) is one of a group of satellites which monitor atmospheric conditions on Earth, allowing accurate weather predictions to be made.
**Thin Blue Line**
*Source: NASA Image of the Day Gallery*  
*Credit: NASA*

The thin line of Earth’s atmosphere and the setting sun are featured in this image photographed by the crew of the International Space Station while space shuttle Atlantis on the STS-129 mission was docked with the station.

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**Sun and its Planets**
*Source: Science Photo Library, R300/0183*  
*Credit: DETLEV VAN RAVENSWAAY/SCIENCE PHOTO LIBRARY*

Artwork of the nine planets of the solar system arrayed from left to right in their order from the Sun (far left). The size of the Sun and planets is to scale. The four small, rocky planets of the inner solar system are Mercury, Venus, Earth and Mars. The four large, gas giant planets of the outer solar system are Jupiter, Saturn, Uranus and Neptune. Finally, Pluto is a Dwarf planet of rock and ice. Planetary rings and moons, a solar flare and the asteroid belt (between Mars and Jupiter), are also shown. The Sun contains 99.9% of the mass of the solar system.

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**Mars**
*Source: NASA Solar System Exploration website, [http://solarsystem.nasa.gov](http://solarsystem.nasa.gov)*  
*Credit: NASA/JPL*

Water-ice clouds, polar ice, polar regions, and geological features can be seen in this full-disk image of Mars, “the red planet”. Mars is a cold desert world about half the diameter of Earth and has the same amount of dry land. Like Earth, Mars has seasons, polar ice caps, volcanoes, canyons and weather, but its atmosphere is too thin for liquid water to exist for long on the surface. There are signs of ancient floods on Mars, but evidence for water now exists mainly in icy soil and thin clouds.

It is a rocky (terrestrial) planet and its surface has been altered by volcanism, impacts, crustal movement, and atmospheric effects such as dust storms. Mars often appears reddish due to a combination of the fact that its surface is comprised of iron-rich minerals that essentially rust (or oxidize) and that the dust made of these minerals is kicked up into the atmosphere, giving the atmosphere a reddish hue as well.

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**The 4 Terrestrial Planets**
*Source: NASA Solar System Exploration website, [http://solarsystem.nasa.gov](http://solarsystem.nasa.gov)*  
*Credit: Lunar and Planetary Institute*

The terrestrial planets are the four innermost planets in the solar system; Mercury, Venus, Earth, and Mars. They are called terrestrial because they have a compact, rocky surface like the Earth’s. The planets Venus, Earth, and Mars have significant atmospheres, while Mercury has almost none. This diagram shows the approximate relative sizes of the terrestrial planets. Distances are not to scale.
Jupiter Globe
Credit: NASA/JPL/University of Arizona
Jupiter is the most massive planet in our solar system, a true gas giant. The composition of Jupiter's atmosphere is similar to that of the sun -- mostly hydrogen and helium. Deep in the atmosphere, the pressure and temperature increase, compressing the hydrogen gas into a liquid. This true-colour simulated view of Jupiter is composed of four images taken by NASA's Cassini spacecraft. These images were combined and the cylindrical map projected onto a globe in order to illustrate what Jupiter would look like if the cameras used to image this planet had a field-of-view large enough to capture the entire planet. Jupiter's moon Europa is casting the shadow on the planet.

Saturn
Credit: NASA/JPL/Space Science Institute
Adorned with thousands of beautiful ringlets, Saturn is unique among the planets. All four gas giant planets have rings -- made of chunks of ice and rock -- but none are as spectacular or as complicated as Saturn’s. Like the other gas giants, Saturn is mostly a massive ball of hydrogen and helium.
While cruising around Saturn in early October 2004, Cassini captured a series of images that have been composed into this large global natural colour view of Saturn and its rings.

Jupiter & Two Moons
Source: Science Photo Library, R370/0013
Credit: NASA/SCIENCE PHOTO LIBRARY
Jupiter and two of its moons, photographed from a distance of 28.4 million kilometres by the Voyager 1 spacecraft on February 5, 1979. Jupiter's inner-most satellite, Io, can be seen against the planet's disc; at the far right of the picture is Europa, another of Jupiter's four Galilean satellites (so called because they were discovered by Galileo). Jupiter’s atmosphere consists of colourful, swirling bands of cloud; it is dominated by the Great Red Spot, visible towards bottom left, which is a giant, circulating atmospheric disturbance.

Planets Compared
Source: Science Photo Library, F003/0414
Credit: MARK GARLICK/SCIENCE PHOTO LIBRARY
A conceptual image showing the Solar System’s planets on the same scale (their rings are omitted for clarity). The largest planets are the gas giants Jupiter (right) and Saturn (left, back). Neptune (blue) and Uranus (green) are almost identical in size, with Uranus just slightly bigger at 37% the size of Jupiter. Of the terrestrial planets (bottom right) the Earth is the biggest and Mercury is the smallest.
Exoplanet HR 8799b
Source: NASA Website
Credit: NASA, ESA, and G. Bacon (STScI)
An artist’s impression of exoplanet HR 8799b, discovered by the Hubble Space Telescope. The planet is one of three extrasolar planets orbiting the young star HR 8799, which lies 130 light-years away. The giant planet is young and hot, but still only 1/100,000th the brightness of its parent star. By comparison, Jupiter is one-billionth the brightness of our sun.

Possible first exoplanet image
Source: Science Photo Library, R650/0208
Credit: EUROPEAN SOUTHERN OBSERVATORY/SCIENCE PHOTO LIBRARY
Computer-enhanced infrared image of a potential extrasolar planet (red) around a brown dwarf star (white). The star, called 2M1207, is around 230 light years away. The planet is thought to be five times the mass of Jupiter. Further study will confirm its status. Taken by the Yepun telescope at the Very Large Telescope (VLT) facility at Cerro Paranal, Chile.

Alien Planets
Source: Science Photo Library, R650/0133
Credit: MGM/VISION/SCIENCE PHOTO LIBRARY
Computer artwork of hypothetical planets in an alien star system.

Alien Planets & Moons
Source: Science Photo Library, R650/0229
Credit: VICTOR HABBICK VISIONS/SCIENCE PHOTO LIBRARY
Computer artwork of alien planets and moons. Several such planets have been detected orbiting nearby stars in our galaxy.