The Inner Planets

Our Solar System is made of eight planets and the Sun. A planet is a large body that orbits in space around a star. The Sun is a star. It and the planets make up the Solar System. The inner planets are close to the Sun. They are all balls of rock. They all have thin layers of gas. Next to the other planets, they are very small. Our own Earth is one of these “small” planets.

The planets go around the sun. They also spin as they go. This is why we have day and night. When our part of Earth spins away from the Sun, it is night. The time it takes for a planet to spin once is the planet’s day. It takes Earth 24 hours to make one full spin. That means Earth’s day is 24 hours long.

Mercury

Mercury is the closest planet to the Sun. It is the smallest of the planets. It has lots of craters. These are shallow holes. The planet was struck by other space objects. They left craters. The planet can get very hot. Lead melts there! It gets as hot as 425 degrees Celsius (797 degrees Fahrenheit). But at night, it can get as cold as 150 degrees below zero Celsius (238 degrees below zero Fahrenheit). The big change is due to the long days there. One day on Mercury takes 59 Earth days. One night is that long, too. It can be very cold with no sunlight for 59 days. It can be very hot out in the Sun for that long, too.

Venus

Venus is the second planet from the Sun. It is the hottest planet. It’s also the brightest in the night sky. Its thick clouds hold the Sun’s heat. It can get as hot as 462 degrees Celsius (864 degrees Fahrenheit)! Venus spins much slower than Earth. It takes 243 Earth days for it to spin once. It takes 225 Earth days for it to orbit the sun. That means that Venus’s day is 18 Earth days longer than its year!
Life on Earth

Earth is not like any other planet we know of. It is the only planet to have life. It is the only one with oceans filled with water. We know that life needs water. The oceans make Earth look blue from space. Earth travels around the Sun every 365 and 1/4 days. That is one Earth year. As it orbits the Sun, Earth spins at a speed of 1,660 kilometers (1,031 miles) per hour. In 24 hours, it spins once. That makes one Earth day.

Mars

Mars is a cold, windy planet. It has the largest mountains we know of. It has a big volcano. The volcano is more than three times taller than Earth’s tallest mountain! Mars has a rusty color. That is why it is called the Red Planet. It is cold. It gets down to 60 degrees below zero Celsius (140 degrees below zero Fahrenheit). Water may have flowed on Mars long ago. There may have once been life there as well.

Comprehension Question

How are the inner planets alike?
The Inner Planets

Our Solar System consists of eight planets and the Sun. A planet is a large body that orbits in space around a star. Our Sun is a star. It and the planets make up the Solar System. The inner planets are close to the Sun. They are all balls of rock with thin layers of gas around them. Next to the other planets in the Solar System, they are very small. Our own Earth is one of these “small” planets.

The planets orbit around the Sun. They are also spinning. This is why we have day and night. When our part of Earth spins away from the Sun, it is night. The time it takes for a planet to spin once is the planet’s day. It takes Earth 24 hours to make one full spin. That means Earth’s day is 24 hours long.

Mercury

Mercury is the closest planet to the Sun. It is the smallest planet. Mercury has lots of craters. These are shallow holes. They were made when the planet was struck by other space objects. Mercury can get very hot. Lead melts there! It gets as hot as 425 degrees Celsius (797 degrees Fahrenheit). But at night, it can get as cold as 150 degrees below zero Celsius (238 degrees below zero Fahrenheit). The big range is due to the long days there. One day on Mercury takes 59 Earth days. One night is that long, too. It can be very cold with no sunlight for that long. It can be very hot out in the Sun for that long, too!

Venus

Venus is the second planet from the Sun. It is the hottest planet. It’s also the brightest in the night sky. Its thick clouds hold the Sun’s heat. It can get as hot as 462 degrees Celsius (864 degrees Fahrenheit)! Venus spins much slower than Earth. It takes 243 Earth days for it to spin once. It takes 225 Earth days for it to orbit the sun. That means that Venus’s day is 18 Earth days longer than its year!
**Life on Earth**

Earth is not like any other planet we know of. It is the only planet to have life. It is the only planet with oceans of water. Water is needed for life as we know it. The oceans make Earth look blue from space. Earth travels around the Sun every 365 and 1/4 days. That is one Earth year. As it orbits the Sun, Earth spins at a speed of 1,660 kilometers (1,031 miles) per hour. In 24 hours, it spins once. That makes one Earth day.

**Mars**

Mars is a cold, windy planet. It has the largest mountains we know of. It has a big volcano that is more than three times taller than Earth’s tallest mountain! Mars has a rusty color. That is why it is called the Red Planet. It is cold. It gets down to 60 degrees below zero Celsius (140 degrees below zero Fahrenheit). Water may have flowed on Mars long ago. There may even have once been life there.

**Comprehension Question**

Compare the inner planets.
The Inner Planets

Our Solar System has a number of planets orbiting around our Sun. A planet is a large body that revolves in space around a star. Our Sun is a star and its planets make up the Solar System. The planets close to the Sun are called the inner planets. They are all balls of rock with atmospheres of gas around them. Compared to the other planets in the Solar System, they are very small. However, our own Earth is one of these “small” planets.

While the planets are revolving around the Sun, they’re also spinning, or rotating. This is why we have day and night. When our part of Earth rotates away from the Sun, it’s night. The time it takes for a planet to rotate once is the planet’s day. It takes Earth 24 hours to make one rotation, so Earth’s day is 24 hours long.

**Mercury**

Mercury is the closest planet to the Sun. It is the smallest of the inner planets. Mercury is covered with craters. These are shallow holes. They were made when the planet was struck by other space objects. Mercury can get very hot. It can be hot enough to melt lead! It gets as hot as 425 degrees Celsius (797 degrees Fahrenheit). But at night, it can get as cold as 150 degrees below zero Celsius (238 degrees below zero Fahrenheit). The big range is due to Mercury’s long days. One day on Mercury is about the same as 59 Earth days. One night is about that long, too. It can be very cold with no sunlight for 59 days, and it can be very hot so near to the Sun for 59 more!

**Venus**

Venus, the second planet from the Sun, is the hottest planet in our solar system. It’s also the brightest planet in the night sky. Its thick clouds hold the Sun’s heat. It can get as hot as 462 degrees Celsius (864 degrees Fahrenheit)! Venus spins much more slowly than the Earth. It takes 243 Earth days for Venus to spin once. It takes 225 Earth days for Venus to orbit the sun. That means that Venus’s day is 18 Earth days longer than its year!
Life on Earth

Earth is not like any other planet in our solar system. It is the only planet known to have life. No other planet has oceans of water. Water is needed for life as we know it. The oceans make it appear blue from space. Earth travels around the Sun every 365 and 1/4 days. That is one Earth year. As it orbits the Sun, Earth is rotating at a speed of 1,660 kilometers (1,031 miles) per hour. In 24 hours, it makes one rotation: one Earth day.

Mars

Mars is a cold, windy planet. It has the largest mountains in the solar system. Its largest volcano is more than three times higher than Earth’s tallest mountain! Mars is called the Red Planet because of its rusty color. It is cold. It gets down to 60 degrees below zero Celsius (140 degrees below zero Fahrenheit). Scientists think water may have flowed on Mars millions of years ago. They are still looking for signs that there may have been life there.
The Inner Planets

Our Solar System has a number of planets orbiting around the Sun. A planet is an astronomical body that orbits in space around a star such as our Sun. The inner planets, close to the Sun, are all balls of rock with atmospheres of gas around them. Compared to the other planets in the Solar System, they are significantly smaller. However, our own Earth is one of these “small” planets.

While the planets are orbiting around the Sun, they’re also rotating, creating day and night. Night is when our side of Earth rotates away from the Sun. The time it takes for a planet to make one complete rotation is the planet’s day. It takes Earth 24 hours to make one rotation, so Earth’s day is 24 hours long.

Mercury

Mercury is the closest planet to the Sun and is the smallest of the inner planets. Mercury is covered with craters, or shallow holes, that were made when the planet was struck by other space objects. Mercury can get very hot: hot enough to melt lead! The daytime temperature can rise to about 425 degrees Celsius (797 degrees Fahrenheit). At night, however, it can get as cold as 150 degrees below zero Celsius (238 degrees below zero Fahrenheit). The big range is due to Mercury’s long days. One day on Mercury is about the same as 59 Earth days. One night is about that long, too. It can be very cold with no sunlight for 59 days, and it can be very hot so near to the Sun for 59 more!

Venus

Venus, the second planet from the Sun, is the hottest planet in our solar system. It’s also the brightest planet in the night sky. Its thick clouds hold the sun’s heat, bringing the temperature to 462 degrees Celsius (864 degrees Fahrenheit)! Venus spins much more slowly than Earth. It takes 243 Earth days for Venus to spin once. It takes 225 Earth days for Venus to orbit the Sun. That means that Venus’s day is 18 Earth days longer than its year!
**Life on Earth**

Earth is unlike any other planet in our solar system: it is the only planet known to have life. No other planet has oceans of water, and water is necessary for life as we know it. Earth’s oceans make the planet appear blue from outer space. Earth travels around the Sun every 365 and 1/4 days: that is one Earth year. As it orbits the Sun, Earth is rotating at a speed of 1,660 kilometers (1,031 miles) per hour. In 24 hours, it makes one rotation: one Earth day.

**Mars**

Mars is a cold, windy planet. It has the largest mountains in the solar system. Its largest volcano is more than three times higher than Earth’s tallest mountain! Mars is called the Red Planet because of its rusty color. The average temperature is about 60 degrees below zero Celsius (140 degrees below zero Fahrenheit). Scientists think water may have flowed on Mars millions of years ago. They are still looking for signs that there may have been life there.

**Comprehension Question**

What are the common attributes of the inner planets?