

# Space Design Challenge Planet Facts

## **Mercury**

1. Solar system's smallest planet.
2. Closest planet to the Sun.
3. Rocky surface, covered in craters.
4. It has cliffs of up to a mile high.
5. Atmosphere is thin and composed of elements like oxygen, sodium, hydrogen, helium, and potassium.
6. No wind or weather.
7. Very hot during the day (800 degrees Fahrenheit (430 degrees Celsius)), very cold at night (-280 degrees Fahrenheit (-170 degrees Celsius)).
8. No moons or rings.
9. Very low surface gravity. On Mercury you would weigh about 1/3 of what you weigh on Earth.
10. Fastest orbit around the Sun of any planet.

## **Venus**

1. Hottest planet in the solar system, up to 900 degrees Fahrenheit (480 degrees Celsius).
2. Only slightly smaller than Earth.
3. One day on Venus lasts about 243 Earth days.
4. Rocky surface.
5. Many craters and active volcanoes.
6. Thick and toxic atmosphere, composed of mainly carbon dioxide and nitrogen.
7. Acidic clouds.
8. Clouds on Venus are so thick that very little light reaches the planet's surface.
9. Clouds cause bursts of lightning.
10. Gravity is similar to that on Earth.

## **Mars**

1. Has the weakest gravity of any of the planets. On Mars, you would weigh 1/3 what you weigh on Earth.
2. Rocky surface with powerful dust storms.
3. Very cold. Average temperature of -80 degrees Fahrenheit (-60 degrees Celsius).
4. Called the Red Planet, because of the rusty appearance of its soil and dusty atmosphere.
5. A Martian day lasts only slightly longer than a day on Earth, and its year is 687 Earth days long.
6. Has seasons, somewhat like Earth.
7. Home to the largest volcano in the solar system, Olympus Mons.
8. Thin atmosphere, made up of mostly carbon dioxide, nitrogen, and argon.
9. Many channels and canyons on its surface.
10. No surface water, but has some ice.

## **Jupiter**

1. Largest planet in the solar system – 1,300 Earths could fit inside.
2. Strongest gravity of any planet. On Jupiter, you would weigh two and a half times more than on Earth.
3. Rotates very quickly – one day takes about ten Earth hours.
4. Has strong winds.
5. Is a gas giant planet, meaning its surface is not solid, but may have a solid core about the size of Earth.
6. Atmosphere is made up of mostly hydrogen and helium, similar to the Sun.
7. Has at least 50 moons. Some have the potential to support life in the oceans beneath their crusts.
8. Known for its giant red spot, which is a storm that has been raging for hundreds of years.
9. Has the largest ocean in the solar system, made of hydrogen instead of water.
10. Average surface temperature of -234 degrees Fahrenheit (-145 degrees Celsius).

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## **Saturn**

1. Has the most elaborate ring system of all our solar system's planets.
2. Rotates very quickly – one day on Saturn takes 10.7 Earth hours.
3. On Saturn, you would weigh only a little more than you do on Earth.
4. Is a gas-giant planet – its surface is not solid.
5. Atmosphere is made up mostly of hydrogen and helium.
6. Has very strong winds.
7. Average surface temperature of -288 degrees Fahrenheit (-178 degrees Celsius).
8. Has high levels of radiation.
9. Has a dense core of rock, ice, water, and other compounds.
10. Has at least 54 moons, some of which have conditions that may support life.

## **Uranus**

1. Has the coldest atmosphere of any planet, reaching temperatures of -370 degrees Fahrenheit (-218 degrees Celsius).
2. Rotates on its side, which means it spins horizontally (like a barrel would roll).
3. Is a gas-giant planet, and is not solid. Most of the planet is dense fluid composed of water, methane, and ammonia.
4. Has a small rocky core.
5. Takes 84 years to orbit the Sun.
6. Seasons last for 20 years, with parts of the planet in complete dark or complete light.
7. Atmosphere is composed of hydrogen, helium, and a small amount of methane.
8. On Uranus you would weigh a little less than you do on Earth.
9. Rotates very quickly.
10. Has faint rings.

## **Neptune**

1. The farthest known planet from the Sun.
2. The windiest planet, with wind speeds nine times stronger than Earth's.
3. Rotates very quickly – one day takes about 16 Earth hours.
4. Undergoes seasons, much like on Earth, making some parts of the planet warmer and some colder.
5. Average surface temperature of -346 degrees Fahrenheit (-201 degrees Celsius).
6. A gas-giant planet, made up primarily of water, ammonia, and methane; its core is solid and about the size of the Earth.
7. Atmosphere is made mostly of hydrogen, helium, and methane.
8. On Neptune you would weigh about 12% more than you do on Earth.
9. One year takes about 165 Earth years.
10. Rotates quickly – one day takes about 19 Earth hours.