



# Space Tours VR

## Student Activity Answers

**Directions:** Read each statement or question and fill in the blanks carefully using the “Space Tour VR” app on the Oculus Rift. You can find all the missing information by visiting each planet in order and reading their descriptions.

### MERCURY

- 1. Mercury is the smallest and innermost planet of the solar system. Also its orbital period is the shortest of all planets with only 88 days. The planet is tidally locked to the sun. It rotates on its axis exactly three times for every two revolutions it makes around the sun. From the surface of mercury, an observer would only see one day every two years.**
- 2. What is Mercury’s mass?  $3 \times 10^{23}$  kg**
- 3. What is the average temperature on Mercury? -184 to 465 degrees C**
- 4. What is Mercury’s orbital period? 88 days**
- 5. How far from the sun is Mercury? 57.9 million km**
- 6. What is Mercury’s diameter? 4879 km**
- 7. How many moons are there on Mercury? Mercury has no moons**



## VENUS

1. **Named after the Greek goddess of love, Venus is not only is not the hottest, but also the brightest planet in the Solar System, rarely visible with the naked eye in broad daylight. It is sometimes called Earth's sister planet due to their similar scale and mass. As one of the prominent objects, Venus is also known as the Morning Star and Evening Star.**
2. **What is Venus' mass?  $5 \times 10^{24}$  kg**
3. **What is the average temperature on Venus? 460 degrees C**
4. **What is Venus' orbital period? 225 Days**
5. **How far from the sun is Venus? 108 million km**
6. **What is Venus' diameter? 12,504 km**
7. **How many moons are there on Venus? Venus has no moons**



## EARTH

1. **Earth is the cradle of humanity with an abundance of life. Positioned in the Goldilocks zone, the exact sweet spot in the distance from the sun that makes life as we know it possible. With the number of habitable planets in the tens intelligent civilizations should have evolved in respect to the famous Drake Equation.**
2. **What is Earth's mass?  $6 \times 10^{24}$  kg**
3. **What is the average temperature on Earth? 14 degrees C**
4. **What is Earth's orbit period? 365.2 days**
5. **How far from the sun is Earth? 149.9 million km**
6. **What is Earth's diameter? 12756 km**
7. **How many moons are there on Earth? 1 moon**



## MARS

1. Mars, often called the red planet, because of its iron oxide on the surface, has a thin atmosphere and a rotational cycle that produces seasons similar to those on Earth, leading early astronomers to speculations about an advanced Martin civilization. After the discovery of its icy poles and the existence of water, the colonization and terraforming of Mars have become the ultimate goal of our time.
2. What is Mars' mass?  $6 \times 10^{23}$  kilograms (.1 of earth)
3. What is the average temperature on Mars? -63 degrees Celsius
4. What is Mars' orbital period? 687 days (1.9 years)
5. How far from the sun is Mars? 227,900,000 kilometers
6. What is Mars' diameter? 6,805 Km
7. How many moons are there on Mars? 2 moons



## JUPITER

1. The giant Jupiter would be big enough to fit all other planets of the solar system inside of it. After Moon and Venus it is the third brightest object visible in Earth's night sky, bright enough for its reflected light to cast shadows. Its biggest moons were first objects found by Galileo Galilei in 1610 to orbit other planets. Called Galilean moons, they reach sizes of planetary proportions.
2. What is Jupiter's mass?  $1.9 \times 10^{27}$  kilograms (318x Earth mass)
3. What is the average temperature on Jupiter? -145 degrees Celsius
4. What is Jupiter's orbital period? 4,332 days (12 years)
5. How far from the sun is Jupiter? 778,300,000 kilometer
6. What is Jupiter's diameter? 142,984 kilometers
7. How many moons are there on Jupiter? 69 moons



## SATURN

1. **Already mentioned by Babylonian astronomers, Saturn's striking ring feature sets him apart from every other planet. Being the second largest planet in the solar system, it is also the least dense light enough to float on water. It's moon Titan is the only natural satellite in the system with a substantial atmosphere and is larger than the planet Mercury.**
2. **What is Saturn's mass?**  $6 \times 10^{26}$  kilograms, (95x Earth)
3. **What is the average temperature on Saturn?** -178 degrees Celsius
4. **What is Saturn's orbital period?** 10,759 days (29 years)
5. **How far from the sun is Saturn?** 1,432,900,000 kilometers
6. **What is Saturn's diameter?** 116,464 kilometers ( 764x Earth size)
7. **How many moons are there on Saturn?** 62 moons



## URANUS

- 1. The appearance of Uranus can be described as a featureless Blue disc. The planet might have been hit by another planet in the early stages of his life, causing him to tumble rather than to rotate. Like the other gas giants it has no solid surface. Its color comes from frozen ammonia crystals that create the coldest environment in the system.**
- 2. What is Uranus' mass?  $6 \times 10^{23}$  kilograms**
- 3. What is the average temperature on Uranus? -224 Celsius**
- 4. What is Uranus' orbital period? 31,000 days (84 years)**
- 5. How far from the sun is Uranus? 2,870,000,000 kilometers**
- 6. What is Uranus' diameter? 50,724 kilometers (63x Earth size)**
- 7. How many moons are there on Uranus? 27 moons**



## NEPTUNE

- 1. The after the re-categorization of Pluto outermost planet Neptune, cannot be seen from Earth without a telescope. The icy bright blue methane clouds race around the planet with up to 2100 Km/h. Neptune is the smallest of the gas giants in our system but has a faint and fragmented ring system, which was discovered in 1982.**
- 2. What is Neptune's mass?  $1 \times 10^{26}$  kilograms ( 17x Earth size)**
- 3. What is the average temperature on Neptune? -214 degrees Celsius**
- 4. What is Neptune's orbital period? 60,200 days (165 years)**
- 5. How far from the sun is Neptune? 4,498,000,000kilometers**
- 6. What is Neptune's diameter? 49,244 km (58x Earth size)**
- 7. How many moons are there on Neptune? 14 moons**

