**Earthlings, Meet Venus**

By Rachel Slivnick

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What are your neighbors like? Chances are you have some friendly neighbors, some quiet neighbors, and some people who live on your block that are downright weird and maybe even a little scary. Well, Earth also has neighbors — in fact, Earth has millions of stars, planets, moons, asteroids, and other planets as fellow residents in our **galactic** neighborhood. While we can’t stroll over to our **celestial** neighbors to say hello or borrow a cup of sugar, Earth does share a galaxy with seven other planets that rotate around the same sun.

Our galactic neighborhood has a lot of different personalities, from gas giants to freezing balls of ice. However, everyone in the solar system agrees — if you can’t take the heat, stay away from Venus. It’s the hottest and most deadly planet in the Milky Way, and it just happens to be our closest neighbor. Yikes!

**Do You Want to Drop by and Say Hello?**

Venus may be our next door neighbor, but a visit to Venus won’t be very pleasant for us Earthlings. First, it will take three to four months in a spaceship to fly the 23.7 million miles to Venus, so pack for a long trip. As you step out of your spaceship, you try to take a big gulp of fresh air... but no luck. The atmosphere of Venus is made almost entirely of carbon dioxide, which is deadly for humans to breathe. Once you’ve **donned** your spacesuit, don’t expect a glass of water. There is no liquid on Venus, although scientists believe that for the first two billion years of the planet’s life Venus had liquid oceans. Any liquid on Venus has long since evaporated due to the extreme heat.

Venus is the warmest planet in our solar system, with a surface temperature of 900 degrees Fahrenheit. To compare, your oven at home only reaches about 500 degrees Fahrenheit. Think about how it feels when you open a hot oven, with the burning air rushing out and heating up an entire room. Imagine an entire planet that feels that hot! Even if you could survive the heat, Venus isn’t the most beautiful place to hang out. The surface of the planet is hot, rocky, and bare. During your visit, you would spot hundreds of extinct volcanoes, along with **omnipresent** yellow clouds full of sulphuric acid. If you try to take a walk to see a volcano up close, you may find it very difficult to move. That’s because the carbon-dioxide atmosphere is so thick that walking on Venus would feel as if you were moving underwater. Furthermore, the atmospheric pressure on Venus is much higher than Earth’s — in fact, the pressure on your body on Venus would be the equivalent of diving over 3,000 feet into the ocean. If you plan on paying this neighbor a visit, make sure your spacesuit is thick enough to withstand the pressure!

**The Most Popular Planet on the Block**

Even though Venus isn’t the most **hospitable** planet in our solar system, it has certainly been a popular place to visit. Since 1962, over 40 spacecrafts have flown around Venus or landed on the surface. Scientists are interested in Venus not only because it is our closest neighbor but because it seems like Earth and Venus should have a lot in common; both planets are a similar size in both diameter and mass. However, as more and more kinds of spacecraft visit Venus, the differences between Earth and Venus are becoming more apparent.

The first successful mission to Venus was completed by NASA’s Mariner 2. Launched on August 8th, 1962, this brave visitor reached Venus in 110 days. In 1970, the Venera 7 actually landed on the surface of Venus and withstood the pressure and heat for about 50 minutes, sending data back to Earth before crumpling and burning up. In 1998, the Magellan spacecraft was launched. The goal? To create a map of Venus. Thanks to the Magellan, we know about the flat, volcanic surface of Venus. This year, the space probe Akatsuki is zooming around Venus, collecting information about the atmosphere of this inhospitable planet. The more we learn about Venus, the more we realize what an unfriendly planet it is.

**Neighborhood Gossip: Venus in Human Culture**

While Venus could earn the nickname of “most unwelcoming neighbor” due to its deadly air, crushing pressure, and lethal heat, this planet has always captivated humans. Why do we love a planet that would kill us within milliseconds of arriving? Simple — Venus is the brightest object in our sky besides the moon and sun. People looking up at night can always spot Venus burning brightly.

In fact, for thousands of years Venus was mistaken for a particularly bright star. Venus is named after the Roman goddess of love, beauty, and desire. Edgar Allan Poe and William Blake both wrote poetry about the “evening star,” which we now know refers to Venus. In the mid-twentieth century, people around the world were fascinated with space travel and the possibility of life beyond Earth. Ray Bradbury, the famous science fiction author, wrote two short stories imagining life on Venus: “All Summer In a Day” and “The Long Rain.” He was inspired by the clouds that cover 98% of Venus’s surface and wrote about a planet full of rain, plants, and creatures.

Bradbury wasn’t the only one **optimistic** about our closest planetary neighbor. Many thought that Venus —with a similar size and proximity to the sun as Earth — was the most likely of all planets to support life. Wouldn’t it be great if our closest neighbor had friendly aliens for us to hang out with and a comfortable planet to host a sleepover on?

Unfortunately, Venus will never be the best friend next door. As we learn more and more about this planet, we have realized that the conditions on Venus cannot support life. Temperatures that are hot enough to melt lead, air that is poisonous to breathe, pressure that would turn our bodies into mush, and clouds full of acid means that our closest neighbor in the galaxy couldn’t be more different from Earth.

| Word: | Morphemes: | Definition: |
| --- | --- | --- |
|  Galactic  |   |   |
|   Celestial  |   |   |
|   Donned  |   |   |
|   Omnipresent  |   |   |
|   Hospitable  |   |   |
|  Optimistic   |   |   |