



The Wonders Above Us



Grade 7
Fiction
Poetry
Nonfiction X

"Astronomy has been practiced for as long as humans have been looking at the sky and wondering what it all means."

-Astronomy Department of Cornell University.

Space has been there since the beginning of time. Stars, planets, and nebulae, are all considered to be a part of astronomy. Early civilizations would use the stars for many things. They used them to farm, place their cities, and even predict the future! However, technically the ancient Greeks were the first to record anything. They named the stars, and plotted their positions.

As a matter of fact, the first man to make it known that the sun is the center of our solar system, was from Greece! This man, Nicholas Copernicus, also discovered the Three Laws of Planetary Motion. These laws include, 1) every planet's orbit is an ellipse with the sun at a focus. 2) A line joining the sun and a planet sweeps out equal areas in equal times. 3) The square of a planet's orbital period is proportional to the cube of the semi-major axis of its orbit. Of course, Copernicus didn't come up with these all by himself you know, he had the help of, Tycho Brahe, and Johannes Kepler! Both are very famous scientists.

One of the most well-known astrologists is Galileo Galilei. He is commonly called, the "father of modern observational astronomy." Galilei was one of the few people who knew how to use a telescope, and he used it to discover 4 of the brightest moons of Jupiter. This is how he proved that not all things revolve around the sun!

In today's day in age, there are 8 planets. Mercury, Venus, Earth, Mars, Saturn, Jupiter, Uranus, and Neptune. Jupiter, being the biggest, and Mercury is the smallest. There are 3 types of planets altogether, Gas Giants, Terrestrial worlds, and Ice Giants. Jupiter and Saturn are the Gas Giants. Mercury, Venus, Earth, and Mars are considered the terrestrial worlds. Furthermore, Neptune and Uranus are the Ice Giants. Now there used to be 9 planets. In 2006, Pluto, the ninth planet, was re-discovered as a Dwarf Planet.

Let's move on to one of the most well known objects in space, Stars! And no not the shape! Stars are small, hot, balls of gas that burn bright in the sky. They are created from dust and rubble from other galaxies. The rubble creates gas! Eventually the gas produced ignites the star, and that is where the beauty begins! They burn for thousands and thousands of years, however as all things live, all things eventually die. When a star dies, the gas that was being produced over it's lifetime runs out. This causes the star to collapse, creating a "supernova." What's left over after the explosion is called a, "neutron star." If this neutron star has enough mass, it can turn into a black hole!

So let's talk about the sun. Something a lot of people get confused about, is whether the sun is a planet or a star, well let me tell you now, it is a star! The sun is just a big burning flame of gas! See, we cannot actually prove this is the way the sun was formed, but based on other observations, we believe that our universe was just old dirt and dust. After a while that rubble mixed together and created one big gas giant! Pretty cool isn't it? The sun takes up over 99% of the galaxy's mass! If you think about it, that's a lot! On the outside the sun can come up to 10,000 degrees Fahrenheit! The core of the sun is 27 million degrees Fahrenheit!

There are many moons in our universe but there's one thing that makes our moon special! The Earth only has 1 moon! It orbits around Earth and makes one full trip in exactly 24 hours! We only ever see one side of the moon. The other side is considered "The Dark Side of the Moon." However it is actually specified as the "Far Side of the Moon." On July 20th, 1969, Neil Armstrong, Buzz Aldrin, and Micheal Collins went to the moon in the famous, "Apollo 11" Aircraft. However, only Neil and Buzz actually got to walk on the moon, while Micheal flew the Apollo 11 command module Columbia around the Moon! Neil was the first to take a step on the moon, and as he did, he said one of the most well-known quotes of all time, "That's one small step for man, one giant leap for mankind!"

Constellations are stars in the sky that make up pictures! There's over 80 constellations in the sky. The biggest constellation is Hydra, while the smallest is, Crux. Astrology symbols were created from 12 different constellations in the sky, Capricornus, Aquarius, Pisces, Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpius, and Sagittarius.

Some of the most well known constellations include, The big and little dipper (aka Ursa Major and Ursa Minor), Draco the Dragon, and the Pegasus. Back to my earlier point, in old times, farmers would use these constellations to know when to plant, and crop their plants. My favorite constellation is Queen Cassiopeia, this has a very interesting story that involves other constellations! The story is about how the queen's daughter, Andromeda was more beautiful than her. This angered the queen so she created a lie about how Andromeda had angered the gods by claiming to be prettier than Athena. So his kingdom wouldn't have hatred for his family, King Cepheus sacrificed his daughter to Cetus, a sea monster! Coincidentally, Percius had just swooped in on his winged Pegasus. Percius had saved the princess and went back to the kingdom and killed the queen! They got married and lived in peace for the rest of their lives. Crazy, but interesting!

I've always been drawn to astronomy! Space is so mysterious and full of wonders. My hopes for this story is to get other people to have as much interest in astronomy as I. Exploring space has peaked my interest as far back as the second grade! Visiting planetariums is always amusing, however experiencing the week-long astronomy camp at the college last summer topped the cake! It was very fun and I learned so many new things about astronomy. I would definitely recommend it to someone who hasn't taken it! I cannot wait until the summer skies are clear enough to stargaze. Who knows, maybe I can make the next biggest scientific discovery, find a new planet, or maybe even find an extraterrestrial life force!