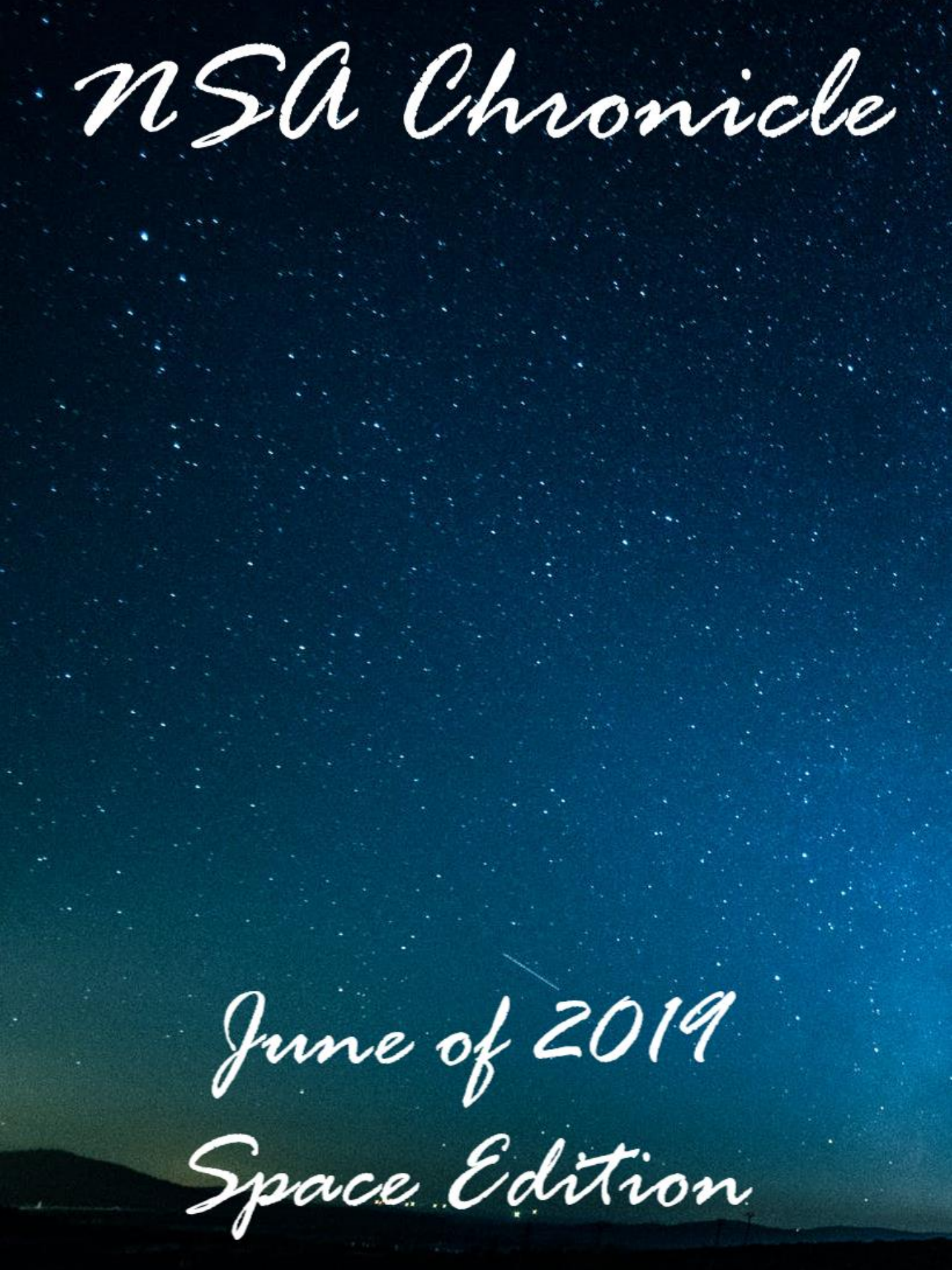

NSA Chronicle
June of 2019
Space Edition

Editorial

By Jade Hill

Hello Everyone,

Unfortunately, the end of the year has reached us. We will be saying goodbye to our previous grade, and saying hello to the new one.

Whether we are finally done all of our courses, or we are going to be finished in a few days, we all can't wait to see the start of summer.

This issue, the team decided to do a space themed issue. We have all worked very hard this year, and I would like to thank all of the team for putting forth so much effort!

Q: How do you have a party in space?

A: You planet!

Hope you had a good year!

On behalf of the NSA Chronicle Team,

Jade Hill

Levi Patterson, Jade Hill, Anna Gamble, Serena Clark, Daylin Hill, Haddassah Houben, Rachel Smith, Natalie Dryden, Gabriel Jones, Naomi Kitchen, Libby Hawbolt, Jacob Brown, Sesame Perry, Jayden Dudenhoeffer, and Emily MacDougall

Games

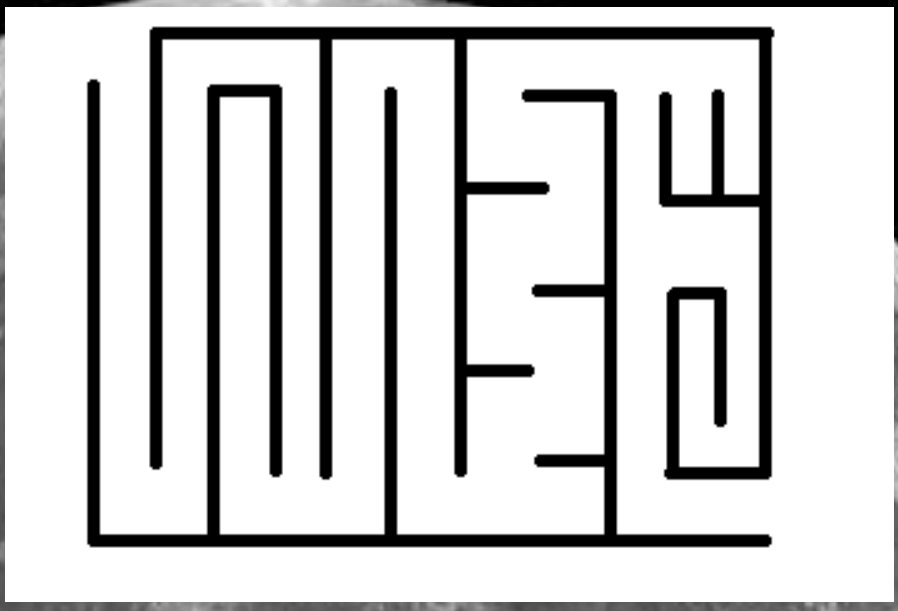
By Daylin Hill

Mission Space:

The goal is to get the most squares.

Lost in Space:

Complete the maze, by going through it, left from right!



0 Gravity:
You each take turns putting an S or an O into one of the boxes. The person with the most Ses and Oes wins the game!

Ten Constellation Fun Facts

By Serena Shark

- **Hydra:** Hydra or the Sea Serpent is the biggest Constellation out of all 88. Hydra is 1303 square degrees big and stretches from the North Hemisphere to the Southern Hemisphere.
- **Serpens and Ophiuchus:** These two constellations are basically connected but two different constellations at the same time. Serpens is 'the serpent' and Ophiuchus is 'the serpent bearer.'
- **Canis Major:** Sirius or Alpha Canis Majoris is the brightest star seen from Earth.
- **Crux:** First, Crux doesn't mean 'Southern Cross' it just means 'Cross', but the constellation is 'The Southern Cross.' Second, since there is no actual Southern Star, the place where the Southern pole is located can be found by using Crux as a guide. Crux is also the smallest constellation.
- **Ursa Major:** A not-too-well-known fact about Ursa Major is that it's not the Big Dipper. The Big Dipper is Ursa Major's tail and the lower half of the body. The Big Dipper is technically an asterism.
- **Perseus:** In the story of how Perseus saves the Princess Andromeda, there are two theories of how he slayed the sea monster that was going to kill the princess. One, Perseus killed it with his diamond sword, two with Medusa's severed head.

Ursa Minor: The Little Dipper, as most people know, contains Polaris, the North Star. As I stated before, it won't always be the most Northern Constellation.

Vulpecula: Vulpecula is the little fox constellation. It sounds awfully close to Vulpix, the Fox Pokemon mostly seen in Pokemon Sun and Moon.

Delphinus: Two stars in this constellation are the name of an astronomer backwards. Rotanev and Salohcin is Nicholas Venator.

Sources:

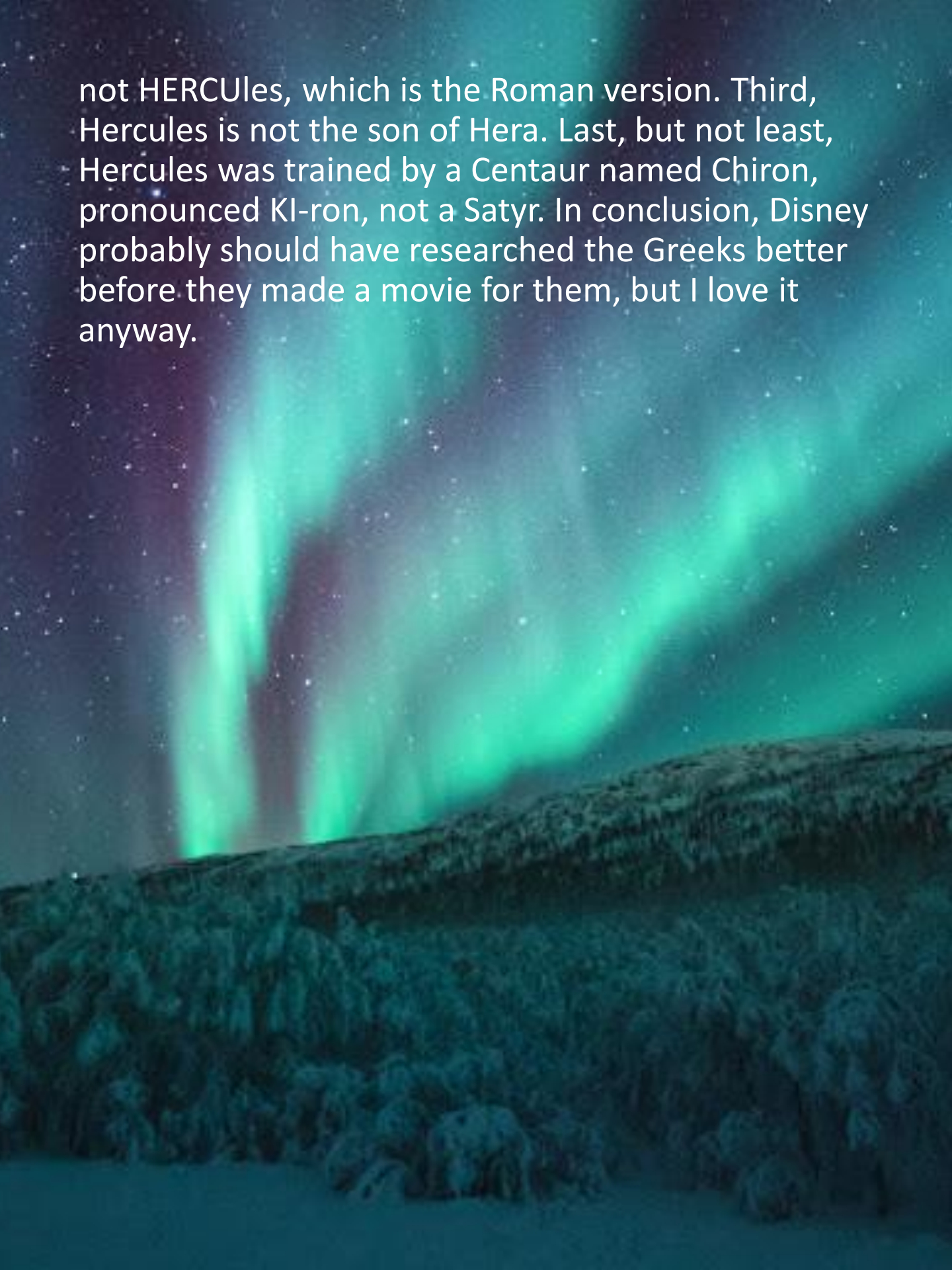
Wikipedia: https://en.wikipedia.org/wiki/Hydra (Constellation)

Grade Six Skyence (memory)

Bonus: DISNEY LOGIC TIME!!!

A few things that Disney got wrong regarding Greek Mythology, which we can tie into the space theme, as it is a Hercules constellation, is that Phil the Satyr says that he had trained many people, hoping that they might be among the stars one day. He always wanted to hear, "Hey! That's Phil's boy!".

First of all, Phil says he trained Perseus, right before he tells Hercules that he hopes that one day, one of the people he trained would be in the stars. Though Perseus is actually a constellation in the Northern Hemisphere. Second, in Greek Mythology, it's HERAcles, not HERCUles,



not HERCUles, which is the Roman version. Third, Hercules is not the son of Hera. Last, but not least, Hercules was trained by a Centaur named Chiron, pronounced KI-ron, not a Satyr. In conclusion, Disney probably should have researched the Greeks better before they made a movie for them, but I love it anyway.

Chapter Two: The Legend of the Moon Queen
By Natalie Dryden

Crystal's eyes fluttered open. She was in a dark, dingy place that appeared to be underground. Spilt experiments lay abandoned on the ground, collecting fragments of filth. Ancient stringy cobwebs dangled from the ceiling, and antique dust particles drifted through the husky air, exchanging dark secrets. The floor was made up of cold hard stone tiles. The cracks between the tiles, were filled with green sludge that looked like some kind of toxic poison. The place was a horrible mess.

Queen Crystal attempted to get up but as she did, her body was shocked by zigzags of pain especially in her head. She lay back down, panting hard. Immediately she started wondering how she was going to get out of the underground area. The room's heavy, dry haze began to make her eyes water. Out of nowhere, something or someone started laughing from behind her.

"There is no escape, you foolish arctic wolf. You are stuck here." A low husky voice growled. The queen immediately recognized the voice. The phantom king had arrived. Ignoring the tormenting pain that pulsed through her veins, Queen Crystal staggered up to a sitting position.

The king phantom spun his head to the side and growled to a nearby guard,

"Get the witch." He snarled, quietly yet menacing. Two phantoms headed off into the dingy tunnel.

Suddenly, Crystal heard a faint wailing sound from behind the wall across the room. The depressing squeals sounded like baby animals crying. Crystal's heart turned to cold stone, gripping at her chest. She scrambled up to her feet to see what was happening, but was stopped by a startling zap.

She cried out in pain and dropped back. The last bit of energy she had was drained out of her body, and she slowly collapsed to the ground. The sound of footsteps echoed down the hall where the phantoms disappeared. Then a young female voice shrieked from down the tunnel,

"Let go of me!" A short arctic fox with white and black fur was shoved into the room. Her tall, grey witch hat fell over her eyes, and she pushed it back up, so it perched neatly on the top of her head. She had a shaggy witch gown on her slender body, with a fancy collar around the neck part, and small shoes on her even tinier paws. She stumbled forwards and landed on the floor in front of Queen Crystal.

"Get up you useless fox. You know what to do..." the King snapped heatedly. The two phantom guards, that had brought the fox into the room, pulled out sharp spears with horrible spikes clutching the end of them.

They held them close to their bodies. The phantoms walked over to a dark area across the room, and began dragging an old rusty cauldron over to the witch. Once the beasts had the cauldron place just right, they prodded the witch with the sharp part of their spears.

"Come on!" one whispered to her. "Don't make the king angry. Get moving!" he stabbed her in the side again and she yelped in pain.

Queen Crystal did not recognize the fox, and she knew almost everyone in her kingdom. This puzzled her, so she watched the curious figure as she continued.

The witch looked up at the phantom king with her startling crystal blue eyes. Then, she shouted with a defiant gleam in her eyes.

"What will you do if I don't make the potion?" The phantom king's mouth twitched, as he tried not to grin at the question. The phantom guard to the left of queen crystal walked across the room with an irritated expression on his ugly face, and over to the wall where the small animal cries came from. He grabbed a rusty, dust caked handle and pulled it to the side.

Creeeeeeeeeeeeeeeeak. The ancient door on the side of the wall pivoted slowly open, causing a mountain of dust to pour down onto the ground in a slow menacing manner. Once the grimy cloud settled, there could be seen three baby animals.

One was a tiny black fox with a white tummy and muzzle, and the other two were delicate little arctic wolves. Both with silky white fur but with different coloured patterns. One had a vibrant, jet black swirl, the other a soft dove, grey.

The witch stared in horror at the captors held beneath the phantom's gaze.

Her heart tightened with sadness, as she watched her tiny daughter trip over her own clumsy paws, and fall onto the hard stone floor. The phantom guard's eye gleamed with pleasure at the pain the young arctic wolf was in.

The two arctic wolves looked up at Queen Crystal, and little smiles flew onto their faces.

"Mommy!" The older one cried out, stepping towards her. Fear seized the Queen's heart, and she lunged forwards to snatch her daughters from the cruel beasts that loomed over their heads.

"Mummy, it is awful here! I want to go home!" she cried out. Then a huge purple phantom grabbed the scruff of the queen's neck, and held fast. She gritted her teeth and gagged. Taking a step back, the air began to flow through her lungs again and she gasped. The guard began to talk with a gruff, dry voice.

"Disobey the king, and these little creatures won't see another sunrise." With a triumphant smile on his brooding face, the phantom king turned to the witch.

"Care to disobey now, *fox?"* The king asked.

The witch stiffened, and slowly walked over to a very poor selection of brewing ingredients mounted on the wall. Running a paw slowly along the items, the witch pulled out a few of the interesting objects and placed them down by the cauldron. It was already filled with water, so she began dropping the magical pieces into it with a *plunk, plunk, and plunk.*

The water began to foam over the edges and bubble in the middle while fizzing into a pale indigo green. The fox looked at Crystal, but turned back to her potion quickly with a shiver. *What is she making?* wondered the Queen, narrowing her eyes at the churning mixture boiling under the witch.

The phantom king looked at the Queen, and noticed her glaring at the potion.

"Wondering what she is making?" He had managed to slither up beside Crystal, and hiss gently in her ear. Crystal dug her claws in the ground to refrain from being swayed by the beast.

"She is making a potion that will trap you in the moon…forever." He said the last word, "forever" like he was trying to torment her with his brooding words.

The witch fox looked up at Queen Crystal with a truly sorrowful, apologetic face. Crystal gulped and lifted her head. She could not leave her kingdom in a time like this! Trying not to attract attention to herself, the Queen began to look frantically around for an escape.

Suddenly, the potion fizzed and bubbled before exploding upwards and sloshing back into the pot with a hiss.

"It-it is finished." The witch croaked. The king phantom glided over to her and patted her on the head, causing her hat to fall over her eyes again.

"Wonderful, my loyal fox." He smiled with the slightest hint of a growl in his throat. She turned at him with blazing anger and yelled at his face,

"I am NOT LOYAL TO YOU! NEVER!" she leapt in the air, paw extended and claws flashing, attempted to scratch his eye. But the guards grabbed her and pinned her down on the ground, spears at her head.

"Well, I'll forgive you for that little fit of yours..." the king phantom glared at the witch, pinned under the phantoms.

“Now… give the queen the potion.” He oozed quietly, his teeth clenched. The solemn guards released the witch slowly, preparing for her to attack again. She staggered up pushing her pointy witch hat back onto the top of her head. As all eyes held themselves onto her, the witch went over to the pot and scooped up a bunch of the liquid in an ancient, wooden, food stained bowl. As if each step was a struggle, the fox walked over to the Queen and handed her the potion with a reluctant blink. Queen crystal smiled at the witch and with a grief-stricken glance back at her daughters.

“Thank you.” She breathed, her voice no more than that of a whisper of a breeze frolicking in the rustling leaves. Queen crystal took the dish from the arctic fox and the thick liquid sloshed in the bowl. Crystal looked at the witch. Instantly, the arctic fox drew herself up in a regal bow, keeping her eyes low to the ground. She looked up slightly and whispered lightly so no one would hear what she was saying except for Crystal.

“There is still hope. I added a special ingredient that will let you be freed again one day.” Queen Crystal blinked her thanks, not wanting the phantoms to get suspicious of their quiet conversation.

Then, Queen Crystal lifted the bowl up slightly, and presaged the phantom king one last time before she would be gone.

“Watch out. For I will return again one day, and the phantom’s reign will be no more.”

Queen Crystal, the mighty warrior and queen of Jamma, lifted the old bowl up to her mouth and took a sip of the cold mixture.

Gravity lifted from her head and her body began to sway. Her vision was a blur and then everything looked like ripples in water, swaying through her eyes. Wind was whisking past her face and swam through her fur as she felt like she was flying in the crisp night sky, through foggy clouds. Splashed of light and bolts of dazzling colours flashed through her vision until she found herself on a cold glowing surface that hummed slightly around her. The queen was trapped in the moon where she could watch her kingdom fight for their freedom from afar,

Goodbye Jamma. Good bye my darling daughters.

So, the soldiers back at the castle never saw the Queen again. They were fighting beside her before she mysteriously disappeared.

Some of the citizens of Jamma, reported a strange thing happening that day. The beautiful outline of a regal arctic wolf formed on the moons glowing surface.

Of course the great queen was never forgotten, but she soon grew distant, like as if she was just a myth or a legend. But that is why I am here. To bring back the story to you. To tell you the Legend of the Moon Queen…

TO BE CONTINUED

Look Up! (A Brief Introduction to Stargazing)

By Gabriel Jones

A Brief Introduction to Stargazing

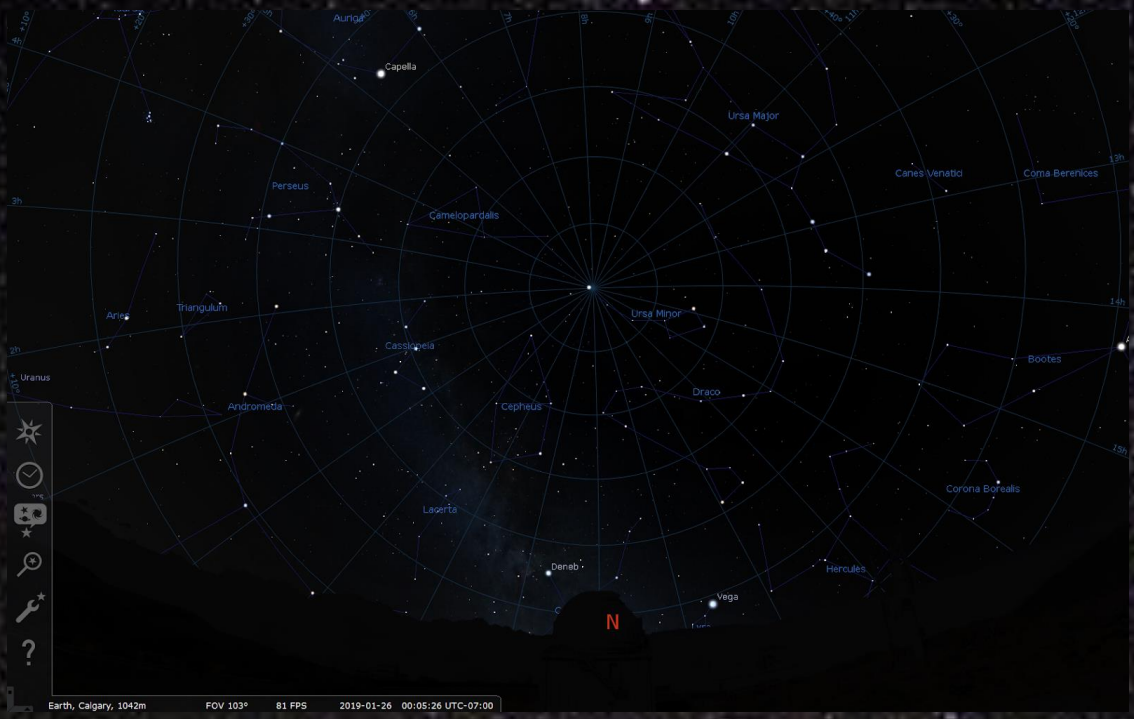
Many people think, at some point, that it would be fun to try stargazing with a telescope. Indeed, backyard astronomy is a great hobby that can be pursued at many levels, but it helps to have somewhere to start.

The bad news (well, not really)

Okay, so the bad news is that you shouldn't buy a telescope! Not at first, anyway. If you do, you could be lost in a sky you don't know. You need to get to know the sky first, and you start with your unaided eyes, some star charts, and a pair of good quality binoculars. Really, astronomy is not just about peeking through a telescope eyepiece. What makes the hobby of backyard astronomy so enjoyable is (to quote Terence Dickinson and Alan Dyer) "the lifelong awareness you gain of the sky's wonders" and the sense of feeling at home under the stars. Telescopes just enhance that. If you get into astronomy, you eventually will want a telescope (it's almost a law of nature) and once you know your way around the constellations, a telescope can be a lot of fun. But for starters, just look up. There is much to be seen in the sky that requires nothing more than your eyes alone, and a neck that can look upwards.

How the sky moves

It helps to think of the sky as a huge dome that you are standing beneath. Everybody knows that the sun moves across the sky because of the rotation of the earth, but it seems that people don't realize that in fact the entire sky is moving relative to an observer on the Earth's surface. The moon, planets and stars march across the sky in the same way that the sun does, rising and setting every day. You just can't see them in the daytime, but they're still there. And the stars you see in the evening are not the same stars that you see before dawn. From our perspective, the whole sky appears to rotate around an axis between the celestial poles, and from our position in the northern hemisphere, we see one of those poles. The whole sky rotates around Polaris, the North Star, which is between halfway and two-thirds up the northern sky in southern Canada (the angle that it is above the north horizon exactly corresponds with your latitude). From the equator, the celestial poles are on the horizon and everything rises straight up and sets straight down. From the southern hemisphere, you can't see Polaris and the sky appears to rotate around the south celestial pole (although there isn't really a south star).



The sky rotates counterclockwise around the North Celestial Pole. Simulation courtesy Stellarium.

Not only does the sky move through the night, but which direction we face at night changes during the year. The stars we see in the winter are not the same as the stars we see in the summer. You aren't going to see Orion in July, nor will you see Aquila the eagle in November. This is one reason it's fun to watch the stars – they change. And with each new season, it's like your old friends are reappearing.

The sky with the unaided eye

So what can you see with the eyes alone? Of course, there are the stars and planets at night, and the Milky Way, are incredible under a dark sky away from light pollution. But the sky is not there only at night. There is so much to see, I can't possibly touch on everything in this article. But here are a few highlights.

One entertaining pursuit is watching the motions of the planets as they zip around the sun, constantly changing their positions from our perspective. As night falls, the moon and planets are the first to appear in the deep blue (green, yellow, purple) twilight. When they are close together, it's called a conjunction and can be spectacularly beautiful.

The Moon, Venus and Saturn at dawn on January 7, 2016

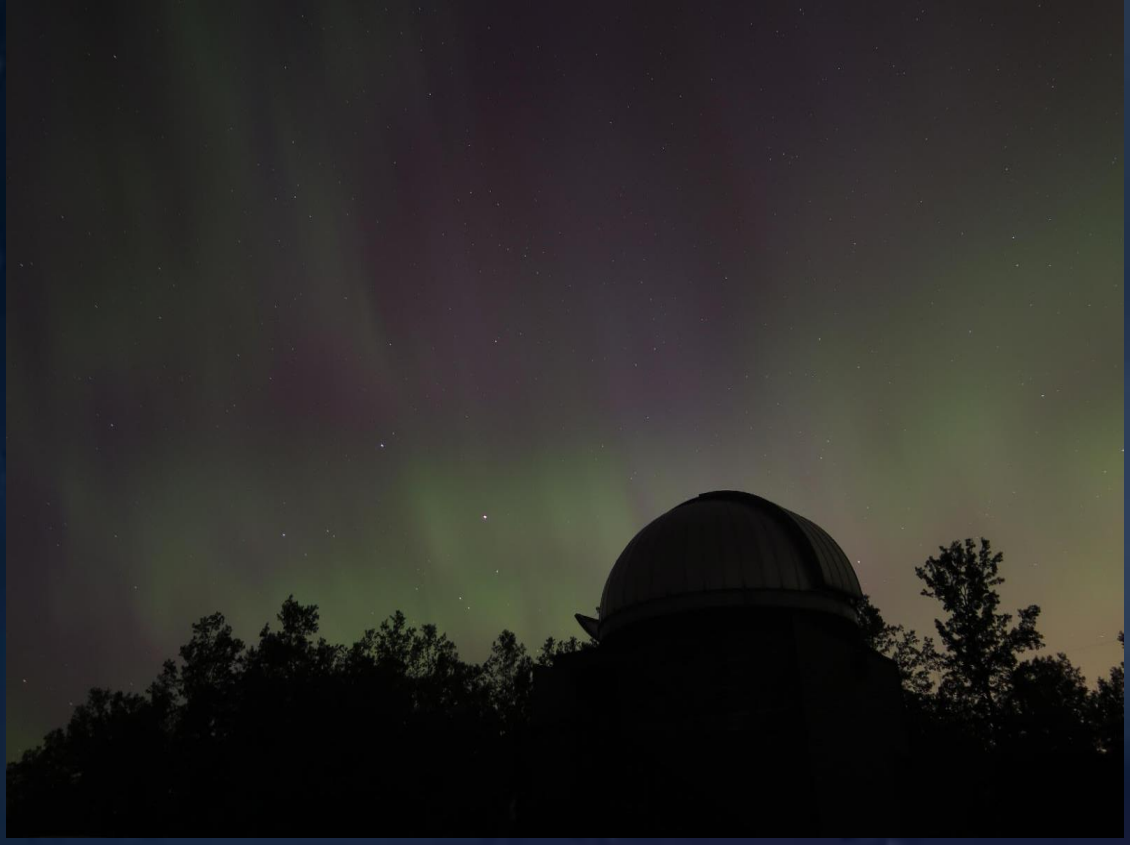
During the midnight twilight of midsummer, often noctilucent clouds can be seen along the northern horizon. They are the earth's highest clouds – far above weather systems – and glow blue in the sunlight they receive at that altitude.

The blue glow of noctilucent clouds

As the sky gets dark and the stars come out, the Milky Way – the spiral arms and core of our galaxy – can be incredibly beautiful under a dark sky.

The summer Milky Way, looking toward the centre of the galaxy

And at our latitude, often the aurora borealis is dancing in the sky. Aurora activity levels correspond to magnetic activity levels due to solar activity, and during solar minimum (now) the aurora will appear far less frequently than at solar maximum, which happens once every 11 years. It's a predictable sinusoidal (waveform) cycle.



Aurora over the Wilson Coulee Observatory

The constellations.

Learning the constellations is key to learning the sky. It takes time and practice to recognize the constellations, but without being able to ascertain what you are looking at when you look at the sky, you will be lost. The best way that I know of to learn the constellations (and this is how I learned them) is to use the charts in Terence Dickinson's *Nightwatch*, which have a version with lines and labels and version that is meant to look like the real sky. This enables you to practice identifying the patterns on paper before you try to compare star chart views with the real sky, which looks so different from a star chart. Whatever star chart you use, look for a chart with simple, clear diagrams and no silly overlays trying to look like what the constellation is named after. These are thoroughly unhelpful for trying to actually recognize the constellations.

Binoculars

Binoculars are indispensable in astronomy. They are actually two mini telescopes side by side to give you a 3-D view that is easier for your brain to work with because information is coming from two eyes. They can show you a huge amount of celestial sights, you can use them from the very beginning, and they are a real pleasure to observe with. One of the most amazing sights in astronomy is looking at the Milky Way (in a dark sky away from lights) through binoculars. The cloudy band resolves into innumerable stars, with dark rifts (caused by dark clouds of gas in front of the spiral bands) and bright patches (star clouds and star clusters). It's incredible! Binoculars are the best way to learn your way around the sky. Even experienced astronomers reach for their binoculars as much as their telescopes. The key is to have the right binoculars – they need to be good quality and they should have an aperture of at least 42 mm for sufficient light-gathering ability (Binoculars are labelled like this: magnification x aperture. So an 8x42 binocular has a magnification of 8 and an aperture of 42 mm). Cheap binoculars are doorstops. For stargazing, I recommend the Celestron Skymaster 8x56 binoculars, which are excellent value at about $230 and are nice and lightweight with great optics. The Skymaster 15x70s are even cheaper but need to be mounted on a tripod as they are too heavy and magnify too much to be handheld. For general-purpose astronomy binoculars, get a pair that are comfortable to hold by hand.

Telescopes

This article is intended to be introductory, so I won't go into detail about telescopes here. But I will tell you that the main spec of a telescope is not magnification.

This always surprises people new to astronomy, but more magnification is not necessarily better – it is usually worse, actually. The main spec of a telescope is the aperture of its main mirror or lens, which determines how much light the telescope can gather. All astronomy telescopes of quality have an aperture of at least 70mm and will *never* advertise their magnification on the box. You can change magnification by changing eyepieces, so it's a meaningless specification. Do your homework (check out the sources in “Further reading” below) before buying a telescope and be especially wary of department-store telescopes, which are always junk even if they say “400x professional instrument” on the side. Astronomers like to call these “Christmas trash scopes” and they are miserable to use.

Pictures?

If you want to try some sky photography, know that wide-field camera on tripod imagery is infinitely easier than deep-sky astroimaging (galaxies, nebulas etc.) which requires a lot of skill and equipment.

Further reading

“Nightwatch” by Terence Dickinson. The best astronomy guide for beginners.

“The Backyard Astronomer's Guide” by Terence Dickinson and Alan Dyer. A bit more advanced than Nightwatch, but full of excellent advice and nice pictures.

SkyNews – the Canadian magazine of astronomy and stargazing. Not as good as it used to be, but still a good source of articles, pictures and information about upcoming celestial events.

skynews.ca – a great way to find out about upcoming celestial events such as conjunctions and eclipses.

http://www.backyardastronomy.com/Backyard_Astronomy/The_Best_Beginner_Telescopes.html – great little article by the authors of *The Backyard Astronomer's Guide*.

All photos by author. Simulation courtesy Stellarium, a free planetarium software available at stellarium.org.

Nebulae: Grave to Nursery

By Levi Patterson

Known as “star nurseries,” nebulae are majestic celestial bodies composed of gas and dust. They are created when stars die and explode. Ironically, they also are the places where stars spawn, grown from the rich galactic materials left from supernovas.

By either young stars shining from within or older stars reflecting light off the nebulae from without, magnificent colors are created from the dusts and gasses.

Nebulae range in size from a mere several million miles to hundreds of light-years across. Something this large could potentially be a major obstacle in the heavens, and dark nebulae are just that. Dark nebulae are so dense that no light can shine through them, creating a black mass.

In the background of this article, you can see the Pillars of Creation, a part of the Eagle Nebula. These pillars were destroyed thousands of years ago by a supernova, but we can still see them because of their distance from us—thousands of light-years away. This means the image behind this article is a clip of history from thousands of years ago, since the light took that long to get to us.

Nebulae are truly amazing creations that dwarf our imaginations in splendor. To whomever is reading this: Even if you don’t have a telescope, you have Google. Go and admire these singular heavenly bodies, nebulae.

Sources:

https://www.universetoday.com/61103/what-is-a-nebula/

https://skyserver.sdss.org/dr1/en/astro/stars/stars.asp

https://www.solarsystemquick.com/universe/nebulae.htm

https://factslegend.org/20-interesting-nebula-facts/

https://spaceplace.nasa.gov/nebula/en/

Global Warming: How it is Wrong
By Sean Umbassar

In today's world hearing about global warming is around almost every corner. I'm sure almost every TV news channel will tell you that its all your fault because you drive a car and heat your house. To prove my point, I'd like to point a few things out.

Although "Global Warming" may be occurring I do not have any strong belief that it's OUR fault the earth is warming up. For example: Water Vapor is a green house gas and there are 1.332 billion cubic kilometers of water on earth (aprox. 16,680 tons of water). Methane makes up 0.00017% of the gasses in the atmosphere yet over century methane traps over 28 times more heat than carbon. 0.0360% of the environment if Carbon but around 1-4% is water. While 20.95% is Oxygen. Surprisingly Nitrogen takes up 78 .08 percent.

Gas Name	Chemical Formula	Percent Volume
Nitrogen	N_2	78.08%
Oxygen	O_2	20.95%
*Water	H_2O	0 to 4%
Argon	Ar	0.93%
*Carbon Dioxide	CO_2	0.0360%
Neon	Ne	0.0018%
Helium	He	0.0005%
*Methane	CH_4	0.00017%
Hydrogen	H_2	0.00005%
*Nitrous Oxide	N_2O	0.00003%
*Ozone	O_3	0.000004%

* variable gases

PhysicalGeography.net. Atmospheric Composition. ND. http://www.physicalgeography.net/fundamentals/7a.html

Pidwirny, M. (2006). "Atmospheric Composition". Fundamentals of Physical Geography, 2nd Edition. Date Viewed. http://www.physicalgeography.net/fundamentals/7a.html

The rest are shown by the chart shown above. While Nitrogen and Oxygen are not greenhouse gasses there is certainly more of them than Carbon Dioxide in the atmosphere and still more water vapor than Carbon. My point being carbon is not the only existing greenhouse gas and doesn't make up most of the gasses in the atmosphere. As well as gasses are naturally produced and if someone volunteers to drain the ocean to get rid of more water vapor… that would be quite a show.

Now there is actually 121 million metric tons of carbon on earth. However

there are 391,600 million hectares of forest in Canada alone. One single tree in one of these millions of hectares can absorb about 48 pounds of co2 per year. That's approximately (NOT exact) 4,800 pounds of carbon absorbed per acre of trees each year. Seeing as the carbon levels are quite high… that actually means healthier trees. It's almost like when humans are exposed to more and (or) purer Oxygen we feel more relaxed and functional. As opposed to if you were to climb over 8,000 feet (the point at which air becomes too thin to breath healthy).

The temperatures of Calgary each year at 12:00 pm of early February: the highest being 14 (1987) Celsius, the lowest is -21 (2017). The average temperature of Calgary on February 6th over the past 50 years is -6 (approx.). Also for the past ten years only TWICE has the temperature surpassed 0 degrees Celsius. In fact in Central England during the year of 1850 the average temperature for February was 6 degrees (C.)

However this year London's average temp for February is 9 to 5 degrees. Although Calgary is average 1 to -12 degrees. That's a 8 to 17 degree difference so the area of Calgary in 1850 would've been more like -2 to -11 on average. Well minus 2 is colder than plus 1 temperature's changing from year to year is part of how the earth works. In fact just in 2016 it was plus three averages early February but 2017 it was -21 early February.

I've heard some foreigners from other parts of the world that come to Calgary say that they know the reason our snow is melting so fast. They say it is due to Global Warming, when in fact around here we have Chinooks, (drafts of warm air that flow down form the mountains. They're more common in Alberta) but that's not global warming! That's nature.

Something else that should be made clear is all the carbon in the world is not our fault. Fires produce carbon, volcanoes actually create more carbon and trap more heat in one explosion than we have in a century. Forest fires can be caused by humans but they still existed in places before human civilization. The largest recorded B.C wildfire released 190 million tones of carbon into the atmosphere.

Even though most news channels/papers will tell you we should be, should we really still be worried about Global Warming by carbon and humans?

Sources:

CBC News

Overview of Greehouse Gasses US EPA

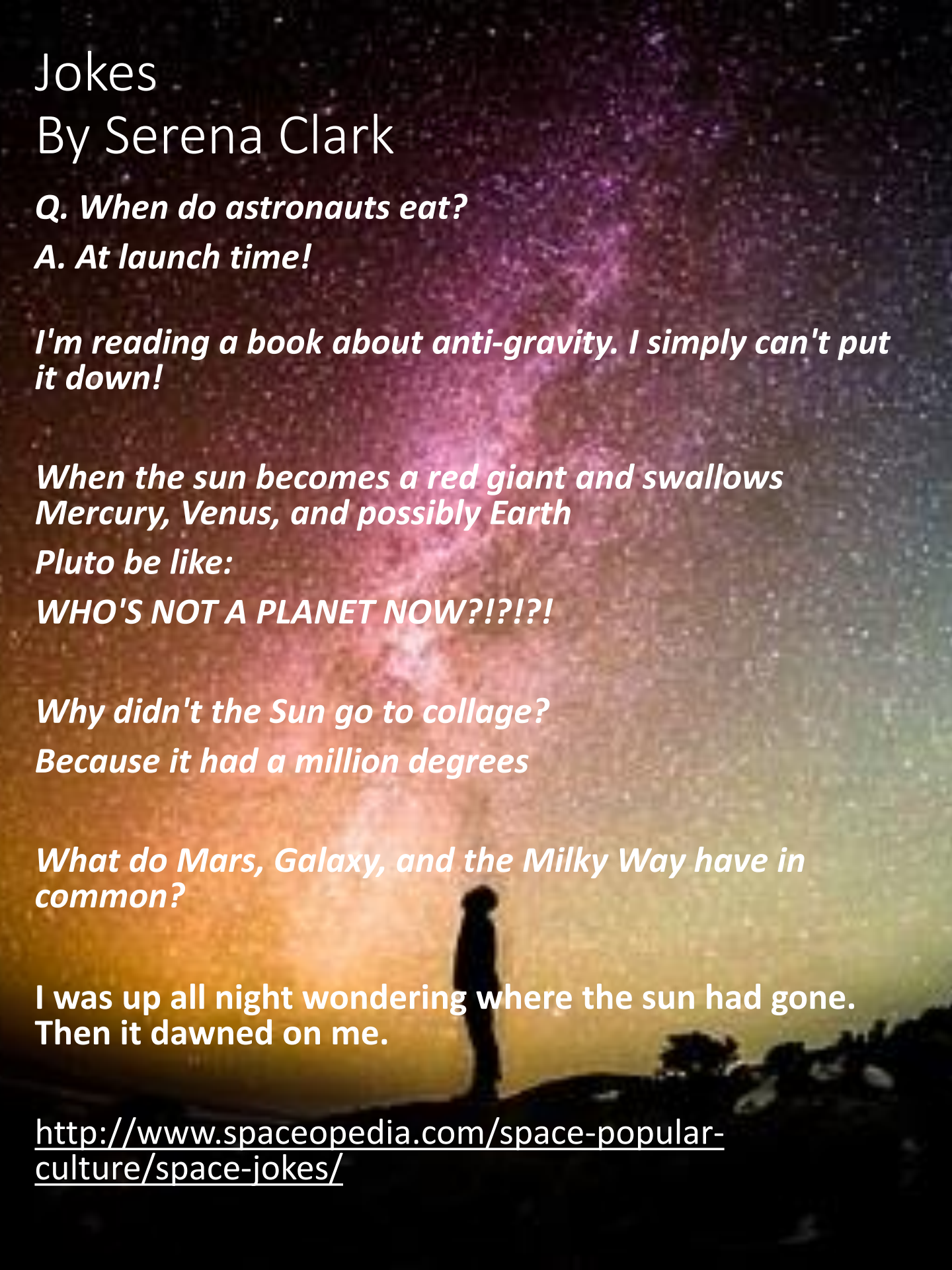
www.epa.gov/ghgemissions/overview-greenhouse-gases

The Weather of 1850
rmets.onlinelibrary.wiley.com/doi/pdf/10.1002/j.1477-

8696.2000.tb04039.x

Historical Data, Weather, Climate and Environment in Canada

http://climate.weather.gc.ca/historical_data/search_historic_data_e.html



Jokes
By Serena Clark

Q. When do astronauts eat?

A. At launch time!

I'm reading a book about anti-gravity. I simply can't put it down!

When the sun becomes a red giant and swallows Mercury, Venus, and possibly Earth

Pluto be like:

WHO'S NOT A PLANET NOW?!?!?!

Why didn't the Sun go to collage?

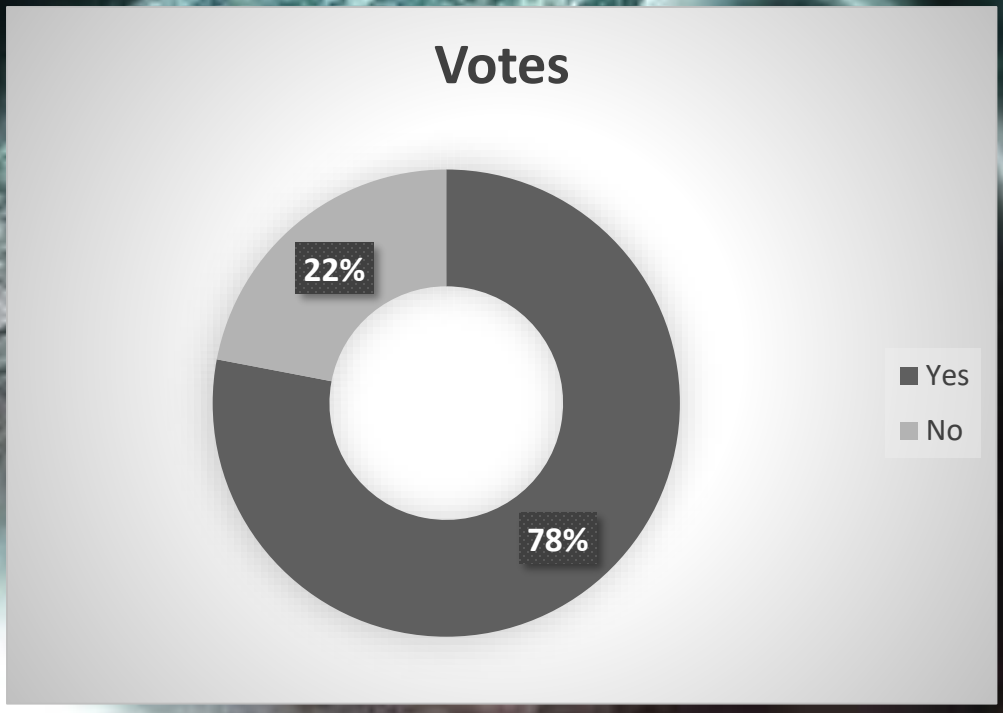
Because it had a million degrees

What do Mars, Galaxy, and the Milky Way have in common?

I was up all night wondering where the sun had gone. Then it dawned on me.

http://www.spaceopedia.com/space-popular-culture/space-jokes/

Poll



I took a poll on whether Pluto should be considered a planet. This was an interesting debate, as there were many facts shared. If you haven't already, I highly recommend reading the forum.

The results are in…

Acknowledgements

Thank you to our teachers for helping us throughout the school year, and helping us when we needed it.

Thank you to our parents who have been so supportive of our work! Without our parents and teachers, we wouldn't have a team to work on the Chronicle, and we wouldn't have the support system and building blocks in place, so we could even write well!

A huge thank you to the team who worked so hard on the Chronicle this year! They each put so much time and effort, so we could have a fun, and interesting e-magazine.

Thank you to the students, who would read our e-magazine, and keep up with our crazy antics!

May you have a safe, and fun summer!

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