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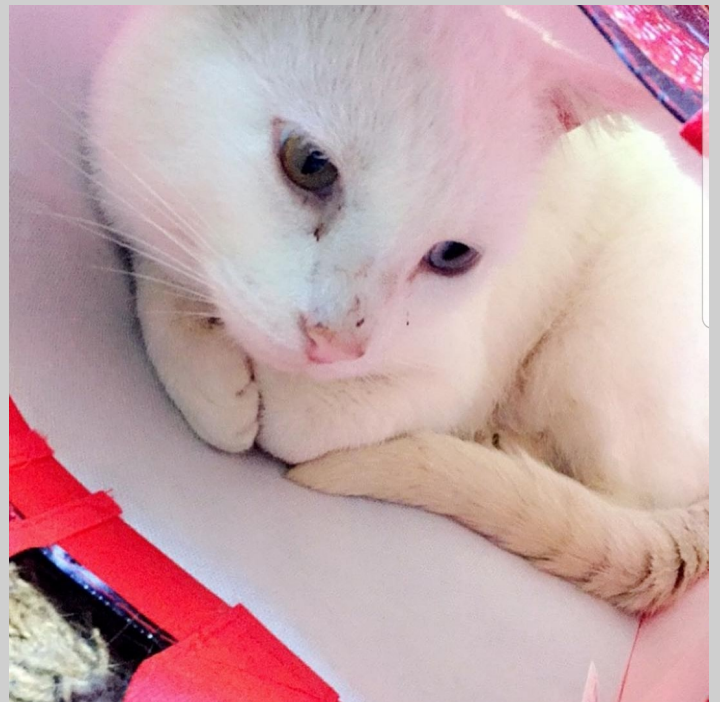
# Fourth Street Journal



January 2019

Dave Carpenter

The *Fourth Street Journal* staff would like to dedicate the January issue to Bowie, the beloved cat of student and former *Journal* contributor Sabryna Hansen. Bowie was loved by many and is very missed.



# Groundhog Day

By: Eli Sund

Would you rather listen to a weatherman, who predicts weather patterns based on science and educated guesses, or a 20-inch tunnel rat who can't even understand the concept of meteorology? Well, if you chose the sensible option, about 10,000 people in Philadelphia strongly disagree with you. Groundhog Day is a holiday that originated in Germany that made its way into the US and Canada all because a newspaper (the *Punxatawney Spirit*) had a slow day in the office and tried to think outside the box.

Punxatawney Phil is usually the groundhog (more like groundhogs) that is in the spotlight on this so-called holiday. During the ceremony, he is placed in his temporary burrow on Gobbler's Knob, soon to emerge and "predict" the weather. After the ceremony, he is placed in his residence in the Punxatawney town library in a special enclosure. Now, considering the Groundhog Day tradition has been in practice for upwards of 130 years, there can be no way that this town has used one groundhog the whole time (the average lifespan of a groundhog being around 6 years). At this moment, the Inner Circle of Groundhog Day (Phil's primary caretakers) have only said that they keep Phil alive by giving him an elixir of life, and when Phil takes just 1 sip, he is given another 6 years of life.

Now, what is this Inner Circle/cult/secret society that I mention? Well as I said, it is a group of people that take care of Phil, plan the ceremony, and speak to Phil in a special language called Groundhogese (yes, you read that right). When they are at the Groundhog Day ceremony, they can easily be recognized wearing top hats and tuxedos. Ahead of Groundhog Day, the Inner Circle will script the ceremony, supposedly making the decision on whether Phil sees his shadow or not.





Groundhog Day actually came from a ritual that took place during Candle-mas in Germany, involving a badger, but sometimes included a bear or a fox. The original formula for this ritual was *Sonnt sich der Dachs in der Lichtmeßwoche, so geht er auf vier Wochen wieder zu Loche*, or in English, “If the badger sunbathes during Candle-mas week, for four more weeks he will be back in his hole.” The tradition came to North America after a German-born journalist in Punxatawney, Philadelphia wrote about the strange holiday in 1886. It wasn’t until the following year the celebration became official. Today, the celebration is held in the same place as that first North American one. While at first the festival was only drawing in around 2,000 people, after the release of the film *Groundhog Day* the attendance rose to around 10,000 people. This year the groundhog, named Punxatawney Phil, is set to come out at 7:25 am on February 2<sup>nd</sup> to make his prediction.

So how accurate can Phil’s guesses be? Actually, his accuracy is lower than expected with random chance, with Tim Roche of Weather Underground giving an estimate of around 39%. This means you could probably flip a coin and be more accurate than Phil. The Inner Circle claims whenever Phil makes a false prediction, the person in charge of translating the Groundhogese must have made a mistake.

Whether you believe all this or not, this holiday can be seen as an extremely crazy event, making sense only to the people who happen to coordinate it. Even after all the bashing of the holiday I’ve done, it really could be a unique experience to go to Gobbler’s Knob and watch Phil make his decision, or at least watch the live stream on [www.groundhog.org](http://www.groundhog.org). Hopefully his prediction will bring an end to this unbearably cold winter.



# Career Spotlight: Ultra-sound Technician

By Angeli Padilla

The career of an Ultrasound Technician is very common in the United States. So what is an Ultrasound Technician? An Ultrasound Technician helps doctors and other health professionals diagnose patient's ailments. He or she operates special equipment that uses high-frequency sound waves to record images of internal organs. An Ultrasound Technician can have other names such as Ultrasound Tech, Diagnostic Medical Sonographer and Sonographer. Ultrasound Technicians earn a medium of \$71,410, approximately 67,300 people are employed in this occupation. If looking to work in this field you will most likely work in hospitals, doctor offices, and diagnostic imaging centers.



This job is usually full-time. I have some family members in this career, I asked and discussed some questions with my sister Illiana about this career. She is currently going to college become an Ultrasound Tech herself, here are the questions and answers of our interview.

Angeli: How many year of college do you need to work in this field?.

Illiana: Well you need 2 years of college and 2 years of clinical but it's so worth it.

A: What's some advice for someone who is seeking to go into this field?

I: You for sure need to be prepared to have a lot of time to spare, you will need a lot of time invested.

A: What does your day to day work consist of?

I: Well you definitely are helping patients, I first started out doing X-rays so at first a lot of positioning, communicating and making sure your patients are comfortable.

A: What are some skills needed to go into this career?

I: Communication is key, be ready to be very social to your co-workers and patients.

A: What does the starting out salary look like for this career?

I: The median wage usually is around \$70,000, but of course it can differ from person to person, I'm still going to college so I'm not full time yet so it differs.

# The Story of the Wise Men

By Liniquer Perez

According to the story, about 2,000 years ago a star showed up. The star was very bright and was special and different. It pointed to a place where something extraordinary was happening. The star pointed to a small town called Bethlehem where a child was born who was going to be king.

The great news spread throughout the world that a king was born, and the three magicians were excited to know the news that a king was born. The kingdoms of Arabia were ruled by a magician Melchior. The magician was very wise and liked to write his stories. He brought for a gift a chest full of gold. There was also the King Gaspar, who was known for his great kindness to the people he ruled, and King Gaspar took a chest with his best incense, and that was very aromatic and that formed incredible figures with smoke. Third was the magician Balthazar, who was very dear because he always knew what a person needed. He took as a gift a chest containing myrrh, a fragrant gum resin obtained from certain trees and used as medicines and incense.

Shortly before arriving in Jerusalem, a fog appeared that did not allow the wise men to see the star. The only way they were able to see the star was to climb a mountain to see it. In the morning, the three magi continued on and got to know each other better. King Herod received the kings in his castle and sought information. The three traveling kings were distrustful of King Herod.

The story says that a new day began, and they continued to Bethlehem where the baby Jesus was born, and the star they followed disappeared. The child's parents were called Joseph and Mary. The three Magi knelt in front of the child and presented their gifts.

The magicians decided to bring a special gift to every child in the world and thus commemorate the birth of Jesus. When the month of December arrives, the children decorate their house for Christmas. The magi know who behaved well and who did not behave well, so if the child was good he or she will be rewarded with a small gift, and if they misbehave, they get a bit of coal. To be considered a good boy or girl, children have to share gifts with their brothers or friends, as well as with other children who have no toys to play with. Much like with Santa, children will write letters about their requests for the magi.

To celebrate the magi, the Night of the Kings is on January 5. People prepare a special dinner and a special party. Before going to sleep, each person leaves a shoe out for the magicians. The children must go to sleep soon so that the Kings can leave the gifts, while the child sleeps. The magicians enter and leave a special gift for the boys and girls who behaved well. For the children who behaved badly, the magicians leave a sack of charcoal, and bring a gift for the parents. On January 6th the boys and girls get up early to see if they behaved well enough to have a gift left behind.



# Horoscope: 2019 Outlook

By Angel Padilla

**Aries:** You will find yourself this year. Focus on your needs; you get to show the world who you are and what you can do!

**Taurus:** You will have an easy flowing year. Everything will fall in place and be just a little easier.

**Gemini:** This year you will step out of your comfort zone, be freer, and focus on what's best for you. This year holds a lot of exciting things.

**Cancer:** This year is all about you! This year is time for you to express and love yourself.

**Leo:** You will thrive this year. Find out what truly makes you happy. This year is all about you.

**Virgo:** This year you will have a lot of time to think about your future, and make moves to set you up for success.

**Libra:** You will decide on either improving or cutting off relationships. You will be at peace mentally, nobody can get in your way! This is your year.

**Scorpio:** This year is all about your dreams and goals. Chase what you're passionate about, and set about reaching your goals.

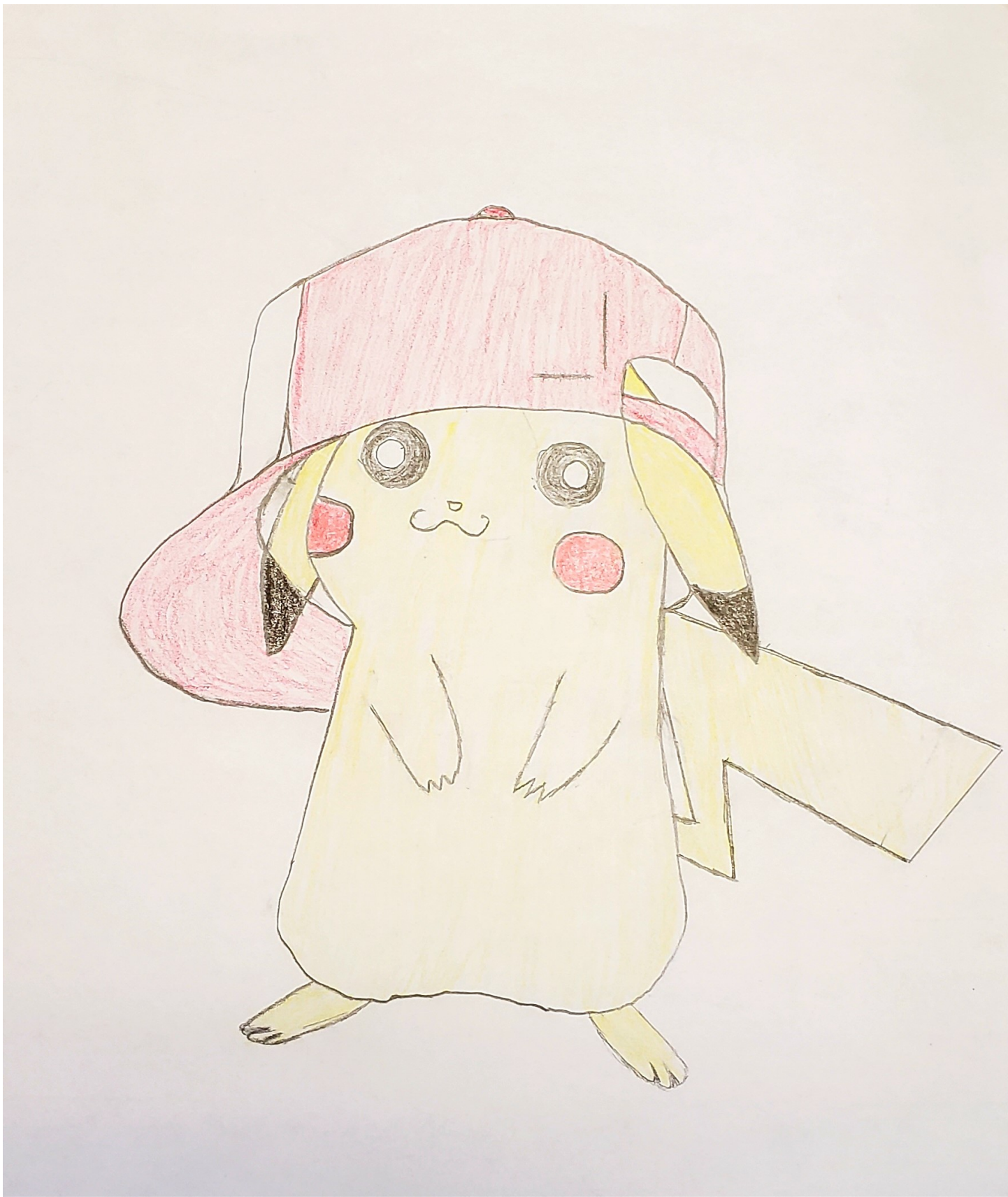
**Sagittarius:** This year you will try new things. Focus on having fun, but also being successful in your life.

**Capricorn:** This year will be a very humble year for you. Observe your surroundings and take notes, you might need them later.

**Aquarius:** This year will be full of changes. Take time from your hectic schedule and learn about yourself. Make choices that could benefit you later on.

**Pisces:** This year will be full of emotion. Face reality, and take this year to grow and learn within yourself.





"Pikachu"

Drawing by Liniquer Perez

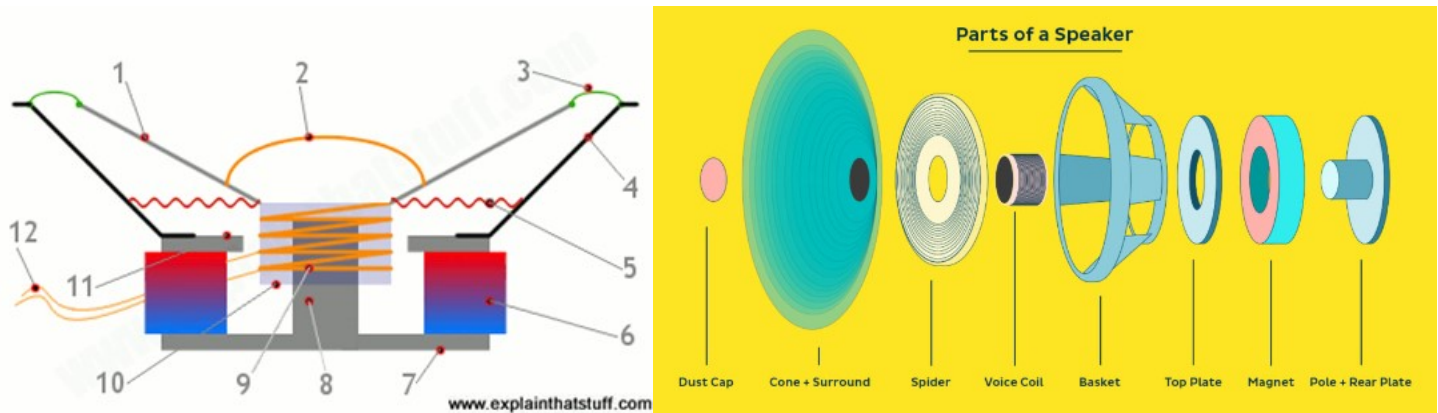


# Where Science Meets Magic: Speakers

By Eli Sund

One of the most taken for granted items in our lives is none other than the trusty speaker. Speakers are used for anything from listening to music and watching TV, to being used as an alarm for microwaves or ovens. Even though speakers have established many uses throughout our lives it still seems to be a mystery on how they work, many people think that since we cant even see the internal housings of a speaker, it must be magic right? Well, those people cant be blamed because it is a very complicated and refined process

One of the first thing we need to know when trying to understand how speakers deliver sound to our ears, is how exactly does sound work? Well, one of the key points we need to remember is that sound moves in pressure waves. When air is compressed fast enough, we will hear those waves as sound. The faster the air pressure changes, the higher frequency of the sound. Now if you look closely at a speaker (without anything covering it to protect it) you may be able to see the foam part (cone) vibrate slightly or more intensely, depending on the frequency of the sound. This is what compresses the air particles into sound waves. Before we move any further, lets discuss the parts of the speaker that makes this happen



Above are 2 images showing all of the different parts of a speaker. The first diagram shows a cross cut view, and the second shows a disassembled view. The parts you see are

- The cone and dust cap (1&2). The cone is the part that moves air and compresses it to form sound, while the dust cap is to keep any foreign objects from entering the assembly
- The spider and surround (5) are what hold the cone and voice coil into place while allowing them to freely move to produce sound
- The magnet and voice coil (6&9) are what interact with a power supply to vibrate at certain frequencies, which is then amplified by the cone. The coil wraps around a pole made of iron to make an electromagnet
- The basket (4) helps to protect the assembly
- the pole (8) which is turned into an electromagnet by the voice coil
- The top and bottom plates (7&11) that keep the magnets separated from other parts

All of these parts in turn work together to produce all the sounds that we need to hear and love to hear on a day to day basis. Of course, these parts all can be made with better quality to make the sound more realistic, but almost all speakers you run into will work the same way, even the speakers in your headphones. Hopefully this article will help you to appreciate the intricacies of all of the things we use in our day to day life.

# Lionel Messi

By Liniquer Perez

I admire Lionel Messi for a lot of reasons, but the biggest is that he never gave up. He wanted to be the best soccer player in the world and he said, "If you have a dream then follow it."

On June 24, 1987, in Rosario, Argentina, Lionel Messi was born. He would become one of the best footballers in history. Lionel Andrés Messi Cuccittini, has also been known as Leo Messi or La Pulga. He started playing soccer at 5 years of age, and in 1995 he joined the junior divisions of Rosarino Newell's Old Boy club.

At 11 years of age, he was diagnosed with a growth hormone deficiency that could not be cured, and the treatment of which was very expensive. His family could not pay for the treatment. A family member of Messi who lived in Barcelona got an appointment with the coach of the football club in Barcelona. The skill and talent of the young footballer attracted the attention of Carles Rexach, technical director of FC Barcelona.

The club offered to pay for young Messi's treatment, so his family relocated to Barcelona when he was thirteen. After the move, he started to play in the lower divisions but was injured and unable to play in many games. When he recovered from the injury, Messi worked hard and played well, and he reached the first team playing alongside footballers like Gerard Piqué and Cesc Fàbregas. He debuted in the first division of the team in October 2004 at 17 years of age.

Only 3 minutes were left until the end of the match, and Messi made his first goal. In this time period, Messi reconnected with his former girlfriend from Argentina, Antonela. He asked Antonela to return to Spain with him where they later married and had three children. The first one is Thiago who is 6 years old, their second child is named Mate and is 3 years old, and the last one is a 10 month old named Ciro.

Messi has been a part of many major wins for Barcelona. Among the many titles he has won are: the Spanish League championships of 2005, 2006, 2009, 2010, 2011 and 2013 and the Champions League 2006, 2009 and 2011. Meanwhile, playing for the Argentine soccer team, of which he is currently a figure and captain, he achieved a Junior World Championship in 2005 and a Gold Medal in the Beijing Games. Messi also won many personal titles. They include: 5 Golden Ball, FIFA World Player, 5 Golden Boot, Best European Player of the UEFA, and Best European Player.




Messi is my favorite player, and I think he's the best player in the world. He even donates money to children hospitals, because he cares about helping people. One day I hope to visit Barcelona when he is playing there, and maybe even have him sign my Messi shirt.

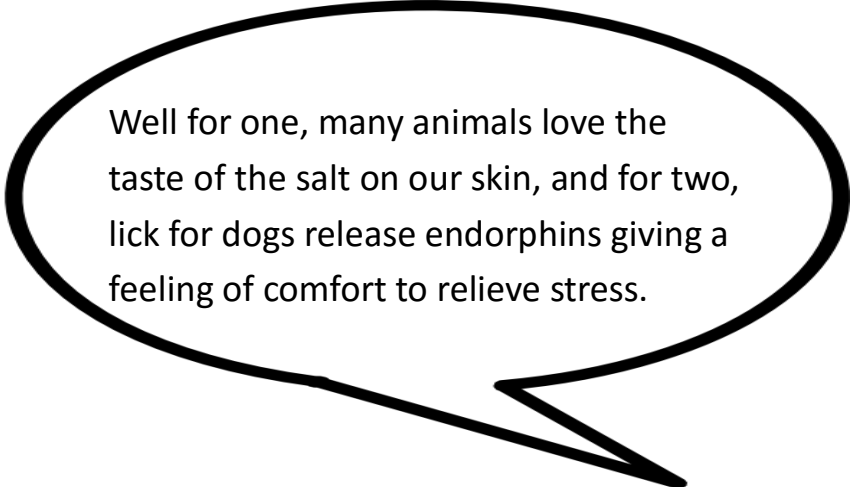


# ASK ELI


Back with another installment of your favorite well-intentioned advice column: Eli Sund



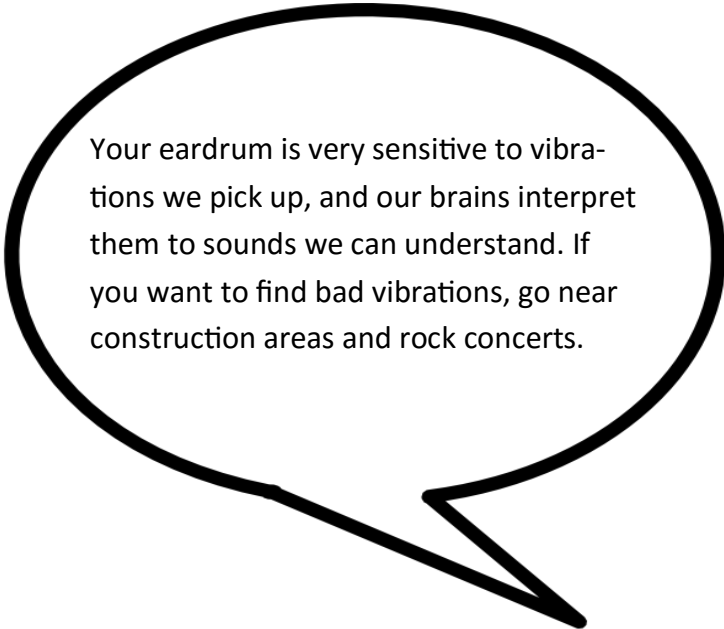
Why do dogs lick?



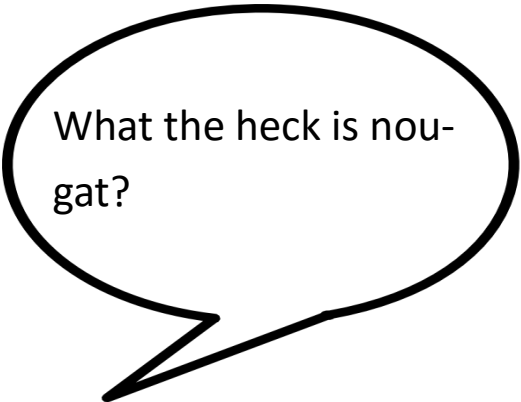
Well for one, many animals love the taste of the salt on our skin, and for two, lick for dogs release endorphins giving a feeling of comfort to relieve stress.



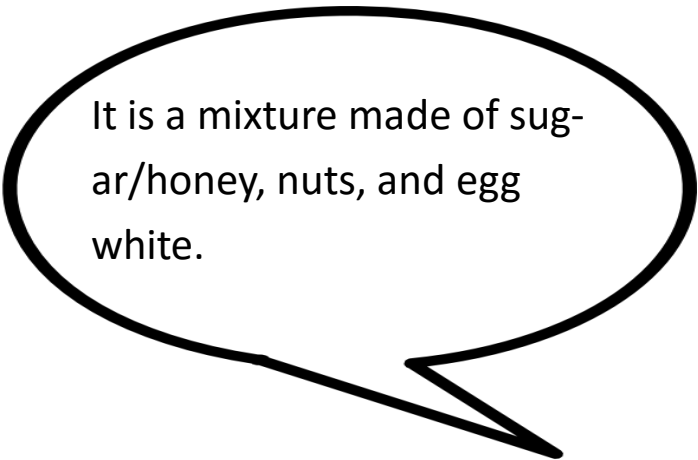
How do we hear vibrations and can vibrations be bad?



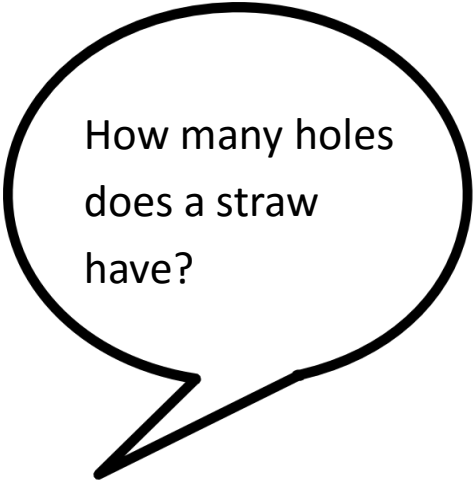
Your eardrum is very sensitive to vibrations we pick up, and our brains interpret them to sounds we can understand. If you want to find bad vibrations, go near construction areas and rock concerts.



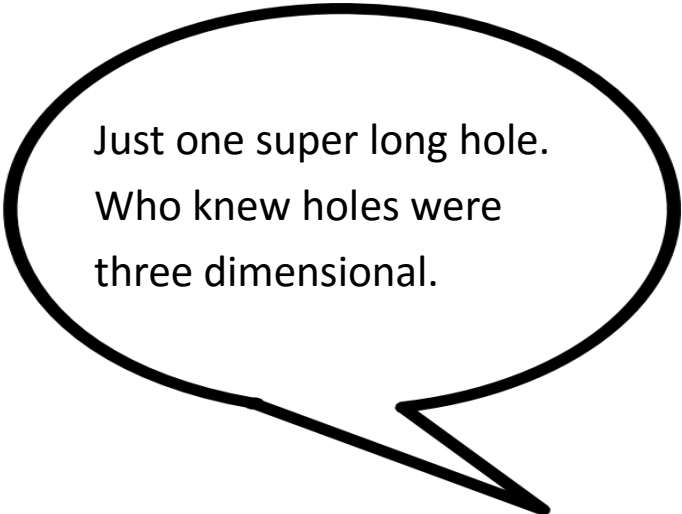
What the heck is nougat?



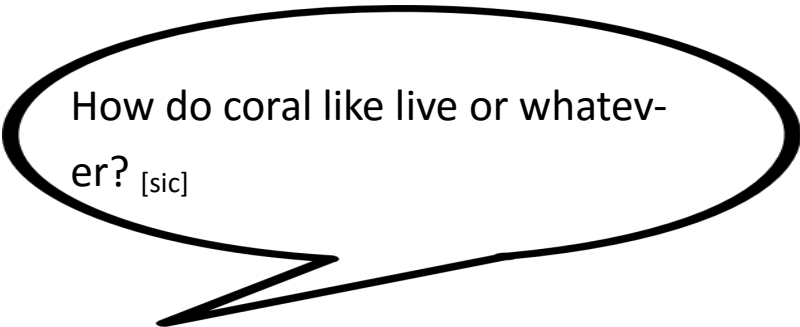
It is a mixture made of sugar/honey, nuts, and egg white.



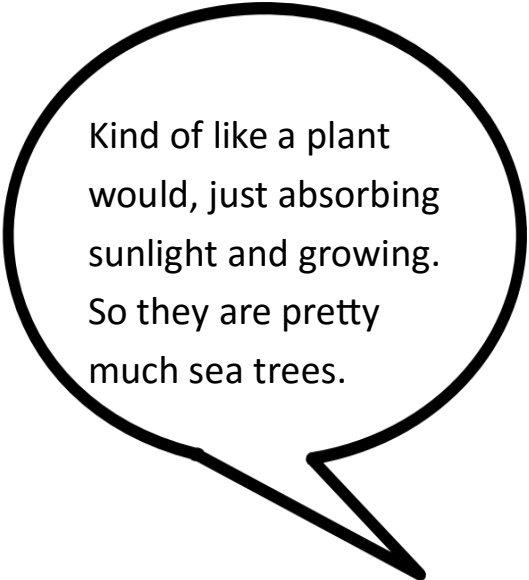
How many holes does a straw have?



Just one super long hole.  
Who knew holes were three dimensional.

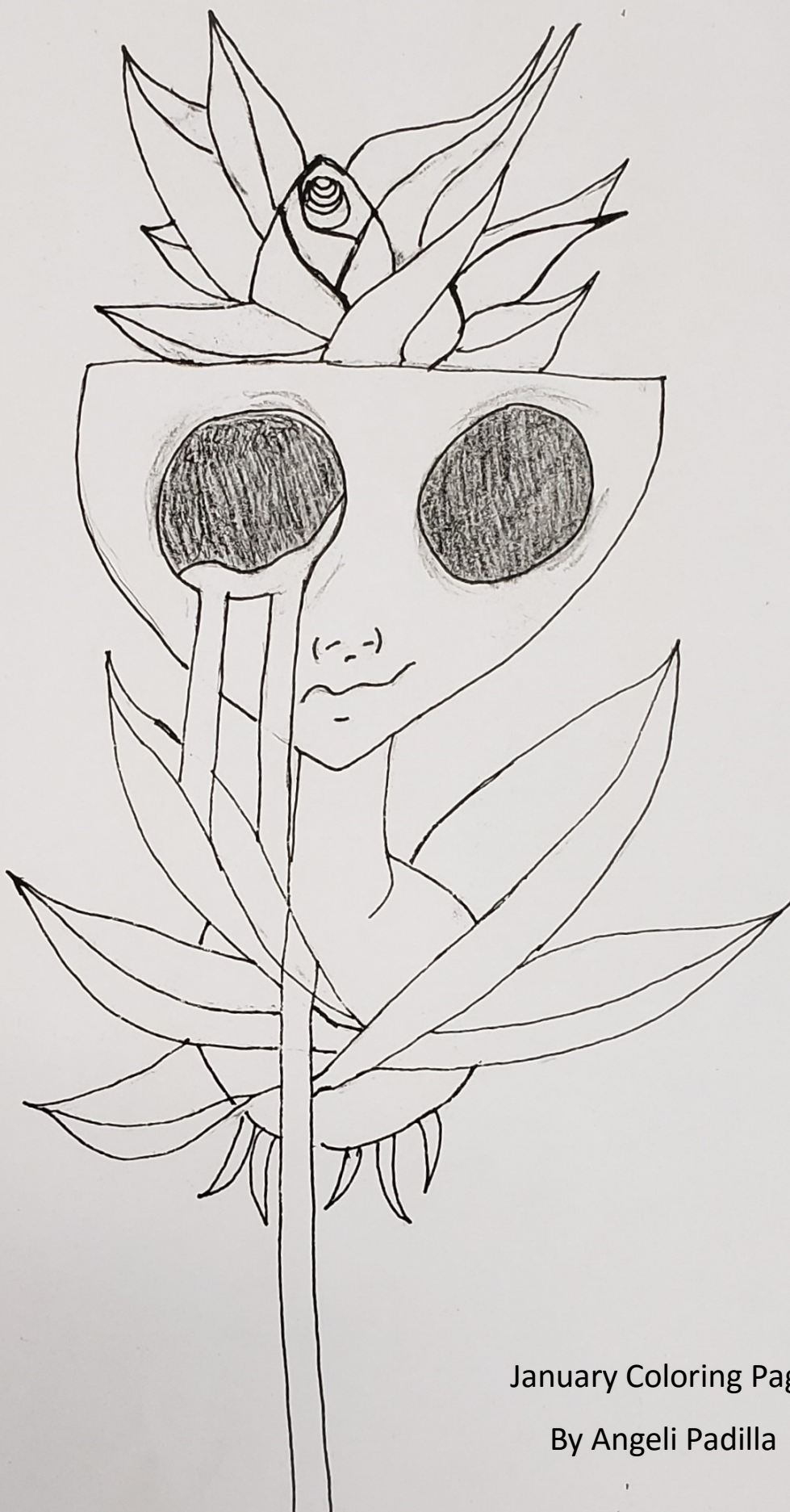


How do coral like live or whatever? [sic]



Kind of like a plant would, just absorbing sunlight and growing.  
So they are pretty much sea trees.





January Coloring Page

By Angeli Padilla