

The Edison Examiner

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Edison Elementary Community Newspaper

Sciencorner with Treetop

James Webb Space Telescope

On December 25th, 2022 the James Webb Space Telescope (JWST) launched from the South American country, French Guiana with the support of three different space agencies, The National Aeronautics and Space Administration (NASA), The European space Agency (ESA) and The Canadian space Agency (CSA). The JWST is a \$10 Billion, decades long project, designed as the next great space telescope with abilities greater than the Hubble Space Telescope. Positioned a million miles from Earth, the JSWT will see further and with more clarity than any Space Telescope before it. Let's explore what it can do and how it is going to get to its destination!

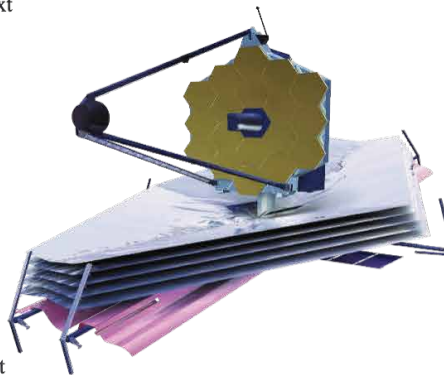
Why a new telescope? The JWST is one successor of the Hubble Space Telescope, first launched in 1990 and the Spitzer Space Telescope 2003-2020. The Hubble has a 7 ft 10 in mirror and lives in Earth's low-Earth orbit, which is close enough for repairs to the telescope in the case that something goes wrong.

In fact, when the Hubble first launched, it was soon discovered the main mirror was out of focus because it was polished to the wrong shape, and the images Hubble sent back to Earth were fuzzy. The world believed it could be the end of Hubble, before its mission even got started. Luckily, NASA sent up astronauts to repair it, which worked, and over the course of its lifetime there have been five servicing missions since.

Hubble's life is expected to last until 2030-2040, which if it continues to work means it will have survived 40-50 years! The Spitzer Space Telescope was retired in 2020, although mostly out of use since 2009 with an expected life of 2-3 years. With the major Space Telescopes either retired or nearing the end of their life, it is time for a new space telescope.

What can the JSWT do? Like Hubble and Spitzer before it, the JWST will be a very powerful telescope capable of seeing farther in space and time when compared to any other telescope, either space or land-bound.

The JWST gold-plated 18 hexagonal segments combine to make a 21ft diameter mirror, which is almost three times as large compared to the Hubble. This will allow the JWST to see back in time over 13.5 billion years ago, or 100-250 million years before the Big Bang! It can do this because the instruments on board are designed to view near-infrared and mid-infrared wavelengths.



NASA describes it like this; "Unlike the short, tight wavelengths of visible light, longer wavelengths of infrared light slip past dust more easily. Therefore, the universe of star and planet formation "hidden" behind clouds of dust comes into clear view for Webb's infrared instruments. Studying infrared light also helps us see closer back to the beginning of everything. Through a process called cosmological redshifting, light is stretched as the universe expands, so light from stars that is emitted in shorter ultraviolet and visible wavelengths is stretched to the longer wavelengths of infrared light.

Four main goals for the JWST

1. Search for the first galaxies formed in the early universe
2. Study galaxies near and far to inform the evolution of galaxies
3. Observe the formation of stars, from young stellar nurseries to the formation of planetary systems, and
4. Measure physical and chemical properties of planetary systems, including our own solar system, and investigate the potential for life in those systems.

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Whats happening at Edison

- 17 January** - No School: MLK Day
- 21 January** - No School: Grading Day
- 21 January** - Treetop No-School Day Camp
- 28 January** - No School: Staff Work Day
- 28 January** - Treetop No-School Day Camp
- 21 February** - No School: President's Day
- 18 March** - No School: Professional Development
- 18 March** - Treetop No-School Day Camp
- 21-25 March** - Spring Break
- 28 March** - Students Return from Break

A Treetop Academics Publication



Edison Kindness Week!

Want Edison to be a Kind and Inclusive School?
Join us in helping us spread kindness at Edison

By Ella Diment and Grace Phillips

If you want to know how to participate in Kindness Week look at the bottom of this article for more information.

Margot's New School

Margot Green has a speech disorder; she stutters. Margot was homeschooled until now. Her mother got a new firefighter job in Eugene, Oregon. Her parents thought it would be best for her to attend a public school. They found a local school called Edison Elementary. They decided to enroll her in Edison as soon as possible. They got a notification that Margot would begin school tomorrow. Margot was afraid that her fellow peers would make fun of her stuttering.

On the first day of school, Margot was introduced at the beginning of class. She was asked to stand at the front of the class, tell everyone what her name was and something that she would like the class to know about her. She froze in her seat, paralyzed and sweating. She walked, slowly, to the front of the classroom. Margot was so overwhelmed with embarrassment and fear, that she almost forgot her name.

"U-uh-uhm, m-my-my name i-is Mar-," She paused, she could tell some of the students were holding back laughs. "Mar-margot, I l-li-like b-birds."

"Thank you, Margot, you can head back to your seat now," the teacher told her.

Margot was holding back tears; she stuffed her head in her lap as salty water streamed down her cheeks. When she thought things couldn't get any worse, she heard her teacher call out, "Math groups of three, discuss why multiplication is repeated addition." She just sat in her chair, hoping that no one would notice she was there. A tall boy with a bright orange jacket and a brown baseball cap pokes her really hard on the shoulder. She wipes her eyes with her sleeve and looks up at him.

"Ye-ye-ss?" Margot says.

"U-u-uh h-hel-hello, w-w-weirdo." The unknown boy tries to imitate her stuttering, his minions follow and begin fake stuttering as well.

"Come on Walter, recess is about to begin," one of the teasing boy's 'friends' tells him. After, the teacher, Mrs. Xaviar, called out that it was time for recess.

Margot sat alone by the slide, picking up bark chips and counting each one of them. Suddenly a young girl, her age, comes and invites her to play tetherball.

"I'm Ivie, nice to meet you, I heard you liked birds. My favorite is a Macaw," Ivie said.

"W-we-well-well, I-I'm-I'm Ma-margot," she said, nervously.

"I know," Ivie told her, lets go play.

They made their way over to the tetherball course where a boy with bright green hair and deep olive skin was waiting for them. Margot's mood lightened, as she met her new friends.

"Theo, come meet Margot. She is new here."

"Sup, the name's Theo" The neon haired boy said, coolly.

Theo and Margot were on a team, and they invited another girl named Everly to be on Ivie's team.

Over to the side, a teacher noticed they had included Margot.

Without even hesitating about her stuttering. The teacher pulled Theo and Ivie aside and handed them each a Kindness Stickers to reward them for becoming friends with Margot.



Did you notice at the beginning of the story how Margot felt defeated and wanted to give up?

And then when someone showed her a simple act of kindness, her mood lightened and she felt more welcome?

Kindness Week is coming up and if you get caught being kind like Ivie and Theo, you will receive a sticker. If you get enough stickers you will earn a prize.

There will be Kindness Week activities as well, like Kindness bingo, Kindness jokes and Kindness drawing competitions.

Learn more about Kindness Week from your teachers.

But alas, you don't need fun games or rewards to be kind, you should do it anyway.

Margot's New School is a story about how important kindness and inclusion really is.

Help us spread kindness at Edison!



Lily's Culinary Corner

By Lily Sykes

Hi! I'm Lily. I love to cook and I'm a 5th grader in Mr. Conner's class. Well, in this addition we are going to make stained glass cookies. I got this recipe from www.eatingrichly.com. They look so cool and are pretty easy to make if you have cooked before. If not, it might take a little time. They are really easy to impress your friends and/or guests. Here's how.

Stained Glass Cookies



How to make it:

1. Put the brown sugar and butter into a large bowl. Mix well with a paddle attachment or a wooden spoon, until the mixture is smooth.
2. Break the egg into a small bowl and whisk well with a fork. Mix the egg in with the sugar and butter, a little at a time.
3. Mix in flour with the baking powder, then stir in cinnamon, allspice, and nutmeg.
4. Sift the dry ingredients through a fine mesh strainer into the wet ingredients.
5. Add the milk then mix everything together well, using a spoon by hand or the paddle attachment of the stand mixer.
6. Form dough into 2 balls.
7. Place each ball of dough between 2 pieces of parchment paper and roll out ¼ inch thick.



8. Keep sheets of dough between parchment and place in the fridge on a plate
9. Cut the cookies out with the normal sized cutters and place them on a lined baking sheet.
10. Cut out the center with the small cookie cutters.
11. If you want your cookie to be ornaments, then poke a hole with the drinking straw at the top. Make sure that it is far enough down so it doesn't break
12. Sort jolly ranchers by color and crush candies with the meat mallet. If you don't have a meat mallet, use a rolling pin or metal measuring cup.
13. Spoon the crushed candy into the cut cookies. You can use different colors if you like
14. Preheat the oven to 350 degrees and pop them into the fridge well you are waiting. You will have scraps from cutting the cookies out, roll them out and repeat steps 9-13
15. When it is preheated, bake them for 10 -12 minutes when candy is melted, and cookies are golden brown.
16. Let them cool and enjoy. If you are making them ornament, thread the ribbon through the hole you cut earlier.

Ingredients:

- 1 cup packed brown sugar
- ½ Butter
- 1 small egg
- 2 ½ cups all-purpose flour
- ½ teaspoon of baking powder
- 1 teaspoon of cinnamon
- ½ teaspoon of allspice
- dash of nutmeg
- 1 teaspoon of milk
- 4 dozen Jolly ranchers

Tools:

- Rolling pin
- Mixing bowl
- Wooden spoon
- Stand mixer (optional)
- Parchment paper
- Baking sheets
- Normal sized cookie cutters
- Small cookie cutters
- Chopsticks or drinking straw
- Resealable plastic bags
- Meat mallet
- Thin ribbon (if you want to make it an ornament)





Go Bears!

By Ella Sykes, Audrey West, and Violet Lillegard



We really like bears, and we hope you like them too! Here are some facts about pandas, polar bears, grizzly bears, black bears, and the koala, which is not a bear, but we think you might find it interesting.

Panda Bears: *Ailuropoda melanoleuca*

Pandas are awesome and cute. We know this about pandas. In this paragraph we tell you how pandas are in danger. One reason pandas are endangered is because of human activity, causing bamboo forests to be cut down.



Bamboo forests are pandas' natural habitat. Humans are cutting down bamboo forests to build roads, houses, and offices. Also, people have been killing pandas for their skin and fur, but pandas are being protected by people to save their lives... Pandas live in one place which is China. China has a lot of bamboo and bamboo is the panda's main food source, "although" they do in fact eat other stuff too. Pandas love fruits and vegetables.

Polar bears: *Ursus maritimus*

Polar bears live in the arctic circle, "North pole" and most parts of Canada. Polar bears are very aggressive. Polar bears are the apex predators of the arctic circle. When polar bears stand on their hind legs, they are 10 feet tall. In the arctic the polar bear is known as the seal shredder. Did you know that polar bears have black skin, but white fur? Polar bears are in danger because of climate change. The Arctic ice is melting away very fast, like really fast. Because of that they are not able to raise their young safely because they have their young on ice flows. Seals are also threatened by global warming because seals raise their young on ice flows. As you may know the seals are the main prey of the polar bear. Without seals polar bears can't survive.



Grizzly bears: *Ursus arctos horribilis*

Grizzly bears weigh about 900 pounds and are eight feet tall on their hind legs. Animals that get too close to a mother grizzly and her cubs may be attacked. A grizzly bear's claws can be up to four inches long, which is also as long as a human finger! Grizzly bears are actually North American brown bears. Grizzlies can run up to 30 miles an hour, which is really fast. Both polar bears and grizzly bears are apex predators. Grizzly bears may seem like bloodthirsty killers, but mostly only attack humans when they or their young are threatened. raise young. Grizzly bears live in forest alpine meadows. They also love to be around rivers where they can catch fish for food.



Koalas: *Phascolarctos Cinereus*

Most koalas live in Australia and some koalas live in New Zealand. Koalas are not really bears. Koalas are actually marsupials, and not bears! As are many other animals. Koalas can get diseases just like humans. There is a terrible disease that is spreading between koalas, and they are having to get vaccinated. The disease called chlamydia pecorum is very dangerous for koalas. Koalas cannot give this virus to humans.



When a baby koala is born it is the size of a jellybean. Koalas may seem cute and cuddly, but they can actually get very rough in the wild, but when raised by humans they are very sweet. Koalas are in constant danger of wildfires and bushfires which happen constantly and are very dangerous to both koalas and humans. Australia is getting dryer with climate change. All it takes is one spark, one lightning bolt. Koala numbers are on the decline each year, their numbers go down more and more. And today the number of koalas is 329,000. Koalas are going extinct very quickly, but there is hope to turn it around! There are lots of groups out to help koalas. Humans are making a difference. You can donate to help koalas at WWF.com.

Black bears: *Ursus americanus*

Black bears are not to be confused with grizzlies. They are totally different! In this paragraph we will tell you how black bears eat, sleep, look, and where they live. A Black bear's diet is mostly vegetation. Their diet can include herbs, grass, roots, buds, shoots, honey, nuts, fruit, berries, and seeds. Black bears will also eat fish, small mammals, and insects. The best way to tell a Grizzly bear from a Black bear is Grizzlies have a hump on their back and Black bears don't. In the south Black bears are black, but they can also be shades of brown, blond, and light brown. A male Black bear typically weighs between 130 pounds and 500 pounds, but females can weigh 90 to 350 pounds. The record weight for Black bears is 800 pounds. Black bears are only found in North America. Black bears are the smallest of bear species in North America. Black bears are much less aggressive than grizzly bears.



The Dragon's Den

By: Ella Diment

Once there was a girl named Britney, but everyone calls her Brit. Her birthday is coming up, she's turning eleven. She is so excited and all she wants for her birthday is a pet dragon. Everyone in her class doesn't believe in dragons, except her two best friends Alexis, and Mitchell. She's new at her school, it's called George Washington elementary.

On her first day of school her teacher Miss Cameron gave her class an assignment. They had to make a presentation about something that they love to do. They got to do the assignment in a group of three, so Brit picked Alexis and Mitchell. They wanted to do a project about dragons because they wanted to show their class that dragons are real.

That night Brit thought about where they might find proof that dragons were real. She remembered that her class was going on a field trip tomorrow and spent the rest of the night making a plan. That morning Brit wolfed down her dragon charm cereal and began to pack her lunch. She rummaged in the fridge to find something good to pack. She found a PB and J and a juice box. It was strawberry, her favorite type of juice box. Then she zipped it up and popped it in her bag next to a crumpled-up piece of paper that had her plan on it, two fluffy pink pens, her planner, and a packet of Skittles. She said goodbye to her mom, dad, two brothers, and three sisters. She sprinted out the door almost forgetting her jacket, but she didn't. When she got to the bus stop the bus was seconds away from leaving. She jumped on and found a seat next to her two besties and told them the plan.

Brit said, "So the plan is once we get there we'll sneak out of line and look for clues to prove that dragons are real."

Alexis said, "Sounds like a plan," and Mitchell agreed.

Once they got there Miss Cameron told them to get in a single file line, but Brit and her friends snuck out. It was pouring so they went under a shed and ate their lunches there. All of a sudden there was a strange blue glow coming from the closet. The air smelled of dead fish and rotten meat. Brit walked over and slowly opened the closet. It was a portal. They all stood up and walked over to it. Mitchell put his hand in, and it felt cold and moist. Suddenly, Alexis tripped and fell in. Brit and Mitchell jumped in after her and everything went black for a second.

When Brit awoke, she was lying on something warm. And she saw her friend. Alexis was lying on a pile of bones and Mitchell was on the cold rocky ground. She looked down and she was so startled that she leaped up waking up her friends.

It was a dragon; she had never seen one in person before. When Brit and her friends got to their feet, they began to look around the cave for an exit. Brit tripped on something, and it looked like a large purple rock with spots on it. She looked in amazement at it. Mitchell came over and looked at it for a minute.

"It is a fossilized egg," he said. "Hey guys!" Alexis exclaimed, "I think I found the exit."

There was a humongous boulder leaning against the wall, Alexis gave it a big push. It moved just enough for her to be able to

squeeze through. Brit walked over and shoved the egg through the gap. After that Brit and Mitchell squeezed through the gap just how Alexis did.

They saw a strange blue glow in the distance. Mitchell begins to walk toward glow, but all of a sudden Brit grabs his sleeve and pulls him backward, saving him from falling off a cliff. She points to a small dragon sitting by the wall. She walks over and asks the dragon if it can give them a ride. It grunts.

"I guess that's a yes," she said as she and her friends hopped on. In a couple of minutes, they land on an island with the same portal that was in the storage closet. They hop off the dragon and say "Bye."

"Wait," she says and picks up four dragon teeth, one for her, one for Mitchell, one for Alexis, and the last is for the project. They all smile and hop into the portal. Everything goes black just like before.

In a couple of seconds Brit awakes in a bale of hay. Next to her is Alexis and Mitchell sound asleep. She checks her watch. No time had passed, not one second, and the only thing that had changed was that it wasn't pouring anymore, the sun was beating down on the dragon egg. She found her backpack. It was lying on a rock. She grabbed it and felt inside, it was slightly damp. She slipped the egg inside and put her bag on her back. She woke up her friends and they joined the rest of their class.

The next day Brit and her friends were getting ready to present their project.

Miss Cameron said, "I hope you all have remembered that your projects are due today, first up is Brit's group."

They bring their project up and remove a small rag, they begin to tell the class about their presentation. Alexis tells them about the egg and Mitchell points to it all. Suddenly Miss Cameron reminds the class that they must sing Happy Birthday to Brit the class begins to sing Happy Birthday.

After they finish, Brit and her friends complete their presentation, and everyone claps.

After Brit's mom picks her up, she asks "How did your presentation go birthday girl?"

Brit replies, "It went great!" They arrive home.

When Brit opens the door her family yells "HAPPY BIRTHDAY BRIT!" They go into the kitchen and open presents.

Suddenly, her mom shouts "Brit the egg hatched!" Brit ran into the living room and stared in amazement at the baby dragon sitting in her mother's arms. It was blue with purple dots all over its body and it had big blue eyes. Her mom hands her the baby dragon and says, "Happy Birthday." The rest of her family comes into the room.

"What will you name it?" asks one of her little brothers.

"Shimmer, because she has big shimmery eyes," says Brit.

That was one good eleventh birthday.

The End.

Mr. Chickpea Garbanzo: The very fashionable rat

By: Grace Phillips

Hello, my name is Chickpea Garbanzo. I'm a rat with lovely taste. Garbage with a hint of motor oil. What's better than that? I am very rich, I have a mustache, and I eat charcuterie cheese boards for breakfast, cheese confit for lunch and the most expensive french soup in all the Garbaging Lands. I live in a penthouse on Rubbish Road. I live with my very fancy wife, Lima Garbanzo-Bean. This would be the tenth year for her running for president. We have no kids because Lima thinks they are stinky and cost no money at all.



Yesterday, Lima and I went to a New Year's Eve party with our neighbor Eugenio Garbage. He had seven children so Lima almost didn't want to go. But Eugenio convinced her that they wouldn't be at the dinner table. Lima wore a yellow and black dress that went down to her ankles. I wore a grey suit. We looked very sharp. Another revolting thing (to Lima) was that Eugenio was also running for president. He announced this at the dinner table. We were only halfway through Salmon en Papillote when she stormed out of the very nicely decorated mansion after learning this. It was the definition of an outrage.

He said with a smirk, and I quote, for Lima's behalf, "I've been thinking of spicing up Garbaging Lands a bit, when, of course, I become president. I already have votes from a few neighbors and that family of raccoons in Stank City." Oh boy!

The Secrets Behind Egyptian Hieroglyphs

By Petra Alsmadi



I was on vacation in Portland and we went out for a walk to get breakfast at a cafe. We decided to go to the Portland Art Museum nearby because it would be fun. Then we saw they had this exhibit about ancient Egypt and Queen Nefertari. Part of the exhibit was about Hieroglyphics. I wanted to be able to read the messages they wrote! On the way out we stopped at the gift shop and I asked my mom if they had anything about the hieroglyphs. I found a book that teaches me how to read hieroglyphics called "How to Read Ancient Egyptian Hieroglyphs" by Marcus Fowler and Jean Rogers. My mom was so kind that she bought it for me. Now I will share some of what I learned from visiting the museum, reading this book, and researching some other sources so that you can learn about hieroglyphs too.

Ancient Egyptians lived thousands of years ago. And they had a special way to read and write. It's called hieroglyphs. Hieroglyph is kind of like the alphabet. Certain pictures meant certain sounds. For example, this symbol  means man. And this symbol  means eat and drink. Did you notice that the symbols represent what they mean? Like the eat or drink one. His hand is up to his mouth like what we do when we eat or drink.

Most ancient Egyptians were not literate. Not literate, or illiterate, means you're not good at reading or writing. If you can't understand hieroglyphics, it's okay because only 1% of ancient Egyptians could.

Most Egyptians didn't need to learn how to read or write because they were farmers. But the 1% of Egyptians who did learn and know how to read and write Hieroglyphs were usually priests and royalty. For example, Queen Nefertari, who lived around 3,300 years ago and was married to Pharaoh Ramesses the second, was very good at reading and writing hieroglyphs and she used her skills to write letters to other world leaders at the time she was queen. She also showed herself as a scribe in paintings on her tomb. Queen Nefertari's tomb is unusually large and one of the most important in the Valley of the Queens in upper Egypt. The tomb is covered in pictures, codes, and messages, usually known as hieroglyphs.

Unfortunately, large and special tombs like Nefertari's are popular with tomb robbers. Many artifacts from Nefertari's tomb were stolen. But the paintings on the walls remain and tell us many things about her and her life.

There are three different types of hieroglyphs. Logograms, phonograms, and determinatives. Logograms represent a whole word or idea, like the man and the eating/drinking above. Phonograms represent a sound, like in someone's name. For instance,  sounds like 'n' in Nefertari. Finally, determinatives are a type of hieroglyph that get put at the end of a word or phrase to clarify the meaning. For instance, at the end of sounding out a name like Nefertari, you might add a symbol like an image of a woman to clarify who these sounds are describing . (I saw this at the museum on a piece of furniture with Nefertari's name on it). There are over 1,000 hieroglyph symbols in total.

At some point in history, people stopped using Egyptian hieroglyphs. For a long time, no one could understand them. But then, in 1799, the leader of France (his name was Napoleon) invaded Egypt with his army. During the invasion, the army discovered something very important called the Rosetta Stone.

The Rosetta Stone is a large stone tablet that translates between Egyptian and Greek. It was probably created sometime between 300 and 0 BC when Egypt and Greece had a lot of connections. Since people still understood Greek when it was found in 1799, it means researchers could start to use the Greek to decode the hieroglyphs and understand their meaning again. Here is a picture of the Rosetta Stone:

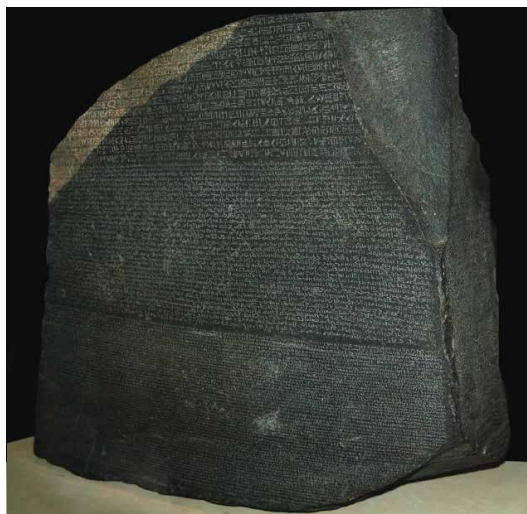
Today the Rosetta Stone is housed in the British Museum in London, England and you can visit and see it yourself.

Now anyone can learn how to understand hieroglyphics and you can even spell your name if you want to. If the Rosetta Stone didn't exist, we might have never been able to understand hieroglyphics. But thankfully the discovery of this important artifact means that we can understand so much more about ancient Egypt and its people.

Here is a list of the phonograms in hieroglyphics. Can you spell your name?

A 	H 	N 	U 
B 	I 	O 	V 
C  or 	J 	P 	W 
D 	K 	Q 	X 
E  or  or 	R 	Y 	
F 	L 	S 	Z 
G 	M 	T 	SH 

Rosetta Stone: There are three languages with the same decree. From top to bottom 1. Ancient Egyptian hieroglyphics mid-4th millennium BC 2. Egyptian Demotic c. 650 BC–5th century AD 3. Ancient Greek 1500 BC to 300 BC





Harlow Wood: Chapter 2



By Grace Phillips

Previously on Harlow Wood: A teenage girl named Harlow is running from something mysterious. She comes across an unknown river in the woods. A boy, swimming in the water, announces himself as Asher. Harlow gets attacked by these mysterious creatures. A strange looking arrow pierces her skin causing her to become unconscious.

Brightness, so bright. Harlow was in an enormous room that seemed endlessly filled with light. Just light. The girl tried to walk on the light-filled floor that was shadowed with large figures, and to her surprise it was easy. She continued walking. It was an odd sensation because she was unsure if she was dead or alive. Harlow assumed she was somewhere in between.

Harlow kept walking, slowly investigating the eerie figures. Finally, she found something, or rather, someone. One of the figures was Asher, her newly found friend. He was moving but didn't pay any attention to her at all. It was as if she was watching Asher through a black and white crystal ball. He seemed to be watching something, but Harlow could not see what.

Out of the corner of her eye, Harlow thought she saw something appear. She turned around to look, but only saw more figures. They had appeared out of nowhere, but they were not strangers. In fact, they were people she knew. Her parents, Chester and Augustus, were among them. They still had their cotton tunics and wolf skin water bladders and were lying unconscious on the dirt floor of her home. Her friends, Julius and Gemini were there, too, along with her aunts and uncles and distant cousins.

In the distance, however, Harlow saw someone she had never seen before. A strange woman with blonde hair, light brown eyes, and a calming smile. She was the only one there who actually noticed her. "Come," she said. Her voice was soft like a smooth piece of glass that sounded like you could break it with the flick of your finger. The ghost-like woman pointed to a door. The door looked like it held back an enormous amount of light that was bursting around the edges of the frame.

As Harlow walked closer, the woman said, "Hello there dear, my name is Aria and I am here to help you... to make sure you apply yourself."

Harlow opened her mouth to say something like, "Apply myself how?" but her mouth shut automatically.

Aria pieced this together. "You cannot speak here unless Sorcerer Izaiah Mentomont Wels Clarice The Third chooses you to stay," she said. "But... if you walk through that door, I can talk to him about whether you have to stay or go. He doesn't like it when people... visit." She gestured to the door. Harlow stepped up the stairs that led to the door. She slowly opened it. As she did, a blinding beam of light shot directly at her and she fell to the floor, not dead but barely alive

...

Asher was pacing around Harlow's unconscious body trying to decide what to do, but the longer he took, the worse she became. Harlow's mumbles were hoarse, practically gagging with a little bit of drool dripping down the end of her cheek to her chin. Her eyes flickered open and shut. A small cut in the wall of Asher's teepee let in a bright beam of light. He really didn't think much of it, it was probably the setting sun shining through the trees. Something did catch his eye, a shadow lingering deep in Harlow's pupils, a very recognizable shadow. Her eyes closed again before he could look more closely. He turned around looking for the light. Nothing was there, only the muddy swamp green river which he could see from the jagged hole in the bear skin tent. Asher dug through her bag for any elixirs or herbs that might be helpful.

Her bag was full of sacks filled with sea glass, vials of strange brown-purple liquids. Teas were placed in paper boxes labeled eerie names like Qew Question or Hazel Hexer. There was one tea box, its label peeling and wet, called Awaken. Asher guessed it did what it promised. If this "tea" wasn't mixed with the other strange teas, then Asher would have just thought it was extremely caffeinated. But, and even if he didn't know it at the time, he didn't fully trust this odd tea. After a lot of procrastinating, he had no choice.

Asher walked out of his teepee, checking for the strange nightly arrow shooting creatures. He slowly and cautiously walked toward the large rock he had his meal on. A pile of sticks and leaves were set at the bottom of the rock. He picked up some wood and carried it back to the tent. He filled a metal pot with river water, one of the few pots that his sister left for him. He lit a fire and placed the pot on to boil to kill off the germs. He dropped in the tea-spices and sat impatiently next to the fire.

After a while, the pot of spices started boiling and the water became a deep brownish yellow. He grabbed a handcrafted wooden bowl and scooped up the tea. Asher propped Harlow up and poured tea into her mouth, halfway pouring it into her mouth and halfway pouring it onto her leather tunic. Her eyelids twitched. She began to move her uncovered toes. Asher shook her and gathered more tea to pour in her mouth.

"Aria-, Asher? Who? Huh?" Harlow mumbled odd, uncommon names. Except for Asher of course.

Harlow's eyes were fully open at this point, but Asher poured more tea into her mumbling mouth.

"Asher, I had the weirdest dream. There was a woman named Aria..." Asher squeezed her too tight for Harlow to finish the sentence.

"Wha-what happened, why are you hugging me?" she said quizzically.

"I'm not sure, I was hoping you would tell me," Asher stammered, "All I remember was you and me by the river, and... and..." She crouched down to the dirt floor and stuffed her head in her lap.

"They came." Harlow said, through her head-stuffed lap.

"Who is They?" Asher asked.

Harlow sighed, the kind of sigh you give when you realize the person you are talking to has no idea what you're talking about.

"I went back to my town, Hester, and it was like everyone was asleep. Everywhere I looked, the ground was scattered with unconscious bodies," she said frantically. "All their bodies, including my fathers', were covered with arrow wounds. There were arrows all around the town, the arrow heads dripping with a maroon liquid. The same liquid was pouring out of everyone's wounds. I knew from the ornate arrows that the..." Harlow paused for a moment, trying to remember what to call them. "Kind, yes, that's their name. The Kind had come." She started back up again; "My fathers told me about them. Greedy little things whose sole purpose is to take our magic."

"Magic? What magic?" Asher asked.

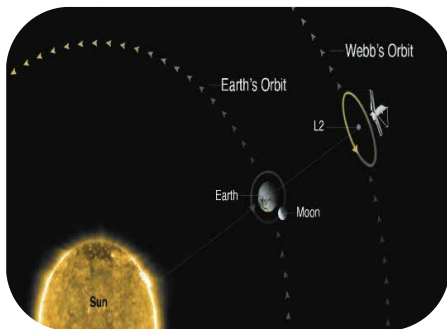
"Oh, right- before I blacked out, I was going to tell you something. I was going to tell you who I am. I'm Harlow. Harlow Wood. And I'm a Sorcerer.



SciNO with Treetop: JWST

James Webb Space Telescope continued...

Where is the Webb telescope? The Hubble space telescope orbited Earth in a low-Earth orbit, about 1000 miles above the surface. After its month-long journey from Earth, the JWST will Halo-orbit in space near the Sun–Earth L2 Lagrange point, or about one million miles from Earth! One Million miles is four times farther than the Moon is to the Earth.

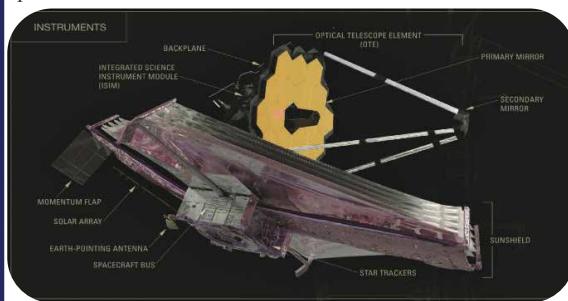


The Lagrange point is a position in space where the gravitational forces of the two large bodies and the centrifugal force balance each other, and are in equilibrium. A small object at a Lagrange point will not get pulled into the orbit of either the Earth or the Sun and therefore, requires very few course corrections to stay in a steady orbit.

There are five of these points in the Sun-Earth system as there are five for the Moon-Earth system. As you can see by the picture, the JWST is “behind” the Earth from the view of the Sun. Orbiting L2 allows the JWST a few advantages it wouldn't have at a lower orbit. The Sun-facing side of the spacecraft will be perpetually bathed in sunshine and allow it to generate power via the solar array.

The orbital path that L2 provides ensures the telescope will stay out of the shadows of both the Earth and Moon. When JWST orbits L2 it is also orbiting the Sun and because it faces away from the Sun at all times, it gets an unobstructed view of the entire sky at all times.

Why so far away? Besides the reasons just mentioned, scientists figured out for the JWST to work it needed to be very cold. The Webb telescope collects infrared light as its data. The instruments needed to collect those waves need to be very cold, otherwise the infrared signals could get lost in the heat of the telescope. This is why Webb has a “tennis-court-size” sunshield that will block light and heat from the Sun, Earth, and Moon. Its five layers of specially coated material plus the million-mile distance helps keep the instruments at -370 F. The five layers block and redirect the heat out the side of the sunshield and are so effective you could boil water on the Sun-side of the spacecraft and go as low as -395 F on the out-facing side. That temperature is low enough for some of the instruments, but for the mid-infrared instrument the Webb telescope is “equipped with a special cryocooler that pumps chilled helium to the instrument to reduce its operating temperature to about -448 F.”

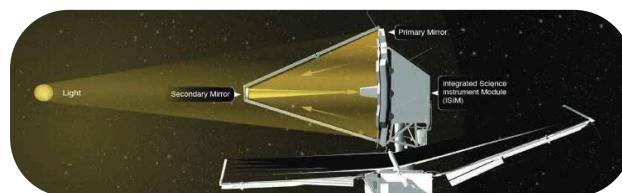


How will it get there? Getting the JWST to its L2 Lagrange point is not easy. It is described by NASA scientists as, “29 days on the edge” meaning it takes 29 days to get from Earth to L2 and every single thing must go correctly. What makes this mission different from many others is if something does go wrong (like with the Hubble) there is no way to repair it. The James Webb Space Telescope is on a one-way mission with no way to return to Earth, or currently, no way for astronauts to reach it. NASA engineers say there are “344 single points of failure” that could occur during the monthlong series of maneuvers and deployments.

The JWST weighs 14,000 pound and when unfolded it is about the size of a tennis court. This is not something you can stick in a rocket, as is. NASA needed to fold the Webb telescope in an origami-like pattern in order to fit it on top of a rocket for launch. (See picture) Once launched, and on its way to the L2 orbit, it will take two-weeks to unfurl the JWST to its proper shape.



There are dozens of these automatically programmed “deployments,” as NASA calls them, that unfold the Webb. A full timeline and description can be found here: <https://webb.nasa.gov/index.html>. At the time of writing this article, the JWST is at the beginning of these deployments at Launch + 3Days at 300,000 miles from Earth, which is about 50,000 miles past the orbit of the Moon.



When will we see the pictures? Even though the JWST arrives at its destination a month after launch, it will take six months for the spacecraft to finish its “commissioning” process. After the Webb unfolds, during the journey to L2, the observatory then gradually cools down to its cryogenic operating temperatures, about -380 degrees Fahrenheit. After that, the commissioning team aligns all of its mirrors and calibrates its scientific instruments for it to operate properly.

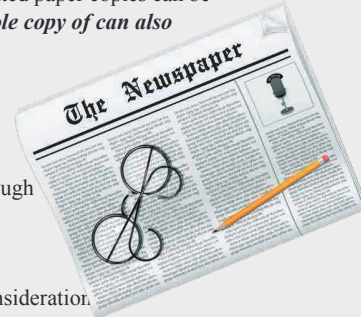
NASA describes the alignment like this; “In order for Webb’s primary mirror segments to act as a single optic, each of the 18 segments must be aligned to within a fraction of a wavelength of near-infrared light, i.e., mere nanometers, or about 1/10,000th the thickness of a human hair!”

In the final months of the commissioning process the Webb will collect data and start running tests. After the six-month period routine science operations will begin and once NASA collects the data and puts it together to create images, hopefully the world will see pictures that are much more detailed and distant in time than anything we have seen before.



The Edison Examiner How to Get involved

The Edison Examiner is a student run newspaper designed to be a source of Edison information for parents, and a publishing platform for student contributors. The Examiner features a full range of subjects Edison students and the greater community may find interesting. The publication is written, administrated, and sponsored by Treetop Academics through our after-school programs. The after-school newspaper publishing class is held on Fridays directly after school in the Edison Cafeteria. Edison will email parents a color PDF of each edition and limited paper copies can be found at school. A full color copy will be posted in the Edison hallway. *A downloadable copy of can also be found at www.TreetopAcademics.com as can past issues of The Edison Examiner.*



*** Interested in becoming a student Editor?**

The Examiner needs student Editors to help design, become contributing writers and investigative journalists. This opportunity is for students 3rd-5th grade and is an after-school class through Treetop Academics. If you are interested, please sign up through our registration page on the Treetop website.

***Making a guest contribution?**

The Examiner will include and publish student guest contributions. Please take into consideration your target audience & appropriate subject matter. Guest Contributions will need to be emailed to Jason@treetopacademics.com for consideration. If you have an idea, Go for it!

Need care for no-school days?

Treetop Academics is hosting eight STEM focused no-school day events to coordinate with the Edison conference, in-service, professional development, and grading days.

The Edison Hackathon is an exploratory time for K-5 students in a fun-directed environment perfect for a useful and educational no-school day camp.

Care options available from 8am-5pm. Different price/time options based on the schedule you need.

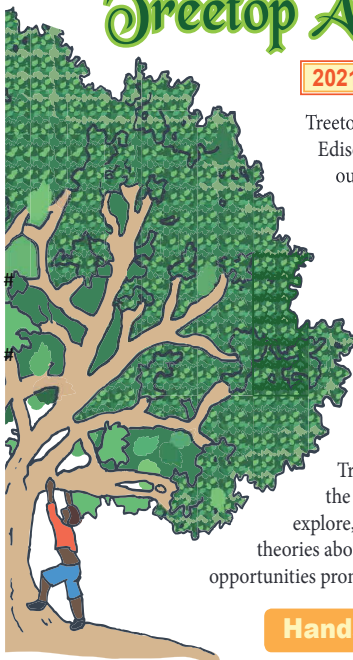
Please visit us online at www.treetopacademics for full details



JOIN THE HACKATHON!

Oct 15/18 Nov 10/12 Dec 6
 Jan 21 Jan 28 March 18
 April 15 June 10

Treetop Academics Enrichment Programs



2021/2022 Edison On-Site Childcare and After-School Programs

Treetop Academics has a long-standing relationship offering high quality programs to Edison. As part of our on-site M-F regular care until 6pm, Edison students get our our best classes and most diverse selection of affordable academic enrichment opportunities anywhere.

Come join our after-school classes in:

- Art
- Science
- Robotics
- World Languages
- Programming/Electronics
- Maker-Space/Engineering
- Publishing the Edison newspaper

Need care during no school days? 'Join the Edison Hackathon'

Registration: Online registration is always open and can be found on our website www.Treetopacademics.com

Treetop Academics is dedicated to providing academically enriching opportunities that put students at the center of learning. While providing the tools for learning, our programs are designed to inspire kids to explore, create, & use their faculties to the best of their individual ability. We encourage students to test their theories about their own learning through practice, exploration, and support. Our unique variety of class opportunities promotes a Science, Technology, Engineering, Art, Math (STEAM) experience, and beyond.

Hands-on

Project-Based

Student-centered



Jokes Every Kid Should Know

By: Maeve Barfield

1. What do you call a droid that takes the long way around?
- R2 detour.
2. Why did the dinosaur cross the road?
- Because the chicken wasn't born yet.
3. Where would you find an elephant?
- The same place you lost her.
4. What do you call a spaniel that has good etiquette?
- A proper spaniel.
5. What do you call a rabbit that has fleas?
- Bugs bunny.
6. How do you get a squirrel to like you?
- Act like a nut
7. How are false teeth like stars?
- They come out at night
8. When you look for something, why is it always in the last place you look?
- Because when you find it, you stop looking.
9. Why should you not trust an atom?
- Because they make up everything!
10. What did the banana say to the dog?
- Bananas can't talk.

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- * Parent Council and parents for providing so much time, effort, and resources for students!



Valentine Word Search

- | | |
|--|-------------------------------------|
| Valentine <input type="checkbox"/> | Sweetheart <input type="checkbox"/> |
| Hearts <input type="checkbox"/> | February <input type="checkbox"/> |
| Celebrate <input type="checkbox"/> | Presents <input type="checkbox"/> |
| Admire <input checked="" type="checkbox"/> | Appreciate <input type="checkbox"/> |
| Friend <input type="checkbox"/> | Precious <input type="checkbox"/> |
| Cupid <input type="checkbox"/> | Thoughtful <input type="checkbox"/> |
| Message <input type="checkbox"/> | Wonderful <input type="checkbox"/> |
| Cherish <input type="checkbox"/> | Love <input type="checkbox"/> |
| Adore <input type="checkbox"/> | |

R V S Q G A W A C D Q M Z Y R T T F T L
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