

The Lion Ledger

❄ Winter 2025 ❄



Wonderfully Winter Cover Art by Kalynn Alexander, 3rd year BMS PhD Candidate

Note from the Editors:

Grab your mittens and your molecules, it's time for the Winter Edition of the Lion Ledger! Whether you're a fan of fresh snow or firmly in hibernation mode, we've got plenty to keep you entertained this season. This edition is packed with seasonal science, cozy recipes, and recommendations for how to stay entertained during the long winter nights. Ever wondered why sunrises and sunsets appear more vibrant in the winter? Megan dives into the science behind these striking hues and why winter is the best season for sky-gazing. Trying to find ways to keep up with your running goals despite the cold? Discover how a local running group tackles cold-weather running – and why you might want to join them! But winter isn't all about bracing the cold- sometimes, it's also about embracing the cozy. Warm up with Natale's comforting vegetarian chili recipe and Ikram's keto, gluten free coffee cake. If you're looking for the perfect movie or book to curl up and enjoy by the fire, Louis and Jeniece have got you covered with some wintery movie and book recommendations. If you have ideas for a Lion Ledger piece, reach out to us at lionstalkscience@gmail.com and we'll be happy to include it in the next (Spring) edition of the Lion Ledger!

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This Season in Science

The Science Behind Vivid Winter Sunsets

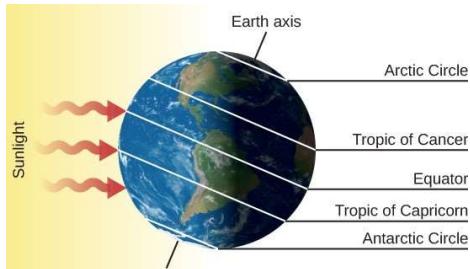
By: Megan Brennan

One thing you may have noticed (if you get out of the lab at all) is that the sunsets and sunrises seem extremely vivid during the winter. The blues and purples look impossibly deep while oranges and reds seem neon. I'm glad to assure you that you are not imagining it, the twilight skies are indeed more vivid this time of year, and the why is very scientific.



A vibrant orange winter sunset. (Image credits: Megan Brennan)

During the winter, the Earth shifts, causing North America to be at a different angle in relation to the sun. Specifically, the planet reaches perihelion, or the point in earth's orbit where it is closest to the sun, but the Northern hemisphere tilts away from the sun in the process. The proximity of the earth to the sun leads to the sunsets and rises lasting longer as the sun lingers in our sky. In addition, the Earth's tilt causes the sun to appear in our sky at a lower angle.



Earth at its winter solstice, December 21st, when it is tilted farthest away from the sun in the northern hemisphere, while also being close to the sun near perihelion, which takes place in early January. (Image Credits: [The Seasons | Astronomy](#))

The positioning of the Earth matters because it means in the winter, the light from the sun has more air to travel through horizontally before it shines on us. This leads to something called Rayleigh Scattering, which describes how small particles present in our atmosphere impact different wavelengths of light. While this occurs all year long, the low angle of the sun in winter accentuates the effects of Rayleigh Scattering. In summary, shorter wavelengths such as purples, blues, and greens tend to hit particles in the atmosphere and scatter away more compared to longer wavelengths. This scattering causes the daytime sky to appear blue. It also means that in the winter, when there is more atmosphere between the sun and earth, there are additional particles for the light to run into, leading the purples, blues, and greens to scatter even more. On the other hand, the longer red, orange, and yellow wavelengths scatter less, so when the sun is setting or rising, these hit us straight on while the shorter wavelengths do not reach us. This is how we get the vivid sunsets present in the winter sky.



Example of daytime Rayleigh Scattering giving a vivid blue sky at a Penn State game (Image credits: Ryan Brennan)

The Rayleigh Effect is also enhanced by the reduced humidity during wintertime, which leads to a clearer view because water vapor reduces visibility when looking towards the horizon. What water remains in the air, however, forms ice crystals due to the temperatures. These crystals are highly reflective, amplifying the light and colors you do see in the sky. So, the next time you look at the winter sky take a minute to appreciate the science behind its beauty.

Why Sunscreen is Misleading- and Essential, Even in Winter

By: Linh Nguyen

Vietnamese mom's sunscreen wisdom

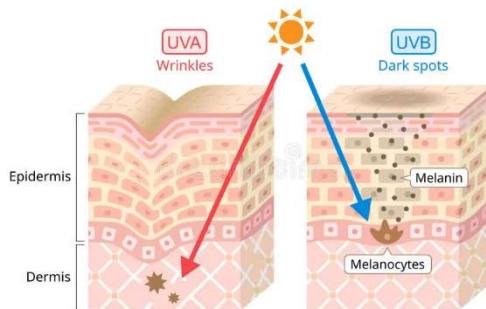
Growing up in Vietnam, my mom always insisted that I wear sunscreen everyday regardless of the weather. One reason is that as a country with a tropical climate, Vietnam has highly intense sun all year round. Also, she struggled with melasma, a skin condition

associated with sun exposure, hormones, and aging that causes tan or dark brown patches on the skin. Though melasma is not life threatening, the uneven skin tone caused by the condition can result in self-consciousness and mental distress, made worse by the relentless pressure from society to look perfect, especially for women. When I was younger, I did not appreciate my mom's advice, but as I got older and experienced skin conditions like hormonal acne and hyperpigmentation (dark spots on the skin), I finally understood the importance of sunscreen in keeping an even complexion.

Understanding UV rays and sunscreen

The skin contains cells called melanocytes which produce melanin, the pigment that gives our skin its color. The purpose of melanocytes is to protect the hypodermis, the layer under the skin, from damage by ultraviolet (UV) radiation. The color of the melanin produced by melanocytes is black, allowing it to absorb UV light and block it from passing through the epidermis. There are two main types of UV rays that reach our skin, UVA and UVB. To remember them easily, I think of the "A" in UVA as aging, and the "B" in UVB as burning. UVA rays make up 95% of the radiation that makes it to the earth's surface and have longer wavelengths. They are present at the same intensity year-round regardless of the weather and can penetrate even glass windows, and therefore also deeper into the skin. UVA rays are the reason why even if you are indoors, you still harbor a risk of skin damage due to sun exposure. On the other hand, UVB rays have shorter wavelengths, fluctuate intensity

depending on the season, and are mainly associated with sunburn.



UVA and UVB rays. (Image Credits: Dreamstime.com)

The name of the cream we apply to protect us from the sun, "sunscreen," is slightly misleading, since its true purpose is to block the sun's UV rays, and UV rays are there even when the sun is not visible. An example of this is on snow days, [the snow can reflect up to 80 percent of the sun's UV light](#), effectively doubling your UV exposure even though it is cloudy. There are different UV shields in sunscreens that can be categorized as "physical" or "chemical" shields. Physical sunscreens, like titanium dioxide and zinc oxide, work by [sitting on the surface of the skin and reflect the UV rays away](#). Chemical sunscreens typically include ingredients like avobenzone, homosalate, and octinoxate, which [absorb the UV radiation](#). Regardless of the type of sunscreen, when it comes to UV protection the most important cue to look for is the "broad spectrum" label. [Broad spectrum](#) indicates that the product exhibits proportional protection against both UVA and UVB rays; if this label is not included, there is no guarantee the sunscreen protects against UVA.

From appearance to cancer prevention, one day at a time

Our appearance, including skin concerns, plays a big role in how we feel about ourselves. If you have suffered from more severe acne like I have- or even just the occasional teenage breakout- I'm sure you understand! For skin conditions like hormonal acne or melasma, sun protection is very helpful in preventing hyperpigmentation and brown spots. Applying sunscreen consistently over the course of a lifetime can greatly benefit skin appearance and reduce the chance of developing sun exposure-associated issues like wrinkles and skin discoloration. Besides skin complexion and appearance, another benefit of using sun protection is reducing the risk of skin cancer. In the United States, there are an estimated [5.4 million new cases of skin cancer](#) diagnosed each year. Though skin cancer is more common in populations that have less melanin in their skin ([white populations](#)), [the disease is largely preventable by practicing proper skin protection safety](#). The best practice is to apply sunscreen every day, but if you struggle with this, one helpful tip is to check the UV index in your phone's weather app and decide if you need sunscreen on a particular day. If the UV index is under 2, you are generally okay to go without sunscreen (except on snowy days!), but if it is anything higher, sunscreen is necessary. Even though as graduate students we are highly protected by being indoors most of the time, I hope this serves as a reminder to take care of yourself (and your skin!) by practicing good habits like applying your daily sunscreen.

Science in the News

What Made the LA Wildfires So Bad?

By: Sarah Latario

It's hard to read the news about natural disasters and extreme weather without a basic understanding of science, and this also rings true when it comes to the terrible Los Angeles fires. As of January 27, [at least 29 people were killed](#) with a total of [over 16,000 structures](#) burned and over 50,000 acres of land damaged or destroyed. The total economic losses are [expected to reach \\$50 billion](#). What exactly made these fires spread so rapidly and become destructive and life threatening? It's a combination of many factors, but most notably, an extremely dry rainy season and the Santa Ana winds.

Dry spell in southern California

The [record-breaking lack of rain in the beginning of this water year](#), which will span from October 1st 2024 to September 30th of 2025, has created an immense amount of extra fuel for a potential wildfire in southern California. In fact, this water year has had the second dryest start to the rainy season on record since records began in 1877. Los Angeles has not had a rainfall of more than 0.5 inches in over 9 months, while other regions of southern California have gone a full year without a rainfall of the same amount. Moreover, [downtown LA has only received a total of 0.16 inches of rain since May 6, 2024](#), and the [LA International Airport recorded a mere 0.03 inches in this timeframe](#), 4.62 inches below the normal level of rainfall. If you can believe it, other

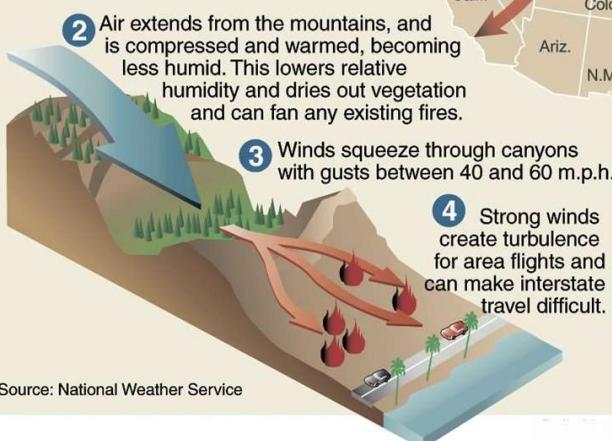
locations in the area have had an even drier start, with Palm Springs receiving less than 0.01 inches. This severe lack of rain turned the region into a tinderbox, only needing a triggering event such as lightning, heat, or wind to initiate severe fires. (Image Credits: [WPTV.com](#))

Santa Ana winds and wildfire

The extreme Santa Ana winds in early January likely became that

Santa Ana winds

In addition to increasing the threat of wildfires, Santa Ana winds can cause trouble for drivers and pilots in Southern California.



trigger. While Santa Ana winds regularly occur [during late autumn and winter in California](#), this year has brought even [more extreme winds than normal](#). These winds are caused by cool air from the upper atmosphere dropping and moving south through the Great Basin (Nevada and parts of Utah). This brings cold temperatures to areas east of the Sierra Nevada Mountains and southwest into the deserts of southern California. Meanwhile, the air surrounding coastal areas like Los Angeles and San Diego remains warm due to the high heat capacity of water, or the ability of water to store heat and resist temperature changes. In other words, land near the ocean doesn't warm up or cool off as quickly and dramatically as

inland areas. This [creates a temperature contrast](#) between the cooler inland areas and the warmer coastal areas that becomes more extreme in the winter. At the surface, this difference in atmospheric air temperature results in [areas of high pressure](#) in the east, forming wind. These winds push cold, dry air into the southern California deserts and the valleys of the region's Transverse Ranges. As the air passes through

the valleys, it [becomes warmer, drier, and faster](#).

The result of this entire process is the Santa Ana winds which are extremely strong, dry, and hot. On average, the Santa Ana winds blow for 3 days at a time, but can last over 7 days, with the longest occurrence on record blowing for 14 days.

As we've recently seen, these types of extreme wind can cause many different types of damage and drive wildfires. The winds can cause vegetation to dry

up, induce damage that emits sparks, and [spread embers from active fires long distances](#) that can settle and ignite new flames. These conditions resulted in several fires burning across Los Angeles county, including the Eaton fire, which [grew twenty-fold](#) in size within hours and [burned over 14,000 acres of land](#). Additionally, the strong winds with gusts up to 80 miles per hour made it unsafe for aircraft to drop water and fire retardant on the fires from above, not only helping embers from the fires spread, but also hindering fire fighters from containing the flames.

Due to its natural dry, desert climate, California has and will continue to be particularly vulnerable to wildfires. However, as climate

change causes increasingly extreme weather, the wildfires are likely to become more catastrophic and occur in areas not as historically affected, like what we witnessed in Los Angeles this January.

Local Organizations

Down by the River: Running with the River Runners

By: Natale Hall

When I moved to Harrisburg, one of the first things on my to do list was to find a running group. Back home in Florida, I was fortunate to be a part of a dedicated group of runners who met daily for everything spanning from quick track workouts to 20-mile-long runs. Determined to find a similar community in my new city, I took to Facebook, where I was delighted to discover the River Runners.



River Runners on City Island in Harrisburg, PA. (Image Credits: River Runners Facebook)

The River Runners are a group of over 3,000 runners living in the greater Harrisburg area, with members coming from Carlisle, Palmyra and

beyond. Typically, runners meet on City Island and then embark on one of the many routes that have been carefully crafted to suit any athlete's needs. There are easy runs that follow the long, flat trail on the Susquehanna, hilly jaunts up to Negley Park on the west shore, and scenic paths that wind through the charming streets of Harrisburg to Italian Lake and other iconic parts of the city. For those located a bit farther from City Island, group runs occasionally meet at Englewood in Hershey (minutes from the COM!), Wildwood Park, and many other locations. One of the most attractive aspects of the River Runners is the variety of scheduled weekly runs, particularly the early morning ones starting at 6 a.m. (or sometimes even earlier), which fit perfectly into my busy graduate school schedule. However, if you're not much of a morning person, you can join the Beer Runners—a hearty and hoppy subset of the River Runners—for an evening jog followed by a well-deserved drink at one of the many breweries in the area. Another enjoyable River Runner custom is the Saturday morning runs that draw in dozens of runners who may find themselves too busy to come during the week. These gatherings showcase how the River Runners truly cater to any kind of runner—fast or slow, training for an upcoming race or just lacing up for your first run.

By far the best part of the River Runners are the runners themselves. Every member goes above and beyond to make you feel welcomed into what could very easily be an intimidating group, considering many River Runners participate in multiple marathons, ultramarathons, and other high stakes races every year. However, instead of competition and

animosity, the runners foster an uplifting and supportive sense of comradery that motivates you to reach your running goals no matter how short or long. In the last year and a half, I have gone on dozens (if not hundreds) of runs with this group, even training for the Chicago Marathon with fellow River Runners, and I look forward to each run. If you have been searching for a dedicated and dependable running group that meets every week, rain, shine, or snow, then come down to City Island and hit the ground running with the River Runners!



Winter Recipes

Allergen-free Coconut Cranberry Cookies

By: Christina McAninch

Who doesn't love cookies, especially during the cold winter months? Well, if someone has a wheat allergy, cookies can be shockingly expensive. On Amazon, one 3-pound bag of [King Arthur Gluten Free Flour](#) costs \$8.62. By comparison, a 5-pound bag of [Gold Medal All Purpose Flour](#) only costs \$4.59. A [12-ounce package of Gluten Free Oreos](#) costs \$6.08 while a [24-ounce package of regular Oreos](#) costs only \$5.49. This recipe is not only free of wheat but all [nine of the most common allergenic foods](#). No fancy flours are required. Real egg

can be used but Bob's Red Mill Egg Replacer is cheaper. The cookies are vegan, high in fiber, and taste great!

Get creative! Add nuts. Add white chocolate chips. The sky's the limit! I make these for every holiday, and they never last long!



Coconut Cranberry Cookies (Image Credits: Christina McAninch)

Ingredients (makes 22-24 cookies):

- $\frac{1}{2}$ cup dried cranberries
- 2 cups rolled oats*
- $\frac{1}{2}$ teaspoon baking powder
- $\frac{1}{4}$ teaspoon salt
- 1 tablespoon Bob's Red Mill Egg Replacer**
- 3 tablespoons water**
- $\frac{1}{4}$ cup coconut oil, melted
- $\frac{2}{3}$ cup sugar
- $\frac{1}{2}$ teaspoon vanilla
- 1 cup flaked coconut

*gluten free, if necessary, as cross-contamination can be an issue

**can replace with 1 egg

Instructions:

1. Preheat oven to 375°F.
2. Soak cranberries in room temperature water until ready to use.
3. Add oats to a blender and blend for 3 minutes.

4. Add baking powder and salt to the oats and blend again.
5. Combine Egg Replacer and water in a separate bowl.
6. In a large bowl, beat oil, sugar, vanilla, and egg replacement mixture.
7. Mix in the dry ingredients to the wet ingredients in the large bowl. Then, carefully add drained cranberries and coconut and mix thoroughly.
8. Roll dough into 1-inch balls, place on cookie sheet, and flatten to $\frac{1}{2}$ inch.
9. Bake until brown around the edges, 10-14 minutes.



Chili with toppings (Image Credits: [Bakerita](#))

Ingredients:

- 1 cup white or brown rice
- 2 tablespoons olive oil
- 1 small white onion
- 1 large jalapeño pepper
- 4 garlic cloves
- 2 teaspoons cumin
- 2 tablespoons flour
- 4 cups vegetable broth
- 2 15-ounce cans white beans
- 1 cup sweet corn
- 12 ounces salsa verde
- 1 4-ounce can green chiles
- Salt and pepper to taste
- Various toppings (cilantro, avocado, sour cream, cottage cheese, etc.)

Instructions:

1. Cook rice according to instructions on packaging.
2. Heat olive oil in a large pot over medium heat.
3. Add diced white onion and jalapeño to olive oil, stir, and cook for about 10 minutes until onion is softened.

- Add minced garlic cloves and cumin and cook for an additional 2-3 minutes.
- Add flour and stir to coat the onion/jalapeño mixture.
- Add vegetable broth, white beans, sweet corn, salsa verde, and green chiles.
- Increase the heat to high and bring broth to a boil while stirring, then return to medium-low heat.
- Cover and let cook for 30 minutes, stirring occasionally.
- Serve over rice and top with cilantro, avocado, sour cream, or even cottage cheese if you want an extra protein boost. Enjoy, and stay warm!

Keto, Gluten-free Coffee Cake

By: Ikram Mezghani

This keto and gluten-free coffee cake holds a special place in my heart, lovingly adapted by my mom as a solution to her own dietary challenges. With a non-celiac gluten allergy and a family history of diabetes, she had to change her diet, which was not easy at first. The gluten-free options available in the market were either too bland, pumped with sugar, or filled with things she could not eat. And so, her long journey of experimenting in the kitchen and recreating her own wholesome, homemade, healthy alternatives began. This recipe is one of her many kitchen successes—finding a way to turn a challenging situation into something positive and delicious. It is more than just a coffee

cake; it is a little slice of her love and determination to create food that nourishes the body and soul. She is thrilled to share this recipe with the LTS community, hoping to inspire others who are facing similar challenges, and to find joy in the process.



Coffee cake (Image credits: Ikram Mezghani)

Ingredients:

For cake:

- 5.5 tablespoons (80g) butter (room temperature)
- ½ cup (120g) erythritol monk fruit sweetener
- 3 eggs
- 2 cups (480g) almond flour
- 2 tablespoons baking powder
- ¼ teaspoon salt
- ¾ cup (170mL) water + 2 tablespoon heavy whipping cream
- 1 heaped tablespoon instant coffee

For topping:

- 7 tablespoons (100g) butter (room temperature)
- 1¼ cup (300g) erythritol monk fruit
- 2.3 oz (70g) cream cheese (room temperature)
- 1 tablespoon instant coffee

Instructions:

1. Preheat oven to 350°F.
2. Line your cake dish (9 inch/23cm) with parchment paper.
3. Use a hand mixer to beat butter and sugar until a smooth mix is formed.
4. Add eggs to the mix, one at a time.
5. Add almond flour, baking powder, and salt. Mix well.
6. Mix the water with heavy whipping cream and heat in the microwave for 30s. This will be your “milk”.
7. Add instant coffee to the heated “milk” and stir until dissolved.
8. Add the “coffee-milk” to the cake mix, and mix well using a spatula or a wooden spoon.
9. Pour the cake batter into your lined baking dish.
10. Bake for 35-40 min or until toothpick insert comes out clean.
11. Let the cake cool completely

Prepare your topping:

12. Mix butter, cream cheese, erythritol monk fruit sweetener using a fork or a hand mixer.
13. Add instant coffee and mix with a spoon.
14. Spread the topping on cooled cake and refrigerate.
15. Serve with your favorite tea/coffee and Bel-hana wa Ashifa (Arabic for “wishing you enjoyment and healing” when eating the food)!

Blueberry Lemonade

By: Sara Langberg

It is never too cold to enjoy a refreshing and easy drink!



(Image Credits: [My Baking Addiction](#))

Ingredients

Blueberry Simple Syrup

- 1 pound of blueberries
- 1 cup granulated sugar
- 1 tablespoon lemon zest
- 1 cup water

Add all ingredients to a saucepan and bring to a boil. Reduce heat and simmer until blueberries are broken down and thickened, around 10-15 minutes. Stir occasionally. Strain the syrup through a fine wire strainer or cheesecloth into a bowl and set aside.

Lemonade

- 1 cup freshly squeeze lemon juice
- 6 cups water

Instructions

1. Pour the lemon juice in a big container.
2. Add the water and the blueberry syrup and whisk until blended.
3. Chill before serving.

Notes: If you prefer a sweeter lemonade, you can make more simple syrup by dissolving sugar into water in a 1:1 cup ratio over heat, then cooling and adding to your lemonade. If it is too strong, you can



add more water to adjust to your liking.

Reviews & Recommendations

Looking Back at 2024 on the Silver Screen

By: Louis Betz

As we move forward into 2025, let's take a moment to reflect on some of the great movies that came out this past year. This is my list- you may not agree with it, and that's okay! That's what makes movies great, there is something for everyone!

Honorable mentions (movies that I heard are great that I have not seen yet): [Wicked](#), [Longlegs](#), [Gladiator II](#), [Sonic the Hedgehog 3](#)



5th Place: [Carry-On](#) 9/10

Carry-On was such a pleasant surprise to arrive this past December

on Netflix. This action thriller revolves around a terror attack plotted for Christmas Eve, and the only person capable of stopping it is a single TSA agent being strung like a puppet by the terrorist. This movie is very clever and keeps you thinking, "How are they going to get out of it this time?". Starring Taron Egerton, from *Kingsman: The Secret Service* and *Rocketman*, and Jason Bateman who you may recognize from popular TV shows such as *Arrested Development* and *Ozark*.

Where to watch: Netflix



4th Place: [Deadpool and Wolverine](#) 9.3/10

Objectively *Deadpool and Wolverine* is not well put together plot wise. HOWEVER, in my opinion, it was the comedy of the year. For every point you take away for weak storytelling, you can give back just as many points for comedy and entertainment value. It may not be for everyone, and you probably won't catch every reference in the movie, but, it is hard not to be encapsulated by Ryan Reynolds' comedic timing and charisma. Hugh Jackman also works perfectly alongside Reynolds as the yin to his yang. This movie pays homage and serves as a great send off to the Fox era of Marvel movies such as *X-Men* and *Fantastic Four*.

So, if you have not already, this is a must watch for all marvel fans.

Where to watch: Disney+



3rd Place: *Twisters* 9.8/10

Twisters felt like a classic summer blockbuster from the 80s and 90s. This movie is set in Oklahoma, with a bunch of storm chasers and “tornado wranglers” trying to chase and stop tornados in their tracks. This movie stars super charismatic Glen Powell and Daisy Edgar-Jones, playing a strong and deep character. *Twisters* has some Spielberg charm to it, and I would even go as far as to say it is “Jaws” but with tornados instead of a shark. Overall, a super fun movie that has great thrilling moments. Please go see this movie!

Where to watch: Peacock

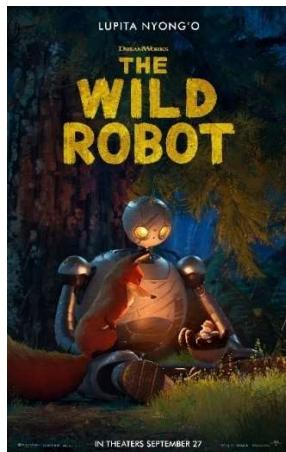


2nd Place: *Inside Out 2* 10/10

Inside Out 2 is not just a great sequel to *Inside Out*. It is more than a movie; it is a true depiction of anxiety and emotional development. The plot shows the main character, Riley, undergoing emotional development and learning how to handle new emotions that come in the teen years of life. This movie has a lot of meaning to it and has some emotional moments that seem to hit harder if you or someone close to you struggles with severe anxiety.

Inside Out 2 is not just a very entertaining, comedic animated film, it is an important movie that everyone can connect to. *Inside Out 2* is one of the best and most important movies of 2024 in my opinion.

Where to watch: Disney+



1st Place: *The Wild Robot* 10/10

DreamWorks’ latest movie *The Wild Robot* is a fantastic story about a robot raising an orphaned gosling and learning to become a mother. However, this movie stretches far beyond that scope, and into the realm of finding family, leaving a lasting impression on those around you through kindness, and making

sacrifices for those around you. This film is beautifully animated and really tugs at the heartstrings of everyone, but especially parents. Also, there are plenty of cute and comedic moments. *The Wild Robot* deserves all the praise and more. This is a movie for everyone, and everyone should see this movie!

Where to watch: Peacock

Winter Book Recommendations

By: Jeniece Regan

The Small and the Mighty: Twelve Unsung Americans Who Changed the Course of History, From the Founding to the Civil Rights Movement by Sharon McMahon

Sharon McMahon, America’s history teacher, focuses her inaugural work on the history of 12 Americans. These are people you may not come across in a history book but are folks who made a major impact on the lives around them.

Standouts in the accounts was the story of Norm Mineta a politician who was incarcerated for being Japanese American during World War II. He then used his experiences to limit discrimination against people with Middle Eastern heritage in the wake of 9/11. As Sharon summarizes his impact, “What will history remember with kindness? The leader with the most cunning tweets? The one with the most self-aggrandizing speeches? No, it’s not the cynics who emerge the heroes, but the people who spent their lives in service to others. It’s those who fight for justice for someone whose reflection they don’t

see in the mirror." This book is an uplifting, accurate reminder of our potential to improve the lives of those around us and future generations

Invitation to a Banquet by Fuchsia Dunlop

In this work on Chinese cuisine, Fuchsia Dunlop walks us through myriad novel dishes. This book pairs conversation about the cuisine's resourcefulness with the author's recognition of her choices to consume extinct species. She welds a deep discussion of a seminal ingredient with a well-crafted recipe at the end of each chapter. This book is excellent paired with a visit to Yi Pin in Lancaster to taste some of the dishes recommended in her work or a visit to the Asian Mart on Paxton to try out the multiple recipes in the book. My favorite recipe and discussion is the chapter on Mapo Tofu, which is an excellent introduction to the numbing properties of the Szechuan pepper.

Tress of the Emerald Sea by Brandon Sanderson

You may recognize Brandon Sanderson from his magnum opus, *Stormlight Archive* (which released book five this past December). This work, *Tress of the Emerald Sea*, occurs in Sanderson's world, the Cosmere, but is a stand-alone novel. In this work, Tress must find a way to rescue a captured friend and bargain with the Sorceress of the Midnight Sea for his release.

If you've ever been irritated with a hero who lacks sense, Tress will redeem your belief that a heroine

can be young and intelligent. We have a young hero who listens to advice. There are snaky asides that break the 4th wall and leave the reader laughing. Plus, we have a fantasy world with toxic spores for the microbiologically inclined.

Aristotle and Dante Discover the Secrets of the Universe by Benjamin Alire Sáenz

This book reminds you of what it means to be human and how we mend and break each other. This coming-of-age story follows the life of Aristotle, a 15-year-old boy dealing with high school on top of a distant father and incarcerated brother. As he meets another 15-year-old Dante, Aristotle encounters angst about what he is becoming and who he loves. To add to the mix, his relationship with his father changes as his father starts to close the emotional distance between them. Not only is this book a soothing read to savor, but the story also continues in a heart-touching sequel and a movie.

Winesburg Ohio by Sherwood Anderson

This classic collection of Americana short stories opens with the author's thesis idea—the grotesque. The grotesque are regular folks who mold their life to live by one virtue. Anderson empathizes with the grotesque. He shows the result of dedicating one's life to an ideal which results in a damning of the ideal and a loss of what it means to be human.

Throughout the book, Anderson shows this again and again

in characters who make you ponder what it means to be human. We have a hero to root for, to see if he will leave his small Midwest town to live his dream or stay to watch his dreams fade. This is a pivotal coming-of-age work, and it would pair well with Aristotle and Dante Discover the Secrets of the Universe to contrast how Sáenz and Anderson deal with coming-of-age.

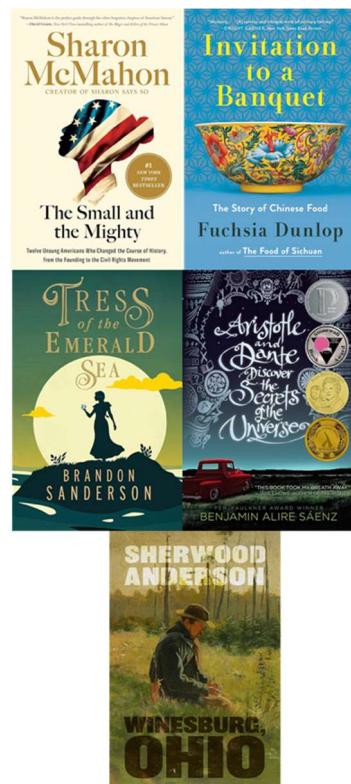


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Thank you for reading the Winter 2025 Edition of the Lion Ledger! If you have something you'd like to contribute to the next edition, email us at lionstalkscience@gmail.com

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