

# **HUMANIZING SCIENCE THROUGH STEAM CHALLENGES**

E.J. BAHNG AND JOHN M. HAUPTMAN

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# PREFACE

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In a science methods course during the Covid-19 pandemic, 51 future elementary teachers wrote inspired children's stories and then read them aloud as part of a giving-back, service learning activity as Open Educational Resources (OER). Collectively, we played Nature of Science (NOS) card games introduced by Cobern and Loving in 2002, and arrived at a cultural and the balanced view of NOS to highlight science as a complicated human affair that cannot easily be reduced to one or even a few simple descriptions. We advocated "knowing, understanding, and applying science" as culturally sustaining practices in that students' cultural and linguistic ways of being and knowing needed to be part of their meaning-making processes and contributing factors to have a sense of belonging in STEM fields.

The 51 children's stories and their accompanying audiobooks are intended to integrate STEM and the Arts to humanize science and scientific inquiry with history and philosophy of science in mind. Each of us read one chapter from *Braiding Sweetgrass* by Robin Wall Kimmerer, a prominent voice for the power and promise of traditional ecological knowledge, and its connection with Western science. In these chapters she showcases examples of the gift-based reciprocal relationship with self, with others, with worlds and with nature. Each of us authored, rehearsed narrating the authored stories, and recorded our own narration of an inspired fictional-educational children's story.

Unwittingly or inherently, we may connect our lived experiences, perceptions, currently unexamined biases, and personal interpretations of the chapters to our children's stories. For that, I hope we made the defects of our first steps perfect in presenting our work at a constant beta-stage. There is still much room to grow. Thank you and we hope you enjoy our children's stories!

# ABOUT THE AUTHORS

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EunJin (E.J.) Bahng is an Associate Professor in the School of Education teaching future teachers how to teach science. She was a full time school teacher and earned her Ph.D. in science education at Arizona State University. She was a state coordinator for a nationwide online mentoring program for newly hired secondary science teachers and engaged in multiple research projects. She was an instructor in the Multilingual Multicultural Elementary Education Program. At ISU, Dr. Bahng teaches science methods and Nature of Science courses for graduating teacher candidates planning to teach in both elementary and secondary schools. Also, she teaches an introductory

educational research course to a diverse group of graduate students in the Student Affairs program. Dr. Bahng's scholarship involves the professional development of new science teachers through a number of different subject-specific mentoring programs. Her work also involves exploring innovative and meaningful ways to integrate the Arts into STEM fields (STEAM). With her colleagues, she is a recipient of the Journal of Research in Science Teaching "Paper of the Year, 2012" award. She recently co-authored a textbook, *Children Doing Physics* (2nd ed) and is also a recipient of a Miller Faculty Fellowship and a Reiman Gardens Science Communication Fellowship, as well as a recipient of a CHS Innovative Teaching Initiative grant. Along with 12 colleagues from various disciplinary areas, she participates in the ISU Sustainable Peace Faculty Learning Community since 2019 and leads an ISU Honors program seminar, *Arts and Science of Peace*. She enjoys swimming and reciting Shakespeare, and wrote a children's book, "*Aari's Arirang Adventure*" (Request the [Ebook version](#)).



John Hauptman is a professor in the Physics and Astronomy Department at ISU and a research physicist in elementary particle physics. He teaches a wide variety of courses but most recently he concentrates on the physics course for elementary teacher candidates in which the hands-on experiments and measurements include most areas of physics and are directly adaptable to the elementary classroom. He also developed and taught the interdisciplinary *Newspaper Physics* ISU Learning Community course as well as Honors courses that combined physics with English and physics with philosophy. As an experimental

particle physicist, he has been involved in various international, national, and regional experiments at several physics laboratories and now focuses on a novel experiment with professor Sehwook Lee to search for magnetic monopoles at Kyungpook National University in Daegu, Korea.



# DEDICATION

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To the parents, families, and friends of the teacher storytellers.

# GRANDPA'S OUT-GROWTH FOREST

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By Jady Allen

Inspired by "Out-Growth Children" in *Braiding Sweetgrass*

## Summary

Lucy lives in Shot Pouch Valley with her mom and grandma. Lucy becomes very curious as to why they are having so many visitors come to their home to view their land. Lucy goes on her own adventure and admires the beauty of the forest surrounding her house. Finally, Lucy decides to ask grandma Dawn about the history of their home and is led to learn the new life of her grandpa Franz and his amazing work.

**Keywords:** forest, unsalvageable, deforestation, out-growth forest, nature

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<https://iastate.pressbooks.pub/steamchallenges/?p=5>

Hello, my name is Lucy, I am in 6th grade and I live in Shot Pouch Creek in Oregon with my Grandma and Momma. We are all about the outdoors here and forests! However, I am really confused on why there are so many visitors coming here all the time. They are always dressed professionally, like artists, or scientists maybe. I mean I like living here, but I do not know what the big deal is.

My momma and grandma are always busy outside planting trees, making sure no animals are getting in the way, and always welcoming the guests to do whatever they need.

If there is one thing I have learned from living here it is that Cedar trees are so important. They are like medicine and provide so much for our forests and for living people! However, Cedar is hard to grow, especially Red Cedar because it can be really vulnerable to bigger trees and any weather that may damage it.

One day I see my momma talking to an artist, so I go up to her and ask, "Who is that?"

Momma replies, "Oh that is just another visitor who has come to look at our beautiful forest your grandpa has built for us!"

I look at her confused, "Grandpa built this forest?"

Momma replies, "Why yes of course, your grandfather has spent many many years building this forest back from the dead. He is known for creating an out-growth forest."

"Hmm.." I say. "What is an outgrowth forest?"

"An outgrowth forest is when you do not use deforestation or logging but instead rely on the forest to rebuild itself and take care of the land we are on." Momma answers, "I think that you should talk to Grandma Dawn about this, her and grandpa worked together on this for a while!"

I decide to go and do my own exploring of our forest. There are so many trees, over thousands, I think! It truly is a beautiful forest. We have so many different kinds of berries and I like to pick off a couple and look at them closely. They have beautiful colors. Some of the trees are a lot smaller than the others so I know that we have to keep a close eye on those to make sure they are able to grow okay.

At night it is our time to relax and eat dinner. After dinner I decide to go and sit by grandma Dawn and ask her some questions about grandpa!

"Hey, grandma! How come we have so many different visitors come during the day?" I ask.

"Well, you know sweetie, your grandfather and I have built this beautiful forest," she says.

"What makes this so special to have people come visit?" I ask curiously.

"Your grandfather loved nature very much and found a huge passion in it. He became so interested in the out-growth forests and wanted to try to figure out how he could build his own. After years and years of working on building this home out of cedar and planting trees throughout our forest, he was able to regain an entire forest from something that used to be long gone and dead!" Grandma explains.

"Wow, that is so cool," I say as I look at her in amazement. "Yes, when I met your grandfather, he had a whole crew that was helping him develop this forest. I decided to help as much as I could. It is so important that we continue inviting people to visit our forest and learn from what a wonderful thing your grandfather has created. Your grandfather especially wants people to recognize the importance of Mother Cedar. She is what gives nutrition to this forest and keeps a lot of things alive. He always considers her to be the medicine of life."

“Is that why there are so many cedar trees?” I ask.

“Yes, exactly! There are also a bunch of berry bushes out there as well that keep this forest growing and thriving,” she says.

“Wow, how hard was it for Grandpa to plant all those trees?” I ask.

“Well, you see it took lots of time. We had to figure out how to keep the animals from ruining our trees and bushes because they love to eat off of them.”

So, we went through trials on where to place them, how to keep them protected, and what they needed to flourish. It became a connection between the land and us,” she says with a smile on her face.

“I cannot believe that this is how our home has come to be. All because of Grandpa Franz. He must have been an amazing man. I wish I could have met him,” I say as I look down.

“Oh, sweetie, your grandpa was in touch with nature and absolutely loved being a part of creating such a beautiful place. Now it is our job to keep this forest close to our hearts like he did. That is what he would want. That is also why we have so many visitors, grandfather wanted others to learn from his creation of Out-Growth forests. To show how land and people can come together to rebuild a forest that was thought to be unsalvageable,” she says and gives me a hug.

I was so excited I jumped out of my seat and said, “I am going to help you as much as I can to continue growing this forest and keeping it in our name for the rest of our lives!”

Grandma smiles with tears in her eyes, “Your grandfather would be so proud of you Lucy.”

# THE GIFT OF WATER

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Inspired by “The Gift of Strawberries” in *Braiding Sweetgrass*

Written by Ryann Armstrong

## Summary

Samuel is an adventurous boy who goes down to the creek in his backyard. During his time at the creek, he collects different kinds of rocks and makes gifts of them. One night while talking to his mother, he realizes what the creek has been teaching him over the years.

**Keywords:** keep moving forward

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<https://iastate.pressbooks.pub/steamchallenges/?p=29>

I had always heard stories of humans being raised by wolves and the nature around them, I guess that can be said about me as well. I was raised by the creek that ran through my backyard. I’ve always been an adventurous child but if you were to ask my parents they would say that I am more of a wild child. If you have ever stood by a body of water, you would know that calmness it brings you with the sounds of the waves crashing along the shore. This is where my story of how the gift of water changed my life.

“Samuel, where are you going?” said Mother.

“I am just going to the creek outside mom, nothing to worry about” I replied.

“Well please be careful, I don’t want you to fall in,” said Mother.

Little did she know, I was already planning on going into the creek to find rocks. I started to walk through the back patio door that leads out into our beautiful backyard with bird feeders to the

left side and a small garden filled with cucumbers, cilantro, tomatoes, and basil to the right side. The garden is in a big wooden box that is raised off of the ground so the bunny rabbits don't eat them. We have a stone path that leads right down the middle of the backyard, it starts at the end of the porch stairs all the way down to a small white gate that is connected to the white fence that surrounds our yard.

As I reach the fence, I turn around and see my mother in the window getting ready to cook dinner. I give her a quick wave and keep moving forward into the woods. The woods are all I can see for miles when looking at the back of my house. I journey down the little hill and there I see the creek. When I approach the creek, I take my shoes off and put them up on a huge flat rock that is lodged into the shore bank.

"Hmm I wonder if the water is going to be cold," I think to myself.

"What type of fish or creatures are swimming in here with me right now?" I say out loud, wondering if maybe the fish can hear me.

I look for different types of rocks to add to my collection, that I have been building over the years of coming to the creek. I make little rock statues, you know the ones where you stack them on top of each other, that's what I give to my parents as presents for father's day and/or Mother's day. I got the idea from a road trip I went on with my parents and I saw them along the dirt roads on our way to the destination. I believe my parents like them because they have never complained about it before, but sometimes I often wonder if they just put the rocks with the rock pile we have in the front yard.

I noticed that the sun is starting to set which means that it is dinner time, so I start to grab my collection and put it into a mason jar that I bring with me every time I go and get my shoes off of the rock. I make my way back up the little hill, through the gate, up the stone path and through the back door. Mother is setting the table up for supper. I put my shoes away and sit down at the table.

"How was your day son?" asked Father.

"It was a lot of fun, I went down to the creek and found more rocks for my collection. One of them I found is all white and has little sparkles!" I replied back.

"Well that is amazing, I can't wait to see what you make with it," said Mother.

After supper, I went up to my room to add the rock that I got today to my collection. I looked at

all of the rocks that I have collected over the years and tested my knowledge of them. I started to pick up the rocks one by one and name them.

“This one here is a chert,” I said out loud.

“Hmm I believe that this one is quartz crystals, yes yes it is.”

“Okay now this one is definitely an agate.”

“The one I found today looks like another quartz crystal because of the sparkles but I am not entirely sure,” I said to myself.

After looking at all of my rocks, I went and laid on top of my bed that is in the center of my room with grey sheets. I started to think about everything that the creek has taught me over the years. That’s when mother walked in to tuck me into bed.

“What are you thinking about Samuel?” said Mother.

“Well, I am just thinking about everything that the creek has taught me over the years of exploring down there” I replied back.

“Hmm and what has it taught you?” asked Mother.

“Now that I think about it, you know how creeks are always moving downstream. It’s because water moves with gravity. Since water is always moving, it has shown me that as humans we need to keep moving forward no matter what is happening in our lives. Because if we stay still, everything will pass by us like opportunities. Life can get hard sometimes, I’ve seen that before with you and father but you always move forward just like the creek.”

“Wow Samuel, that is amazing, I guess it is true that moving forward no matter how hard life gets is more beneficial than staying put.”

That’s when I realized that the creek has been raising me since I was young. It has given advice to me without any verbal communication but just the way that it flows downstream.

# KEWANEE'S APPRECIATION OF EARTH

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Inspired by "The Offering" in *Braiding Sweetgrass*

Written by Katelyn Arnett

Dedicated to my future students

## Summary

A Potawatomi girl, Kewanee, learns of her ancestry through her parents. Her ancestors dealt with many hardships as Native Americans. Her culture emphasizes the importance of nature, and she appreciates that greatly. She is proud of where she comes from.

**Keywords:** appreciation of Earth, family virtues, generational values, culture

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<https://iastate.pressbooks.pub/steamchallenges/?p=31>

It was a warm summer morning. Kewanee woke from her sleep and exited her tent to find her mother and father making breakfast over a fire. Smiles were across their faces as they made breakfast for their family. They were the most thankful people Kewanee ever knew.

Every meal together, the family spoke of their ancestors that came before them. Kewanee loved learning about her past. Mother and father did not shelter them from the truth. There were good and bad stories, and Kewanee enjoyed hearing about all of them.

Their ancestors dealt with hardships as Potawatomi people. They were Native Americans who were stripped of their land and culture. European settlers wanted them to be more like them, so they forced them into schools that rid them of their language and virtues.

Eventually, they were free to go back to their land and raise their families the way they wanted. Kewanee's family prioritized gaining back one main thing that was lost when they were sent to these boarding schools: their culture and appreciation of the land.



There is no life without Earth. Kewanee's mother taught her since she was little that wherever she went in nature, she should leave it better than she found it. If there was litter, she picked it up. If a string fell off her bag, she didn't leave it. She appreciated every aspect of the land.

Her family also planted crops for them to harvest and eat along with flowers. Kewanee knew why they planted crops, but she wondered why they planted the flowers. When she asked her mother, she replied with "flowers are beautiful." Mother found beauty in everything in nature.

That is what Kewanee appreciated most about her culture. They appreciated nature and everything that came with it. She was proud to think about her teaching her future children how to treat Earth with kindness and respect.

# THE LIFE OF A LILY

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by Emily Bonnett

## Summary

Lily Berns is a curious little girl who loves to play outside. One beautiful summer day Lily and her parents make their way to a nearby pond. At the pond Lily finds that there are many more water lilies in the pond compared to last year. Lily curiously asks her father about how the water lilies survive in such deep water. As Lily's father explains how water lilies survive Lily listens carefully. Lily learns the basic components of a lily and how they survive living in the nearby pond.

## Keywords

- Petiole – stalk that connects the stem of the lily to the pedals.
- Aerenchyma – cells that can only be found in floating plants.
- Rhizome – a root like structure that keeps the lilies alive.
- Mature – developed or fully grown
- Cell – the smallest living thing; carry out a variety of jobs within living things
- Pollination – the transfer of pollen

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<https://iastate.pressbooks.pub/steamchallenges/?p=34>

Little Lily Berns had just woken up from a night's rest. She looks outside to see a beautiful sunny summer day. She throws off her bed covers, changes out of her pajamas, and runs as fast as she can out of her bedroom. As Lily runs for the front door, she passes her mother and her father in the kitchen.

“Where are you off to in such a hurry?” asked Lily's father.

“Oh, it’s such a beautiful summer day outside. I want to play outside all day long!” said Lily.

“How about you first have some breakfast and then we will all go outside and play all day long,” Lily’s mother said.

Lily was slightly annoyed that she couldn’t go outside and play right away. She knew that the quicker she ate her breakfast the sooner she would be able to go outside. So, Lily ran to the kitchen, poured herself a bowl of cereal with milk, and started eating it as quickly as she could.

“Slow down Lily the beautiful day will still be ready for you when you’re done eating your breakfast,” scolded Lily’s mother.

After deeply sighing Lily finished eating the rest of her cereal.

“I’m done eating now. Can we please go outside?” Lily begged.

Laughing Lily’s father says...

“Yes, Lily we can.”

Lily and her parents put their shoes on and made their way outside.

“Today is a perfect day to go play at the pond. Do you want to walk over and go play by the pond Lily?” asked father.

“Yes! Yes!” squealed Lily. We haven’t been to the pond in such a long time!

Lily excitedly started running in the direction of the pond.

“Wait for use sweetheart!” yelled Lily’s mother.

Lily slowed down and waited for her parents to catch up. They continued walking towards the pond. The pond was about a ten minute walk away from Lily’s house. Lily had been to the pond many many times before, but she hadn’t been there since before winter. Lily was so excited to see what the pond looked like now.

As Lily and her parents made their way to the pond Lily could smell the pond in the distance. Lily smelled a familiar smell.

“I can smell the water lilies!! We’re getting closer!” Lily shouted excitedly.

As Lily’s parents laughed at her excitement the pond came into view. They walked up to the big blue pond with the white water lilies sticking up out of the water.

“Wow” Lily said. “There are so many water lilies compared to last year.”

Lily and her parents walk to the edge of the water just as a white water lily shifts its way to where Lily was standing. Lily bends down and touches the pedals of the flower.

“Dad, how do water lilies survive in all this water?” Lily asked.

“Well Lily water lilies are very interesting flowers. The water lilies have a petiole which is a stalk that connects the stem of the lily to its pedals. The petiole stretches all the way to the mud at the bottom of the pond” Lily’s father said.

“Wow! I thought they just floated! I never even knew they had a stem!”

Lily and her parents walk a little farther around the pond. Lily stops and looks at a broken water lily stem.

“Whoa” said Lily. “Look at the inside of the stem!”

“The stem looks spongy and white because those are cells that help the water lilies stay afloat in the water. The cells are called aerenchyma and can only be found in floating plants.”

“Why are some of the lilies below the surface and some above the water?” Lily curiously asked.

“Well,” said father, “ the lilies need light and air to survive. So, they come to the surface to get the light and air they need. The lilies have a rhizome that is stuck in the mud at the bottom of the pond. This rhizome keeps the lilies alive and without air they will die. So the white cells or the aerenchyma in the stem forms chains of oxygen filled cells that will make its way to the rhizome. As for some of the flowers being above the water and some below that is all about pollination,” Father said.

Lily continued to listen carefully.

“The lilies want to be pollinated. The lilies will rise above the water in order to invite pollinators to come pollinate them. Once they have been pollinated, they will go back under the water for several weeks while their seeds mature. Once the seeds of the lily are grown the lily will resurface and the seeds will pop from the lily onto the surface of the water.”

“There is so much to learn about water lilies! I never knew they could be so complicated!” Lily said.

“There is so much more for you to learn about these lilies,” Father told Lily.

“I would love to learn more but can we come back another day? It is getting very hot outside and I think I want to go play inside now,” Lily exhaustedly said.

Lily’s mother and father laughed and said...

“Of course, dear. We can come back anytime you would like.”

# THE STORYTELLER

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## Summary

This is the story of an old man storyteller who used his gift of words to teach and bless the children who came to see him every day. Throughout his life he learned lessons from nature around him. He learned from bees in how to share what was gathered, trees in how to plant roots in order to grow and give gifts, and birds to enjoy life and share that through song.

**Keywords:** storyteller, gift-giving, bees, trees, birds

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<https://iastate.pressbooks.pub/steamchallenges/?p=38>

There once was an old man who lived in the woods by the river. He lived all on his own, but was never alone. He was surrounded by the birds and the trees; he took care of them. He loved them and learned from them.

What we remember most about him was his smile and his stories. He told stories of the earth and used them as lessons about life. During each late spring day after school, a group of us stopped by to see him and the many animals that always wandered into his yard to say hello.

Always waiting for us was some ice cold lemonade as well as a story. And with each of his stories came a lesson.

## The Bee:

“Do you see that bumble bee?” The old man would ask us. “Flower to flower it buzzes along. Ms. Bee gathers. Ms. Bee and her kind are the great gatherers. They collect nectar from each flower they land on, a little from each, then on to the next.”

“Ms. Bee and her thousands of sisters and cousins gather for hours, never stopping till they’ve

filled their bags to the very top. Then they bring it home, they share what they've gathered, and they make something sweet out of it. They work together making the sweetest honey. The type of honey that when you put it on your toast in the morning you can't help but smile out of how simply sweet it is."

"Do you know what we can learn from the bees? What do we gather? We gather knowledge. Everyday you all go to school and gather. You gather from the biggest flower as you learn from your teacher and then you gather from smaller flowers as you learn from each other. Then you bring it home to share and make something sweet out of it. And that sweet thing is knowledge. But if you don't gather, you'll never be able to share."

## The Tree:

"Do you see that tree? It's my favorite kind of tree, one with all the twisty branches hanging down almost to the ground. I've always thought that tree has always looked a little like me. Maybe that's why I like it so much."

"That tree has always had a very special dream. When trees dream, they dream big. His dream is to stretch to the sky and reach the clouds and provide shade and shelter for so many. He tried to grow right away to provide that shade and to be tall enough that the birds wanted to build nests in him. And he did grow tall."

"But one day a storm blew through and with the roar of the wind and huge crackling of the sky the tree was left with broken branches and he thought he might not survive. He was devastated. His dreams were crushed."

"Until he remembered that in his sapling years, an old wise tree had told him to plant his roots deep. 'Even though they're hidden, they'll make you strong and sturdy, son. Strong and sturdy. And I tell you, no storm'll knock you down when you got deep roots like mine.' The tree learned and grew his roots even though the process was long and hard."

"We also need to learn from the tree. We need to have a foundation on what we know to be true. We learn new things as our branches stretch out but unless we have a firm foundation we will never go strong and tall. Trees provide fruit. They are the great gift giver."

"We have also been given many gifts. The gifts of our voice, our time, our energy, and so much more. But we need roots to grow in our fruits. We need to be rooted in our family and friends and in a good place in order to give out gifts. We needed to be rooted in what we know to be true. That foundation will help us to be generous in giving the gifts that we have."

## The Bird:

He always led us back into his favorite story by a look into the sky and twinkle in his eye, asking, “Do you want to know why I like birds so much?”

“Mr. Bird is my favorite because he can fly. He can see the world. He is well traveled. He has built his nest in many different trees. And is always working to take care of his young ones by bringing back food and teaching them to fly. But what Mr. Bird does best is bring joy through his gift. Mr. Bird loves to fill the sky and bless the wind with his song. He enjoys life and the blessings it has given him, and he shares that song with the world.”

“We have each been given a gift. Our own unique and special gift that we can use in our own unique and special way to bless others, to bring joy, to serve, and to bring a life only we can. How are you going to use your gifts to bless and spread joy like Mr. Bird with his gift of song?”

Words are powerful. The old man shared the gift of his words, the gift of his stories. He used them to share the knowledge he had and to bless others.

What gifts have you been given? What makes you special and unique with a perspective of life all your own? And how will you use your gift to bless others?



# NOW OUR MINDS ARE ONE

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Inspired by “Allegiance to Gratitude” in *Braiding Sweetgrass*

Written by Reegan Brockhage

## Summary

Sara’s life is uprooted when her family moves to a small town in the middle of nowhere, surrounded by nothing but woods and fields. She meets a new friend Meztli at school who introduces her to *The Thanksgiving Address*, and she begins to appreciate the Earth that she lives on and the nature that surrounds her.

**Keywords:** allegiance, gratitude, Thanksgiving, Mother Nature

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<https://iastate.pressbooks.pub/steamchallenges/?p=41>

What if, instead of reading *the Pledge of Allegiance* everyday at the beginning of school, we read *the Thanksgiving Address*? What if we pledged allegiance to gratitude instead of to our flag? What if, when we said “Thank you,” we actually meant it and explained what for? How different would our world look? Well, this is the story of Sara and how she came to learn to show her gratitude for the Earth she lives on and everything around her.

It was the first day of fifth grade at Cody Elementary School for Sara. She was new at school, and she was a little nervous. She walked in the classroom right when the bell rang. All of the students stood up and began reciting the Pledge of Allegiance which they knew like the back of their hands:

“I pledge allegiance to the Flag of the United States of America, and to the Republic for which it stands, one Nation under God, indivisible, with liberty and justice for all.”

Sara couldn't help but wonder why she always had to recite these words, but she obediently did it every single time. She couldn't focus at all that day at school. All she could think about was how mad she was at her parents for moving her clear across the country to a small town with nothing but fields and woods. She was used to the big city life and shopping with her grandma every weekend, so it was a big change as you can imagine. The school day was a little rough, so she came barging through the door when she got home.

"I can't believe you moved me to this awful town!" screamed Sara.

"I'm sorry, honey, but your dad has such a wonderful work opportunity here. Go out and explore the beautiful nature. I'm sure you'll learn to love it," exclaimed her mom.

"Whatever," answered Sara.

Sara hiked on her tall rain boots and went out to her new, wooded backyard. The sun was low in the sky and the moon was starting to peek through the still bright blue sky. Her backyard was covered with trees and flowers, and there was even a stream running through the woods. She thought to herself, "My mom is right. This backyard actually is kind of beautiful," but she could never actually admit that to her mom, of course. She continued exploring and saw all sorts of animals—insects, chipmunks, squirrels, deer, birds— she even saw fish swimming in the stream! The long trek was making her thirsty and tired, so she scooped up some water from the stream to drink and then walked over to a low-hanging branch from a big Maple tree to take a rest.

She dozed off for a few minutes and before she knew it, the stars were starting to shine, and the moon lit her path back to the house. Along the way, she discovered a mulberry bush and decided to pick a few berries off for a snack. Mmmm, are they tasty! She made it back to the house and jumped into bed. It wasn't so bad of an end to her terrible day.

The next day at school, Sara noticed another new girl named Meztli (Mays-lee). She decided if she was going to be forced to stay in this town, she might as well make a few friends, so she worked up the courage to strike up a conversation with Meztli during their morning recess. It turns out that they have a lot in common and Meztli is actually super cool. She even invites Sara to have a sleepover Friday night. So, maybe this town won't be so bad.

Friday arrives, and the school day couldn't go any slower. Sara and Meztli can't stop talking about how excited they are for their sleepover, so when the bell rings at the end of the day, they run out to Meztli's mom's car. When they get home, they spend all afternoon playing outside until the moon shines in the sky. Meztli whispers a few words of thanks to the moon for giving them light to play. Sara thought it was a little weird but didn't think much else of it.

The next morning, Meztli explains to Sara, “So, every morning, my family says *The Thanksgiving Address* before we eat breakfast. It’s a way to give thanks to Mother Nature and all of the living things around us that make our Earth a better place. You can participate with us, or you can just wait until we are done, if you want.”

Sara was a little confused, but says, “That sounds interesting. I’d love to hear!” Meztli and her family recite *The Thanksgiving Address*, and Sara can’t help but think back to her walk through the woods in her backyard a few nights ago. While exploring, she saw all of these elements of the ecosystem that Meztli and her family were showing gratitude towards in their address—Fish life, Plant life, Berries, Trees, Animal Life, The Sun, The Moon, The Stars, and so much more. Sara now saw all of these things in a new light. Before, they just co-existed with Sara, but now she understood all the good that they do and realized how much gratitude they deserve.

Meztli and her family finished with, “Now our minds are one,” and Sara felt at peace with the Earth and all of the life that surrounds her.

# MOTHER EARTH

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Written by Ashley Burns

## Summary

A little girl named Lomasi meets another little girl while in the forest looking for some flowers to take home and use as medicine in her tribe. It just happens that both girls happen to be doing the same thing. They discover a new plant and are curious as to what it is and how it could affect mother nature.

**Keywords:** Mother Nature, garlic mustard, medicinal herbs

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<https://iastate.pressbooks.pub/steamchallenges/?p=44>

I have always felt a connection to being outside. From the trees swaying side to side to the summer heat and grass between my toes. The flowers are my favorite of all, my mom always says it fits my name. Lomasi means 'pretty flower' from the tribe we belong to. It is in our nature to be a part of the nature. To embrace Mother Nature.

Before heading off to help my mom in the fields I gather my stuff to go out and explore. I always take with me a basket for the flowers and things I find. Sometimes mom even uses it to make medicine.

While on my walk this time I ran into someone. It was another girl! I don't think she is a part of my tribe though. I hesitate to approach her in fear of what may happen but before I can even think she greets me. "Hello!" said the girl, "What is your name?!"

"My name is Lomasi, it means..." and before I could finish my sentence the mystery girl said it for me. "It means pretty flower! I love that name! My name is Aiyana, it means eternal blossom which means our names are almost the same!" said Aiyana in a very excited tone. "Would you like to join me? I'm looking for flowers and mushrooms for my family," she said.

“That’s funny that’s just what I was about to go do! Where are you from?” I was still curious as to where she came from. “If you go through this way and just past the small river, I live with them. I’m not quite sure what our tribe is called. They tell me and I never can figure out how to remember it. My mom always says as long as I follow the stars and the sky, I’ll always find my way back home!” she said.

We walked around picking up all the beautiful flowers among the trees making sure to only take the ones we needed. It is part of what we believe. Mother Nature will provide us with what we need from when we first come to when we leave, she will always take care of us, as long as we take care of her. I did happen to notice something while looking. I saw an interesting looking plant. I had never seen anything like it around here. So, both Aiyana and I grabbed one to bring back and show our families. “I am going to show this to my mom maybe she knows what it is!” I said. “I come out here every day. Do you want to meet me here again tomorrow? When the sun is in the same spot as today!”. She agreed to do the same.

I head back home to show my mom what I found today and to help her in the fields. “Look at what I found today!” I showed her excitedly. Before she even told me what it was, she told me to put it in the fire. I ran right over to do as she said. I wonder why she wanted me to get rid of it this way. I came back to the fields to help her for the day.

“Why did I have to get rid of that one?” I asked her.

“We learn from mother nature what is best for us as well as what we can do to take care of her. That is called *Garlic Mustard*. It hurts mother nature by poisoning her soil. When we hurt her soil, it kills all of our medicinal plants and food. Do you remember where you found it?” I nod my head and take her to where my friend and I found it.

I help my mother put it all up to help get rid of it. I figured now I could tell her about my new friend.

“Do you know anyone that doesn’t live in our tribe but nearby?” I asked.

“There is another tribe nearby. We have made peace with them but keep to our own,” she said.

“Why do you ask, Lomasi?”

“I met this girl! She says she is from across the river! She said her name is Aiyana and she also helps pick flowers for her family,” I tell her with excitement. “She said she would meet me here again tomorrow. I will have to tell her about the plant being bad for mother nature!”

“Yes, be sure to tell her about the plant. They can help us make sure mother earth is protected so she can protect us,” she said. The day came and went with the sun and moon. I made sure go

to the spot I told her I'd meet her in. After a little I see her coming towards me I wave at her in excitement. I am excited to have a friend my age here and can't wait to learn more with her.

# HONORABLE HARVEST

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Written by Molly Carlson

## Summary

Garrett is a normal teenager who loves what summer encompasses. However, his favorite part of summer is attending Camp Shiverpool. At this camp he rejoices in playing with his friends amongst the wilderness. However, when he pulls up to camp this summer, he is informed that the camp changed and now Garrett cannot bring anything with him into camp. Hank, Robert, and Sam all guide Garrett on a journey of appreciating all that nature has to offer. But, Garrett is stuck with one question: Why can we take so much from nature, but not give anything back?

**Keywords:** Take and give back to nature

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Finally, after a long school year, I was free. There was sunshine, and pool days, no homework, and a lifetime full of memories amidst the summer air. But the one thing I was looking forward to the most was Camp. I have attended Camp Shiverpool every year since I was 10. Now I am fifteen years old, and am so excited to see all of my friends from the past summers.

Mom called me from downstairs. "Garrett! Finish packing up your things. It's time to leave."

Finally the moment I have been waiting for has come. I packed all the essentials I needed to live out in the woods for a week. A tent, sleeping bag, water, toiletries, clothes, and most importantly my beloved phone. With built-in cell-service, this thing was indestructible. I also packed a week's worth of food containing chips, marshmallows, candy, chocolate, cookies, and popcorn - just what every teenage boy loves.

Our car-ride to Camp Shiverpool looked a lot different than I remembered from years past. When

we pulled up to the site, I expected to see the cafeteria, infirmary, the waterpark, canoes and boats, and the tire swing my friends and I built last summer. However, when I arrived I saw nothing. Nothing but trees and one circular area with a tiny bonfire set up.

“You must be Garrett,” an old man said, whose hair was as grey as the sky on a gloomy day and who smelled worse than Mom’s cooking. “We are so pleased to meet you! Welcome to Camp Haverkamp,” he said with a grin.

“I must be in the wrong place. I am supposed to be attending Camp Shiverpool,” I said confused.

“Well you are in luck. We took over Camp Shiverpool and are proud to be the best new summer camp in the country,” said the old man. “My name is Hank and I will be your guidance along your journey here.

Journey? Summer camp is supposed to be a carefree experience not a learning lesson. I started to pull out my packed bag because I knew my mom would not let me leave after she already put the deposit down.

“Woah son, I don’t believe you have heard of our new rules. You are not allowed to bring anything with you to camp except for the clothes on your back,” Hank said.

I looked over to mom and she accepted Hank’s response and forced me to put all my beloved items back into the car. I did manage to sneak my phone into my pocket when no one was looking. I said goodbye to Mom and I was left in the woods, all alone, and with nothing to help me survive.

A few hours later Hank introduced me to a 15 year old named Robert and a 13 year old girl named Sam. I was so thankful to see actual people that didn’t smell like rotten garbage.

“Boy, am I so excited to see you guys. How are you guys eating? Where do you guys go to the bathroom? Where is the lake and canoes and tire swing? I saw a path leading out of this camp a mile back. I smuggled a phone in here and I can get you guys out!” After blubbering, I looked at Robert and Sam, both encompassing a blank face.

“We like it here,” Robert exclaimed. “It is fun to try to survive in the wilderness, almost like the forest provided everything we need for survival,” Sam chimed in.

I walked with the two as they showed me around camp. Everything was made from nature and they explained that every food they eat can be found within a mile radius. I shortly began to realize the importance of nature, but I just had one question. My mom has always taught me to share and not take. So how come every camper is taking what the wilderness is giving us, but not giving anything back in return?



I decided to hold the question to myself until a more appropriate time.

Later that night we all sat around the circular campfire. I felt comfortable with Hank, Robert, and Sam now, so I finally decided to ask the question I have been wondering since I got here.

“How do you all even survive?”

“Everything the land gives us is free range. Humans long ago survived solely off what Mother Nature gave us and this camp allows us to go back in time and live like our ancestors,” Hank said spiritually.

“But then why do you not give anything back to the forest after you take all of it?” I asked.

“You see Garrett, plants are always adapting to humans’ selfish control. We admire our wilderness and are thankful for all of her gifts. But we do pay Mother Nature back for these gifts,” Robert remarked.

“Impossible,” I said under my breath.

“We give back recognition, gratitude, and reciprocity. You are right Garrett, humans are selfish and take from the environment. But the people who hurt and pollute our environment are the ones Mother Nature is concerned with,” Sam mentioned.

We continued this conversation long until after dark and throughout my next week at Camp Haverkamp. I found myself becoming one with nature and giving my thanks for all the tremendous gifts she gave us. Only then did I realize the honorable harvest my friends and I participated in that summer.

# LOVING OUR LAND

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By Michaela Carstens

## Summary

A little boy and his grandparents go to Cascade Head where his ancestors are from. They tell him stories about hunting and gathering, their ceremonies, and how they loved their land. He learns about the importance of taking care of our Earth the way his ancestors did.

**Keywords:** Indigenous people, salmon, smallpox and measles, fire, giving back to the land

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Today my grandparents and I are visiting Cascade Head. It is in Tillamook County, Oregon. My grandparents tell me that my ancestors used to live here and would perform ceremonies, hunt, gather, and would give back to the land. We come from a line of indigenous peoples.

My grandparents say that a wave of disease wiped out a bunch of the people who lived and hunted here on Cascade Head. Smallpox and measles were vicious diseases that left this place a ghost town. Now, it is a reservation that people are about to visit to celebrate and protect the land.

But, before I continue, I should start at the beginning of the story. My ancestors thought the land at Cascade Head to be sacred. The soil was rich and fertile, the forest was full and strong, and there was an abundance of animals and fish to eat.

Once, my grandparents told me about a ceremony that their parents and grandparents used to perform while gathering fish to eat for the winter, this is known as Burning Cascade Head.

During this ceremony, the natives would gather sticks, brush, and other items that would stay lit

during a fire. Once that task was completed, they would set flame to the pile. Because Cascade Head is on the headland, they would light this fire at the top of the nearest hill.

This large blaze would attract the salmon in the sea and make them swim towards the estuary, where my ancestors would catch them, then store them for the winter.

After waiting the allotted 4 days for as many fish as possible to gather, they would hunt for hours and hours until they caught all of the fish they needed to survive the winter. It was a very efficient and environmentally safe way to catch fish.

However, my grandparents told me that there was a special ceremony that would be performed for the very first fish that swam into the estuary. Rather than capturing and storing it, they would celebrate it and have a special feast.

The natives allow the “most honored fisher” to capture what they call the “First Salmon” and prepare it for the ritual. The salmon is carried to the feast on a cedar plank in a bed of ferns. Then, they eat the sacred foods—salmon, venison, roots, and berries.

Next, they celebrate the water that connects them and the fish in a ritual called “passing of the cup.” They dance in long lines, singing, and giving thanks for all that is given to them by the land.

The salmon bones are placed back in the river. My ancestors would specifically place their heads facing upstream so that their spirits might follow the other spirits. They also brought the bones into the forest and places them beneath trees.

By doing this, my ancestors fertilized the trees and something they called Skunk Cabbage. Today, scientists use isotope analysis to trace where the source of nitrogen in ancient wood in the forests came from. They found that it can be traced all the way back to the ocean.

Salmon fed everyone, including the forest and its animals. Doing these rituals and replacing the carcasses of dead animals back onto the Earth was very important to my ancestors because they wanted to celebrate and give back to the land.

After the wiping out of our people from smallpox and measles, there was a group of settlers who showed up to Cascade Head. They found that the place had been deserted, but it was perfect for living. They set up camp and started changing the land. My grandparents tell me how disastrous this was for the animals and land.

The settlers put a dike in the water, resulting in the forcing of salmon back into the salt-water from the fresh-water. They also ruined the land, making it only available for pasture.

Today, my grandparents often talk about the disappointment they face due to the lack of respect some Americans have for the land, especially their sacred lands, like Cascade Head.

There are reservations and conservationists that protect lands that are in danger or are important. But, the Earth climate is still declining at an alarming rate.

Visiting Cascade Head with my grandparents and hearing all of the stories of my ancestors has given me insight into the importance of protecting the Earth.

Cascade Head is a beautiful place that is full of vegetation, animals, and history. This place is incredibly important to my ancestors, and now myself.

I can't wait to get home and tell my parents and siblings about all of the stories grandpa and grandma told me. I bet my friends will think the story about making a huge fire to catch fish is awesome.

# WINDIGO FOOTPRINTS

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Written by Olivia Chamberlain

## Summary

This story is a folktale that comes from the Anishinaabe people during the Little Ice Age. This story is about a creature that was banished to the woods because they were too greedy and took too much from the rest of the community. This story was mostly told to small children to teach them how to behave and covers information about the Little Ice Age that took place in the 14<sup>th</sup>-19<sup>th</sup> centuries.

**Keywords:** Warming Period, Cooling Period, Little Ice Age, temperature

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One winter night, it was so quiet that you could hear the beat of your own heart. The sky is blue but everything as far as the eye can see is white. There was recently a snowstorm that covered everything in snow and ice. Everybody is hungry but there is no food in sight. We eat very little day to day and share with our family members as much as we can.

When the wind picks up, I can smell more snow coming. It is starting to get darker outside and I start to make my way home. I can hear a howl behind me and I pray that it is just the wind.

I look around me in the snow tracks that are not my own. They are much larger than my small feet. My heart beat starts to quicken. I look around to see if I can spot any figures in the shadows but it has become too dark.

It's nights like this that the Windigo is afoot. You are able to hear it shrieks and it wanders through the forest looking for anything to eat. Windigo lives in the North Woods. I have never

spotted Windigo myself but I have heard the stories. People say that Windigo is the shape of a man and stands 10 feet tall. Windigo has frost white hair and arms the size of tree trunks. His feet are the size of snow shoes. Windigo has a hideous smell that can poison the clean snow. Windigo has yellow fangs and worst of all... a heart made of ice. Windigo is no natural beast. Windigo is a human being that has transformed into a monster. On cold winter nights, Windigo travels through the forest looking for something to eat. The thing about the Windigo is its bite will turn others into a monster.

I quickly make my way home and warm up by the simmering pot of soup. There were times when we didn't always have food. When the snow would get too tall and we would be locked inside. These times were called Hunger Moon.

As you may have guessed the story of the Windigo is a fictional one. This was as a legend of the Anishinaabe people. They told the story of this villain on freezing nights while huddled around the fire. This story was told mostly to children to scare them into behaving.

During the winter months the Anishinaabe people would suffer from starvation especially in the era of the Little Ice Age which took place from 1303-1860. The term Little Ice Age refers to a time of cooling after the Medieval Warm Period, although this time was not a true Ice Age. This time lasted for several decades and temperatures dropped 1-2 degrees Celsius below the thousand year averages for those areas that were effected. Most of the affected areas include the European Alps, New Zealand, Alaska, and the southern Andes. Temperatures also dropped across the Northern Hemisphere. The Little Ice Age preceded the present day warming period that we are currently in that started in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. Starvation was a harsh reality for many people at this time and the Anishinaabe people were forced to share rations of food.

This story of the Windigo was a cautionary tale to reinforce to people that sharing with others was essential to survival and acting greedy was dangerous to the entire group. During these times, individuals who endangered the community by taking too much were eventually banished. The Windigo story possibly arose from remembrance of someone who was banished and left to wander hungry and alone also looking to wreaking vengeance on those who banished them.

The tale of Windigo is of someone who is selfish and cares more about themselves than anyone else. Although this folktale is a very old story, it can be applied to behaviors of people today such as being greedy about resources from our environment. People that use too much water or electricity are not only hurting the planet, they are using up resources that others might

not have available. The overall tale of this story is to share with others and think of the greater whole.

# GRANDMA'S HEALING HERBS

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Written by Megan Church

## Summary

Todd agrees to help clean up his grandma's yard during his summer vacation. As Todd is cleaning the yard, his grandma notices that he is about to remove all her herbs, which Todd mistakes for weeds. Todd's grandma gives him a lesson on how these herbs are healing.

**Keywords:** Healing Herbs, feverfew, chamomile

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<https://iastate.pressbooks.pub/steamchallenges/?p=48>

On summer vacations, Todd and his sisters, Wren and Rene, tried to get outside as much as possible, doing fun activities they could not do during school time. One late summer afternoon, Todd and his sisters were out swimming in their yard. They were bouncing around a beach ball until their mother came out with lemonade. Todd and his sisters got out of the pool for their nice refreshing beverage when their mother explained, "I just got off the phone with Grandma. She says she could use some help around her house. She could use some deep cleaning inside the house and some cleaning up in her yard. I figured you could all show up at her house bright and early tomorrow morning and help her out."

Todd and his sisters looked at each other with disgust and disappointment. "But Mom, Wren and I wanted to go bike riding tomorrow morning," Rene complained.

"Yeah Mom, then we were going to meet our friends at the lake and go kayaking," Wren added. Todd really didn't want to go help his grandma, but he didn't have any plans. He thought, 'If I don't have anything better to do, maybe I should go help Grandma.'

"I don't have any plans tomorrow," Todd admitted. A smile grew on his mother's face.



“Well Todd, you can go to Grandma’s tomorrow and help her out with her yard work. Girls, you’re getting out of helping her around the house tomorrow, but I expect you both to get out there sometime this week and help her deep clean the house and help her go through her storage.” Wren and Rene smiled and replied with “Thank you, Mom!” and “We’ll be sure to get out there in the next couple of days.”

Normally when Todd woke up early, he had big plans to go camping with his buddies or to meet some friends at the soccer complex, or to make a trip out to the lake for some peace and quiet. Not to go clean up his grandma’s yard. As much as Todd was dreading yard work, he realized that the earlier he started, the sooner he could get done and make some plans with his friends. ‘Besides,’ Todd thought, ‘yard work isn’t that hard anyway. You just mow the grass, weed whack the weeds, cut down vines and dead branches. It’ll take some time, but it won’t be too bad,’ Todd assured himself.

When Todd arrived at his grandma’s, he was immediately greeted with a hug. He hardly had time to set down his yard cleaning tools before his grandma attacked him with love. “It’s so good to see you, Todd! I really do appreciate you coming out and helping me with the yard work. It’s hard for Ol’ Grandma to stay too long out in the sun these days!” she laughed. “I just need the basic yard work done, just lawn mowin’ and weed whackin’. Don’t mind the garden, I usually take care of that myself. When you’re all done, come on inside and Grandma’ll make ya some lunch!” Todd smiled and said okay. Then, he got straight to work.

Todd mowed the lawn and weed wacked the corners the lawn mower couldn’t get. There were some vines growing along the house that he decided to trim. Farther out into his grandma’s yard, he noticed that there was a lot of weeds that needed to be taken care of. He dreaded it, but he was looking forward to Grandma’s lunch, so he started up the weed whacker to start taking out the weeds. He looked over and saw his grandma looking at him. He smiled and waved and went back to the weeds. Next thing he knew, his grandma was running through the yard. Todd had never seen an elderly woman run faster. Startled, he stopped the weed whacker to see what was wrong.

“What are you doin’, boy? I thought I told you to mind the garden!” his Grandma said in an upset tone.

“Well yeah I did, Grandma. I made sure to mow around your tulips and not trim the lilac bush. I’m just trying to get rid of these weeds over here.” Todd explained.

“Weeds?” his grandma replied with a concerned look on her face. “These aren’t weeds Todd! These are herbs.” Todd was confused. They were just leaves and white flower looking weeds. Herbs? What was this woman talking about?

“Grandma, these are just weeds. If they were herbs, what are you using them for anyway?” Todd asked.

“Why, I use these herbs for healing,” she protested. Todd couldn’t help but laugh. This sounded like the craziest thing he’s ever heard his grandma say, which is saying a lot.

“Grandma, what are you talking about? If you know so much about herbs, please, enlighten me on what these herbs are called and used for,” Todd scoffed.

“Well alright then,” his grandma said. “Get on down here, boy. Get a good look at these,” she said gesturing Todd to squat down and look at the weeds. “These pretty green leaves here are called Feverfew Leaves. Back in the day, we used them to treat fevers, but now we use it to treat your ol’ grandpa’s arthritis.”

“Do you expect me to believe this, Grandma?” Todd laughed.

“Laugh all you want, boy! Have you ever thought why your grandpa can still run around with all you kids at his age? These herbs right here,” she said. Todd realized his grandpa does get around very well for his age. “Ah and this little daisy-like plant here,” Grandma continued, “is called chamomile. I put this in your mom’s tea when she’s too stressed from work.” ‘Mom does always feel less stressed after a visit with Grandma,’ Todd thought.

“I’m sorry for almost taking out your herbs, Grandma. I should’ve checked with you first,” Todd apologized.

“Don’t worry, Todd. Here, let’s take some of this chamomile and put it in our tea for lunch! Come on, boy, let’s get out of this sun.”

# THE NEW NEIGHBOR

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By Keelie Davis

## Summary

A new neighbor or a new friend can be a scary or fun experience, even if you don't want either one in the first place. Alivia doesn't want new neighbors, but when the family may have a daughter her age, she changes her mind in hopes they will get along.

**Keywords:** friends, home, interest, bonding

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<https://iastate.pressbooks.pub/steamchallenges/?p=49>

It was a beautiful spring evening in Alivia's neighborhood. The sounds of the street whistled through her ears as she sat on her front porch. The sound of children at play and birds chirping. She could tell that people were in their backyards grilling as the smell reached her nostrils every time the wind blew. As she was basking in the warm, setting sun, a loud slam made her jump to her feet. She turned her head and saw a moving truck.

"Mr. and Mrs. Williams are moving?" Alivia thought to herself. She was not happy with this news. "I don't want new neighbors, I like my current ones,"

Alivia ran inside to tell her parents.

"You already knew?" Alivia asked her mom.

"Yes, honey we have known for a little while,"

"But I don't want them to move," Alivia said sadly.

"Oh Liv, don't worry these new neighbors will be just as good," her dad explained.

She then said her goodnights to each of them, before heading downstairs to her bedroom.

Alivia began to ponder in her head what her new neighbors could look like. Would they be older or younger? Would they have kids, and would there be someone her age? Alivia then decided she didn't care what they looked like; she still did not want new people living next to her. Even though she didn't care, Alivia still ended up falling asleep dreaming of the people who may move in next door.

Alivia would wake up each day and check to see if there were any new moving trucks in front of the empty house. After a few days, there were still no new neighbors. Alivia began to get excited as she hoped no one was going to move in after all, but just as she was getting up to check again, she unfortunately heard a loud slam like the one she had heard a few days prior. Alivia then sprinted upstairs to the nearest window. As she peered through, she saw the family getting out of their vehicle.

She saw a mom, dad, and two kids. One of the kids seemed to be older, but the second seemed to be around her age. "At least if I have two new neighbors, I may get to make a friend," she thought.

As she was watching out the window, her mom came up beside her. "Alivia, you know it isn't nice to stare. Come have some breakfast and after that we will go meet them,"

That is when Alivia ran to the table, and before her family knew it, her plate was gone.

"I thought you didn't want new neighbors," Alivia's brother Jude remarked as the family packed up some extra food to take over.

"I didn't before I knew they would have a girl around my age," Alivia responded.

"It'll be nice to have a new friend," her dad added.

As the family walked over, Alivia skipped. She was excited to find out who this new neighbor girl was. As they reached the front door and Alivia's dad was about to knock, Alivia beat him to it. As the door opened and a female figure appeared, Alivia was all smiles, but she knew to let her parents speak first.

"Hi, we are your next-door neighbors and we wanted to bring you guys some breakfast as a welcome to the neighborhood," Alivia's mom explained.

"Hello! Thank you so much, it means a lot to our family to already see caring people around us, The woman who Alivia guessed was the mom said, "Would you like to come in and meet the rest of the family quick?"

Alivia was ready to sprint straight through the door but walked politely into what was going to be the family's living room.

"So, I am Allison, this is my husband James, my son Jeffree and my daughter Megan," she said as the family waved.

"This is Alivia and Jude. I am Ashley and this is my husband Donnie," Alivia's mom said as their family returned the gesture.

As the grownups began to talk, and Jude started to talk to Jeffree, Alivia decided this was the perfect time to introduce herself to Megan.

As they began to talk, Megan invited Alivia to the backyard.

"Do you like plants, Alivia?" She asked as they headed around the house.

"Actually, I do!" Alivia exclaimed.

When they opened the gate, there was a small tree with a yellow stringy flower that Alivia hadn't seen before.

"This is called witch hazel. It used to grow in my backyard back in Georgia. My mom said I could bring this small tree with me, even though it may not survive. All I wanted was a little piece of home for a bit."

"I have never seen that before, but it is really pretty, Alivia said glancing at the plant again, "Maybe we can find you a different flower to like now that you have a new home."

That's when Megan and Alivia looked at each other with smiles on their faces, knowing that they were already going to be the best of friends.

# THAT'S NOT SCIENCE

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Written by Natalie Dixon

## Summary

This story is about a young curious girl named Eve. Eve loves flowers and art, especially Goldenrod and Aster flowers. As Eve grows up she is forced to pick which path is more important to her, even though she doesn't want to pick just one. As years go on she never loses her passion for both. She learns through experiences that science and art can be related.

## Keywords:

- Spectra: a band of colors, as seen in a rainbow,
- Pollination: is the process that allows plants to reproduce.
- Palette: a thin board or slab on which an artist lays and mixes colors.

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<https://iastate.pressbooks.pub/steamchallenges/?p=50>

Once upon a time, there was a young girl. She was a curious young girl. This girl's name was Eve. Everywhere Eve went she would ask questions. She would ask questions to her friends, parents, and teacher. Eve really liked science so she would ask the most questions in that subject. Half the time the teacher would say "That's not science" so after a while Eve stopped asking.

Eve had lots of friends at school but she enjoyed being alone. Every day after school Eve would walk to her favorite spot about three blocks away from the school. Every day she would sit in the same spot, under a big pine tree surrounded by these beautiful purple and gold flowers, which she later found out are named asters and goldenrods. Eve didn't know why she picked there other

than the flowers were pretty but something about it intrigued her, it intrigued her enough that she sat almost every day for two years.

During those two years, Eve never got less curious, probably even more curious. She noticed that anytime she saw goldenrods and asters they were next to each other but she never thought much of it because they were beautiful next to each other. One day Eve was sitting in her usual spot and she noticed something she never noticed before. She noticed that there were a bunch of bees sitting on the purple and gold flowers. On the other side of the tree, there were white and blue flowers that had no bees on them. Eve was curious why all the bees are on her favorite flowers when there is barely any room for them at all and lots of other different flowers close by.

Instead of being scared of the bees, Eve thought it was kind of cool that they also liked asters and goldenrods so she just let them be. Eve left that day early wondering if those bees would also come back to that spot just like her. The next day when she got there, there was no sight of bees but after twenty minutes of homework, the bees arrived. Just as they did yesterday they all went to the asters and goldenrods. Eve watched them as they pollinated her favorite flowers and then continued on their way. Eve was fascinated.

As the years went on Eve was still interested in plants and nature but she started to also pick up on art. She liked them both art and science but she knew she would eventually have to pick one over the other. Eve's parents always said "art and science are so different!", but Eve didn't think so. When it came time Eve picked science but she still had a passion for art.

One day Eve finally asked one of her artist buddies about the power of purple and gold and they sent her right to the color wheel. They said, "these two are complementary colors, as different in nature as could be. In composing a palette, putting them together makes each more vivid; just a touch of one will bring out the other." This explains why Eve appealed to these flowers but she was always told "Art and Science are different," so she still didn't know why the bees liked the purple and gold flowers.

About a week later Eve was in science class. She learned bees see many flowers differently than humans do due to their perception of additional spectra such as ultraviolet radiation. The teacher later explained that goldenrods and asters are one of the only flowers that appear very similar to bee eyes and human eyes. The teacher explained that those flowers growing together, both receive more pollination visits than they would if they were growing alone. She finally understood why she always saw these flowers together and why the bees also picked her flowers.

Eve almost jumped out of her chair with joy. She was happy those bees got to see these beautiful

flowers the same way she did. She knew that she was right all along. Science and art aren't so different after all.



# THE LOST AND FOUND OF BEAUTY IN NATURE

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Written by DJ Duve

## Summary

Sammy was a 10-year old boy that loved flowers for their beauty. After learning about the cells and structure of the plant in science class he started to view flowers as simple objects, and did not see their beauty. That was until one day he rediscovered their beauty. This encouraged him to learn more about flowers, and become a teacher to teach others about them.

## Keywords:

- **Balance:** Sammy becomes so obsessed with the science of flowers that he forgets the beauty of them. Then, he realizes he needs more balance of beauty and science to appreciate them.
- **Resilience:** Sammy becomes upset with his feelings after learning a lot about flowers. However, he shows resilience in staying with the learning and rediscovers his love for flowers.
- **Passion:** Sammy finds his passion of flowers and pursues it relentlessly. This allows him to make a career out of it as well (teaching about them).

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<https://iastate.pressbooks.pub/steamchallenges/?p=51>

Sammy was a 10-year-old boy starting 5<sup>th</sup> grade. He was shaking with excitement as he knew the big science unit in 5<sup>th</sup> grade was about flowers. To explain, Sammy was always in awe of the natural beauty of flowers. He loved seeing the bright yellow dandelions cover up the outfield at baseball practice, and the incredible red roses his mom grew in their family garden. As he

walked into the classroom on the first day of school he looked at his teacher and exclaimed, “I am so excited for our flower unit. I cannot wait to create beautiful bouquets and pick my favorite flowers.” To Sammy’s surprise his teacher looked at him with a frown. “That’s not science, Sammy,” said his teacher, “we are going to learn about the cells in the flowers and how they get nutrients instead.” Sammy was disappointed, and 5<sup>th</sup> grade was off to a bad start.

As 5<sup>th</sup> grade kept going Sammy decided to learn everything he could about flowers. He studied them day and night. He learned all about photosynthesis and their cells. He learned how flowers needed water and sunlight to live, and how their seeds helped make new flowers. Sammy was becoming a flower scientist. However, Sammy felt sad about this and he did not know why. Then, it dawned on him. He no longer was in love with flowers. He did not appreciate their natural beauty anymore. Instead, they were simply an object to him. They were no more special than his pencil or his backpack. This made Sammy incredibly sad.

Sammy kept trying to find the beauty in flowers that he had seen before. He tried everything from picking dandelions to making beautiful bouquets for his mom. Nothing seemed to work. However, he was the school expert on flowers and their makeup. This did not make him happy. Then, one hot June afternoon Sammy’s dad walked into his bedroom. He looked at Sammy and said, “Grab your glove. Let’s go down to the ball field and play some catch.” Sammy jumped at this opportunity. He grabbed his glove, got in the car and off they went. As Sammy and his dad pulled into the parking lot something special happened. Sammy felt an immediate spark and butterflies in his stomach. He saw the bright yellow dandelions springing up in the outfield. He was in awe of their beauty. Then, he saw the concession stand and saw their roses. They were some of the prettiest flowers he had ever seen. Sammy was overjoyed. He had rediscovered his love for the beauty of flowers.

As the summer went on Sammy continued to see the beauty in the flowers that lined the streets. He continued to pick the beautiful bouquets of flowers that he saw. However, this time around he knew the cells inside the flowers, and how they got their nutrients. Sammy had finally realized that science does not try to make special things ordinary objects. Instead, science helps you understand how the special things in your life are created, and how they work. Sammy found this so interesting that he continued to learn all about flowers and plants for a long time. He learned so much about flowers that he even went to college to study them and become a teacher. After graduating college, he accepted a job as a 5<sup>th</sup> grade teacher in Iowa. He was nervous as he walked into school the first day. He was going to have so many responsibilities in the classroom, and he was not sure he was ready for it.

As the bell rang to start class Sammy asked his students what they were excited about to start the school year. They went around the classroom and every student shared with Sammy what they

were excited about. Every student seemed to share the same two answers. These answers were “to make new friends” and “get smarter.” Then, the last student stood up to share. Her name was Lisa and she seemed a little nervous to speak. However, she still shared with the class. She said, “My name is Lisa, and I am excited to learn about flowers. I have always loved them and thought they are beautiful.” A smile broke out on Sammy’s face. He replied, “Me too, Lisa. I love flowers.” At that moment, Sammy’s nerves seemed to calm down, and he knew he was ready to teach.

# LILY AND THE COMMUNITY GARDEN

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Written by Madelyn Ekdorn

## Summary

Lily is a girl who would rather spend her time playing video games than playing outside. One day, Lily's mother brings her along to help plant a community garden with their neighbor, Mrs. Hoover. Lily, who hates everything about gardening, learns many different things from spending time planting and gardening. Lily learns the important lesson that small things matter and make big impacts on the world around us.

**Keywords:** giving back, learning from the world, nature, appreciation

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<https://iastate.pressbooks.pub/steamchallenges/?p=52>

Lily woke up to the sun streaming through her curtains, a bright sun beam landing directly on her face. She groaned, pulled the soft blanket over her head, and tried to fall back asleep. Not but two seconds later her mother yelled,

“Lily Paulson! It is almost 7:30. You need to get up and get ready to go. We are helping Mrs. Hoover plant the community garden today. Do not make me come up there and pull you out of bed! You have one minute, get a move on!”

‘Great’, thought Lily, ‘just what I wanted to do on a Saturday, spend my time around a bunch of dirt and bugs.’ She stretched her arms above her head with a huge yawn. One foot at a time, Lily dragged herself out of bed. She sighed and started to get ready for the day. Lily dawdled as she ate her breakfast, dreading the day ahead. She sulked as she walked outside to the car. Lily’s mother was an avid gardener and loved everything that was green. Lily, on the other hand, hated pretty much everything involved with gardening and plants.

“Why did you feel the need to bring me with you today, Mom? I’m already sweating, and it is barely 8 o’clock in the morning,” Lily complained to her mother.

“Mrs. Hoover asked for our help and it is the neighborly thing to do,” her mother replied. “I also thought it would be a great opportunity for you to spend some time outside this summer... rather than being holed up in your room playing video games all day,” her mom said, quickly mumbling the last part under her breath.

Lily rolled her eyes. “Fine. But do not even think about asking me to touch any worms or bugs we see.” Lily shuddered at the thought of the creepy crawlers that might be looming in the garden.

When Lily and her mother arrived, Mrs. Hoover was already there. Her ginormous, bright red sun hat was glaring in the sun. Lily chuckled at how ridiculous Mrs. Hoover’s hat looked. Her mother flashed her a glare to behave as they got out of the car.

“Andrea,” Mrs. Hoover called out to Lily’s mother, “I am so glad you could make it!”

Lily’s mother smiled and waved at Mrs. Hoover’s greeting.

“Hello Lily! It is nice to see you too,” Mrs. Hoover added.

Lily replied with a forced smile and a wave, thinking about how she would rather be any place else.

Lily’s mother and Mrs. Hoover started chatting about the different types of fruits and vegetables that were going to be planted in the community garden. Lily was more focused on kicking a rock than listening to the talking, which slowly faded to mumbling in the background. Lily’s focus was broken when her mother pushed a pair of gardening gloves right in front of her face. Lily looked at her mother with irritation. She pulled on the gardening gloves with a deep sigh and was once again distracted by Mrs. Hoover’s bright red sun hat.

“Lily,” Mrs. Hoover called to get her attention, “We are going to have you start with poking holes in this trough for the squash seeds. Does that work for you?”

Lily replied with a nod and headed over to the dirt patch designated for the squash seeds. Mrs. Hoover knelt down next to Lily and started to explain how the seeds should be planted. She first poked a small hole with her index finger, and then continued to make holes down the whole length of the dirt patch, each a few inches apart.

“First, you are going to have to make enough holes to cover this entire patch of dirt, just like I

showed you. Then,” Mrs. Hoover paused to grab an open package of squash seeds, “You are going to place one seed in the hole and cover it back up with the dirt. Do you think you can do that?”

Lily answered, “Yes, I think I can handle that.”

Lily secretly thought to herself, ‘This is going to take me years to plant all of the seeds. This is so tedious.’

She got to work poking holes in the dirt with her gloved fingers. Mrs. Hoover stood behind her to make sure she was doing it correctly, but eventually left to start planting something else. The whole time Lily was poking holes and planting the seeds she hoped and prayed that no bugs would come near her. She eventually finished planting the seeds in the patch of dirt.

Lily turned and asked her mom, “I’m done. Is it time to go now?”

Lily’s mom laughed. “No, Lily, it is not time to go. We still have more fruits and vegetables to plant. Here, why don’t you go over to that plot of dirt and start planting some strawberry seeds, just like you did the last ones.”

Lily groaned and walked over to the patch of dirt. As she was planting the strawberry seeds, a gigantic bumblebee flew at Lily’s face. She shrieked and sprinted away from the bee.

“I hate gardening! I hate bugs! I do not understand the purpose of creating this stupid garden. It is too hot to spend all day in the dirt surrounded by disgusting bugs,” Lily screamed at her mother.

Lily looked over to see Mrs. Hoover chuckling softly at what Lily had just said. Lily glared at Mrs. Hoover, not understanding what she thought was so funny.

“Lily come take a walk with me,” asked Mrs. Hoover. Lily cautiously walked over to Mrs. Hoover and followed her down the rows of dirt patches.

“Do you know why I wanted to create this garden?” Mrs. Hoover asked Lily.

Lily shook her head no.

“I wanted to create this garden to give back to those around us who are less fortunate, those who can’t afford to buy fresh fruits and vegetables. By planting this garden, we are helping those around us and creating change through good deeds.” Mrs. Hoover stopped to look at a few patches of healthy plants with yellow and orange flowers blooming from the stems. “I planted these seeds a few weeks ago. Look at them closely. Do you see the bees on the flowers?”

Lily nodded her head yes, worried that the bees would fly at her.

“Those bees play an essential part in making fruits and vegetables grow. We need the bees to pollinate the plants in order for the plants to grow food. I want you to remember that even the smallest of things make an impact on what is around them.”

Lily and Mrs. Hoover walked back and continued to plant the seeds. Eventually, all of the patches of soil had been planted and watered. Mrs. Hoover smiled with an accomplished look on her face. Squash, strawberries, peppers, beans, corn, carrots, and blackberries were just some of the fruits and vegetables they had planted that day. Lily’s mother and Mrs. Hoover exchanged goodbyes. Lily gave an exhausted wave to Mrs. Hoover as they got in the car and drove home.

Lily continued to go back to the community garden every Saturday. She learned to love and appreciate everything about gardening, even the bugs. Whenever Lily works in the garden, she thinks of Mrs. Hoover’s reminder that the smallest things make big impacts to the world around them.

# THE GIFT OF RAIN

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Inspired by "A Witness to Rain" in Braiding Sweetgrass

Written by Drew Fielder

## Summary

This is a story of a farmer named Greg who has a barn with a leak in the roof. He needs to fix it to potentially save the lives of his newly born calves. A neighbor named Jake helps him patch the hole and a few weeks later Greg notices a patch of beautiful wild flowers on the outside of the fence of the pasture. He can't help but think that during that stormy night with endless amounts of stress, brought new life to this world and he couldn't help but not taking the little things for granted anymore.

**Keywords:** gifts, stressful, beautiful, living

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<https://iastate.pressbooks.pub/steamchallenges/?p=53>

The moon started to crest over the starry night sky. A crack of thunder was heard in the near distance.

POW-POW

Shortly after the roar of thunder shook the earth, a flash of lightning struck down to the muddy terrain as if a photographer was taking a photo of the dark sky. The crash of the lightning was blinding to the eyes for the innocent bystander, Greg. Greg is a farmer on the outskirts of a little town in Oregon. Shortly after that crack of lightning struck the ground, a heavy rain fall started to hit the old barn roof.

Pit-Pit-Pit-Pit-Pit

Greg ran outside to the barn covering his head with his old Carhart jacket trying not to get wet



from the heavy downfall. The chores had to be done and it happened to be Greg's favorite time of the day. A lot of people tend to hate doing chores, while Greg on the other hand loves doing them. Feeding the animals while the rain doesn't seem to be lightening up any time soon, Greg notices a rather large hole leaking water on his roof. The sound of rain hitting an old horse trough grew louder and louder as if the hole in the roof kept growing and growing. Greg knew he couldn't let the hole grow because he had two baby cows in the next stall that were just born earlier that morning. If Greg took a chance and let the hole get bigger, he took the chance of letting the baby calves get wet and sick and possibly die.

Greg was thinking about all the options he could do to patch the hole. Since Greg lived on his own, he knew it was not safe to go up on a wet tin roof by himself to try to patch the hole. Greg thought for a few minutes as the leak became louder.

PIT-PIT-PIT-PIT

The animals in the barn could sense the stress in Greg's body as he was pacing back in forth. The animals became louder and louder which made Greg pace faster and faster. Finally, Greg thought of an idea. He quickly opened the barn door and shut it quickly, running to his truck covering his head in that Carhart coat again to avoid getting wet.

Greg drove down the gravel road to his neighbor's house to see if they could help patch the hole in the barn. His neighbor, Jake, was happy to help and told Greg that he had to change into clothes and he would be right out to the truck.

On the way back to Greg's house they talked about a plan of patching the hole to save his calves from potentially becoming sick. Greg says to Jake, "I am going to take a piece of tin up to the roof and screw it over the hole for the time being. When the rain stops, I can go up and patch it up tighter. Since the hole on the roof was near the side wall, I think if you just hold the ladder, so I don't fall, it shouldn't take too long."

The rain continued to fall as they were getting the materials collected to start the fixing process. Greg and Jake opened the door of the barn and leaned the ladder up against the soaking wet wall and Greg began to climb what seemed like Mount Everest in this weather. It seemed as if the rain fell heavier the higher Greg climbed. Jake yelled from the bottom of the ladder,

"Did you find the leak?"

Greg wiping water droplets from his eyelids, so he could see,

“Yeah, I found it. Thank goodness I did, because this hole would be grown larger in the next couple hours and probably would have killed my calves.”

Greg took Jake home and they continued to help each other whenever they needed. A few weeks after that rainy night, Greg was walking outside to check on his calves in the pasture, and he noticed that off in the distance, wild flowers were in thick patches that you could see from a mile away. Greg walked over to see the flowers that were at the end of his pasture fence and as he approached them his mind began to wander. He thought back to that stormy night and all of the bad thoughts that were going through his head.

Those bad thoughts started to fade as he thought of the good that came from that rain. He thought to himself, “If it wasn’t for that rain, these beautiful flowers would not have come to life.”

Looking down at the colorful flowers, he heard something rattle the fence in front of him. It was one of the calves sticking his head through the fence with its tongue out trying to eat the flowers that Greg was holding.

Greg could not do anything but smile at that moment. He kept thinking back to that rainy night with Jake up on a slippery roof trying to patch the hole and smiled again.

He thought to himself, “It was the gift of rain that led me to this beautiful day. None of this would have happened without that stressful night but the good that came from it is all worth it.”

Greg smiled to himself again as he stood up and looked at his healthy calf and rubbed its head and said, “I’ll see you tonight for chore time, little one, this time we won’t have to worry about the sound of PIT-PIT-PIT from above.”

# A SPRING DAY

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Written by Addy Flammang

## Summary

Claire and her family took a trip to the Mohawk tribe's reservation to learn how to make sweetgrass baskets. This experience opened Claire's eyes to her uniqueness and love of nature. She learned about indigenous people and used what she learned to help others.

**Keywords:** nature, Mohawk, sweetgrass, relationships

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<https://iastate.pressbooks.pub/steamchallenges/?p=54>

It was a sunny and warm day in spring, when Claire and her parents decided they would try something new and make sweetgrass baskets. There was a local indigenous tribe that was offering this experience to help bring people closer with nature and to also learn about the culture, by the Mohawk River. The local tribe wants to teach others about the culture using the hands-on activity of making these baskets, teaching the Mohawk language, and trying to connect people to nature. The Sweetgrass baskets are a staple of Mohawk culture, while the tribe is trying to bring the Mohawk language back to life.

Claire had always felt a connection to nature whenever she was younger, but as she grew older the feeling of a connection started to diminish. Claire was 12 years old, and about to enter her teenage years. This was a very hard time for Claire, and she was struggling with finding herself. She still loved being outside and one with nature, however her friends not so much. Her friends always preferred to stay inside and text about boys.

As Claire and her family got to the River, she started to feel at ease. Claire always felt her

best and the happiest when she was outside. The feeling of the sun beating on her and the breeze around her, the sounds of the river flowing and birds chirping. She felt weightless.

Claire sat at the table as the elders of the tribe started to explain the significance of sweetgrass baskets. They went into the history of them and the Mohawk tribe. Claire was mesmerized. She loved learning, and always has. But this was different. This was information Claire wanted to *embody*. Everything she learned, the language, the way of life, the skills, she wanted to live this way.

As Claire started making her basket, she started to talk with one of the elders. She learned the elder's name, Tom Porter, which she was really surprised at how "American" it sounded. Tom told her about how the Mohawk language had died out in this area for quite some time. The Mohawk language was brought back, and the elders are trying to do the same with the culture.

Claire told Tom how she was now getting older and that she couldn't enjoy being outside anymore because it was considered too "kiddish." Tom laughed at this. He told Claire that there was no such thing as being "too kiddish." He told her that being "kiddish" is something everyone needs. He explained that loving to be outside is a great thing for Claire, and that she should never stop feeling this way. Tom explained to Claire that she can use her voice and her actions to help make a change for nature.

After making her basket, Claire decided to go to the river. Claire sat next to the river in the Sweetgrass, with her toes in the water. She recited the Mohawk song that she had learned while making the baskets. Claire looked at the river and saw her reflection outlined in light from the sun. This was a moment of peace, excitement, and hope for Claire. She realized that she didn't care about what her friends thought of her about the fact that she loved nature.

Claire had come to the realization that she was a special person. She had a unique relationship with nature and that she should embrace this. She also came to understand that she could use her relationship with nature to better nature. She could use this to fight for not only nature, but indigenous people. Claire knew that she had a lot of power, and that it was up to her to use this power in a good way.

After this realization, Claire decided to speak up for nature. Claire became close friends with Tom and the other elders, and together they raised awareness for not only nature and its health and wellbeing, but also for indigenous people. Claire joined the tribe in many more activities like this one for years to come. She even set up a field trip with her school to go visit the tribe, learn indigenous songs, and make sweetgrass baskets.

# SUMMER CAMP

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Written by Samantha Hardaway

<https://youtu.be/RATCAyolj1g>

## Summary

Paul must go to summer camp for a week, and he is not very excited. He has to do activities, share a room, sit in the hot summer sun instead of being at home. However, when Paul and his new friend James go on a boat ride with Counselor Robin everything changes, and they realize summer camp isn't so bad.

## Keywords:

- Waterfall: large body of water falling from cliff or ledge into a larger body of water
- Naturalist: a person who explore nature and often teaches others about nature
- Counselor: a person who mentors and helps kids
- Robin: a common bird with black and red feathers
- Remarkable: something that is amazing or surprising
- Thankful: grateful or happy to have something (in this case nature)

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<https://iastate.pressbooks.pub/steamchallenges/?p=55>

As Paul looked out the car window, he could not believe that his mom was sending him to summer camp. Not just one day at camp but one whole week.

Last week when she signed him up, she told him, "Don't worry honey summer camp will be fun! It will give you a chance to reconnect with nature."

He had told her, “News flash mom I don’t want to reconnect with nature. I want to spend my entire summer inside, where it is cool.”

When they pulled into the parking lot, he saw a lake, rows of cabins, a big building, and kids just like him being dragged to this camp. He thought to himself, “This week is going to be horrible.”

He dragged his feet up to the mess hall where his mom said goodbye and he followed Counselor Robin to Bluebird Cabin, his cabin, and Paul didn’t even like birds.

As he entered the cabin there were three bunk beds in his room. “Great I have to share a room with five other people” he thought. He took time to explore his cabin before dinner call. He was shocked to realize that there was no electronics anywhere, no phones, no TV, no Xbox, nothing. He muttered aloud “Perfect this week just got worse.”

Just then a boy walked by, his name was James, and asked “What did you say?”

Paul replied, “Nothing, just talking about how excited I am to be here.”

James said, “Really because my mom is forcing me to be here to ‘reconnect’ with nature.”

“Ha-ha really? My mom said the same thing, and let’s just say I am not thrilled about being here either.”

The two boys walked up to dinner together. Maybe this week won’t be so bad. At least Paul isn’t the only one who didn’t want to be here.

The first couple of days dragged by slowly. It was filled with crafts, music, nature hikes, science experiments, outside all day in the hot summer sun. They learned about the life cycle of a frog, how to build a birdhouse, songs about nature, and explored for hours. The only good thing was that he and James had a little fun joking around and hanging out during free hour.

The next day the boys were on a nature hike with Counselor Robin. They were walking in the back of the line drowning out everything the naturalist was saying. When Counselor Robin noticed this, she pulled the boys aside and said come with me. Reluctantly the boys both followed behind. She led them to a pond where there was a canoe with three paddles waiting for them. Counselor Robin got in the back and the two boys sat in the front.

As they pushed off the bank Counselor asked, “Are you enjoying your time here?”

Unsure whether to be honest both boys shrugged and said “Sure.”

Robin said, “Well that doesn’t sound convincing. What don’t you like?”

Paul started, "It's hot and there is nothing to do. I wanted to spend my summer at home watching TV in the nice cool air conditioning."

"You know there are many ways to cool off in nature. Like sitting in the shade, feeling a breeze in the wind, or jumping in the water. And there are tons of fun things to do and see in nature you just got to look for them," Robin said.

Just as she finished talking, they turned the corner just in sight of a beautiful waterfall. It was so grand; you could hear the roaring water as the waterfall hit the lake. But, at the same time it was quiet, and you could hear the wind blowing, leaves rustling, and birds chirping. You could see a mama bird care for her chick. You could feel the cold breeze coming off the waterfall. "Now this is cool" Paul thought.

Counselor Robin said, "Jump in, cool off."

"Are you sure? Just jump in the massive lake. Aren't there fish and plants in here?" James said.

"Yes, jump in, cool off, you have life jackets on."

When the boys jumped in, the water was so cool and refreshing. It felt amazing. The boys swam for a few minutes then got back in the canoe and headed back to camp. As Paul walked back to his cabin to change clothes, he began to think to himself, "A week isn't that bad besides I am already halfway done. The waterfall was pretty cool, and Counselor Robin said we can go swimming anytime." It was in that moment Paul and James decided they were going to have a fun next few days.

That night Paul and all five of his bunkmates stayed up late telling scary stories to one another. They laughed for hours and wanted to stay up even later than lights out time.

When he woke up in the morning, he was so excited to get started he was awake before everybody else. He hurried up to the dining hall for breakfast, where Counselor Robin was surprised to see him up so early. But she didn't say anything she just smiled. During the day, Paul was full of energy he was excited to learn about nature. They spent their day learning about the water cycle and different plants that they can use to create baskets. The baskets they were making would be made 100% by things they found in nature. He was constantly asking questions and was so excited to get started on their final project, basket weaving.

It was finally the day that they had prepared for basket weaving day. He had stayed late the night before practicing so he was ready for today. James and Paul had to go into the woods and find their own supplies to create their basket. They had learned that there were so many materials

and supplies they could use right outside. The two decided to gather some plants with long leaves to weave, sticks, and other plant matter. They didn't need to go to the store and spend any money, nature already had it made for them.

The two went and gathered everything they needed and headed back to camp to get started. The boys worked on their creation for hours. They wanted it to look just right. They were very careful to weave the basket together sure not to break a leaf. After the basket was completed, they placed the final piece on the basket, a robin feather they had found. They then headed up to the cabin to give Counselor Robin their creation. She was surprised to see the masterpiece that they had created.

They handed her the basket and said "We made this for you. You taught us how important nature is and how remarkable it can be. You really made me enjoy this week and we owe all our thanks to you."

She was so surprised and touched by the boy's thankfulness. She gave them a big hug and said, "Thank you."

The two left and went for an afternoon swim. Later that night they enjoyed smores and a campfire with their bunkmates. There they sang all the music they had learned that week. Tonight, they got to stay up late, because today was the last day of camp, tomorrow morning mom would come, and Paul was dreading it.

When morning came Paul waited till the last minute to pack up and head to the pickup area. He didn't want to leave, he was having so much fun here. Now he would have to go home and watch TV. Or does he? He thought, maybe he could go in the backyard and explore and that's just what he was going to do.

When he saw his mom waiting for him, he ran up to her and gave her a big hug and said, "Thanks mom for sending me to summer camp. I had a great time with my new friend James, can I come back next year and every year after that?"

Mom smiled and said, "Of course you can."

Paul was already counting down the days until he went back to summer camp.



# SKYWOMAN FALLING

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Written by Jessica Hartwig

## Summary

This story is about a little girl named Elise who wakes up due to a bad dream. Her mother tells her a fable about how the earth was created because of a lovely lady named Skywoman who befriends animals and creates the world as we know it. The mother tells the story to Elise and then Elise is able to settle down and fall asleep.

**Keywords:** Creation story, fables, Mother-daughter relationships, fantasy

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<https://iastate.pressbooks.pub/steamchallenges/?p=56>

Late one night, Elise woke up with a bad dream.

“Momma!” she called out into the dark abyss that was her hallway. “I had a nightmare and can’t go back to sleep. Will you please tell me a story?”

That was Elise’s favorite pastime activity, listening to her mother’s crazy, adventurous tales. Her mother sluggishly walked into Elise’s room, rubbing her eyes.

“I have the perfect story for you, my little bean,” said Momma with a groggy, sleepy voice. Elise sat up in bed, making room for her mother to sit down next to her.

“This story is our story, all of our stories. A long, long time ago, before any human lived on planet earth, there was the *Skyworld*. This world was like no other, bright and lively. But underneath it, was darkness... nothingness. One day, the Skywoman, a beautiful soon-to-be mother, decided to see what was beyond her Skyworld. In search of a new home for her future child, she ventured out, not bothering to look back to her previous world. It took Skywoman hours to go through

the darkness, but everywhere she went, light followed. During her journey, she found seeds and plants, so she picked the seeds and fruits. Finally, she met a pack of geese.”

“Geese are mean!” shrieked Elise. “They chased me at the park last week, remember momma? And I didn’t even do anything to them!” Momma laughed and continued on with her story.

“These geese were not mean like the ones at the park. In fact, these geese were so kind to Skywoman, they offered to fly her wherever she desired. Eventually, the geese got tired and needed to rest. ‘We’re really sorry, miss,’ said the head goose, ‘but my troops just aren’t cut out for this long, treacherous journey. We’d love to help you get more assistance, though.’

‘Why don’t we ask other animals to come help us out?’ asked another goose. Soon after, hundreds of animals were lined up to help the Skywoman on her journey. Unfortunately, none were strong enough to carry her on her way, until a large and wise tortoise offered to carry Skywoman on his back. ‘That is awfully kind of you,’ said Skywoman. ‘As you can see, I am with child and need to find a suitable home for the two of us. Do you know anywhere that would be good?’

‘Nothing around here would be good enough for someone as beautiful and kind as you, but I do have some friends down the way that are wanting to put something together...something new. Just for us. Does that interest you ma’am?’ the tortoise asked, wanting to help the Skywoman as much as he could, for he knew that she could not survive on her own in her current condition.

‘I think that sounds splendid. I must meet these friends of yours.’ So Skywoman and the tortoise went on their way to meet his friends.

“After Skywoman met the tortoise’s friends, they all agreed they need to start working on their new land as soon as possible. ‘In order to begin, someone needs to go to the bottom of the ocean and collect the best clump of mud that they can muster,’ said the tortoise. ‘I would go myself, but as you can see, my little hands cannot hold enough mud. Someone else must be brave enough to do it.’ So one by one, the animals went to the bottom of the ocean to retrieve the perfect sample of mud. But due to the deep water, and intense pressure, none of the animals could seem to do it. Finally, the only animal left to volunteer was a muskrat. Everyone laughed and scoffed at the little animal, thinking he wasn’t strong enough to do it. Before he dove down, the muskrat took a giant breath of air, and then he disappeared under the waves. He was down there for so long; some animals began to lose hope. Some thought he had died or given up and swam away in fear of embarrassment. But just as Skywoman was beginning to lose hope, muskrat broke through the water, gasping for air. In his tiny paw, was a clump of beautiful mud. The animals and Skywoman all erupted into cheers and hoorahs. The little muskrat had actually done it.

‘Here, put the mud on my back and I will hold onto it,’ said the tortoise. Skywoman spread the mud

onto the tortoise's back, then out of sheer joy and happiness, she danced. Skywoman danced and danced, spreading light and joy everywhere her feet touched. And with it, grew the land. After the land grew, she remembered the seeds and fruits she had found on her way into the darkness, and she decided to plant them. Her plants and seeds thrived in the soil and multiplied, providing more and more sustenance for herself and the animals of the land. This land soon would be named Turtle Island, and it's the land we call home today."

"So America is actually Turtle Island?" asked Elise.

"According to this tale, yes," replied momma, gently stroking Elise's head. "This story reminds us that the first humans on this earth were immigrants. We humans are not at the top of the hierarchy of beings. Plants have been here far longer than we have and can literally survive with just sunlight and air. We need to remember to cherish the Earth and what inhabits it."

"I liked that story," Elise said while yawning, eyes drooping shut.

"I do too," said Momma. "Now get some sleep my little bean. I'll see you in the morning." And with that, Momma shut Elise's door and went to sleep, dreaming of Skywoman and her travels.

# THE STUDENT IS THE TEACHER

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Inspired by “The Sound of Silverbells” in *Braiding Sweetgrass*

Written by Sydney Hook

## Summary

A teacher and a class of college biology students take a 3-day camping trip into the Great Smoky Mountains. After having to convince the dean to allow them to take the trip, her next goal was to convince the students to fall in love with nature as much as her. However, in the end the students end up convincing the teacher what really matters. While the teacher only focused on spitting facts about every plant and animal they saw, the students were focused on making deeper connections. They took notes on how the world is a gift. The students taught the teacher to not focus on how it works, but what it means.

**Keywords:** true meaning, perspectives, eye-opening

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<https://iastate.pressbooks.pub/steamchallenges/?p=57>

“Alright class, let’s go outside and load the school busses,” I announced to my 4th grade class. Today was our field trip to Ada Hayden Park. My class of 24 students and I won the bonus field trip for having the highest science test scores this quarter.

“Are we going to eat lunch there,” asked one of the students.

“We sure are! The cafeteria cooks were kind enough to prepare us with sack lunches for today” I answered eagerly.

I had been to Ada Hayden Park numerous times. I have always loved walking around the lake and smelling the fresh aromas. It has always been so peaceful. The tall green grasses, the

colorful flowers, the deer and squirrels rustling around in the trees, and the kayakers grazing the water surface.

We headed towards the bus in a single file line we have practiced so many times. My line leader of the week was walking proud and feeling cool as she led the way. When we got on the bus I took attendance once more as everyone found their seats next to their bus buddies. Everyone was accounted for so I gave the bus driver the signal to start heading that way.

The bus ride was only 35 minutes to Ada Hayden. The students found it easy to stay entertained chatting with one another. I stayed busy thinking about which plants I should teach about and stressing that we would hopefully see enough animals for me to talk about. If there weren't animals around today, of course I could always teach for hours about insects.

I was in the middle of trying to plan my lessons when a student interrupted and said, "I can't wait to go run around and play. It's like a recess all day!"

I was quick to correct him by saying, "We are going here to learn about nature, not just to play in it, okay?" He slumped back in his seat with a face of disappointment. I turned back forward and took a minute to recover from my shock of him being so disappointed. I started thinking to myself of why he thought this was just to go play. I tried shrugging it off and went back to mentally planning lessons for the nature we were to see.

Soon enough we arrived at Ada Hayden. I hopped up from my seat and gave a few last minute reminders about how we are to stick together and have our best listening ears on today. "We have to all stay on the path that I lead for us. Also, don't forget to bring your science notebook journals with you as I expect you to take notes on what we see and learn about today."

We got off the bus and began our journey for the day. I didn't hesitate to start teaching about the first plant we saw, milkweed. Then about a cricket we saw. Then a frog, monarch butterfly, spruce tree, purple coneflower, cattail, painted turtle, wood duck, and deer mouse were all to follow.

A good chunk of the day had passed and it was time for lunch. We all huddled around the picnic table and passed out the sack lunches.

As most students were finishing up lunch, I made the announcement "Make sure to throw away your trash and then we will get back on the path and see what else we can learn about."

One of my typically quiet students came up and sat down beside me. She asked, "Can we go play in the water instead of taking more notes on plants?"

“Why wouldn’t you want to learn more about the beautiful nature here?” I questioned.

“I do think it’s beautiful here, but that’s why I want to just go play in the nature. It’s just that...you keep trying to teach us all of these things about what’s growing here and we’re trying to hurry and right it down. But I think we can learn more from just enjoying the day and admiring it,” the student said to me, nervous to make eye contact.

“I don’t know, that’s not really what I had planned for the day.”

“Please Ms. Hook. I promise just try it. Maybe you will learn something new about nature too. Maybe you’ll learn the true meaning of nature.” Then she got up and walked back over to her friend in the class.

I sat there staring at the class, bewildered. My 4th grade student’s words sunk in. I spent the whole day thus far trying to cram in so many facts about the species we saw today, rather than letting them enjoy the day. They earned this field trip. They already had the highest science scores for 4th grade, so why was I trying to pound more information into them. Why not just let the students teach themselves today. And even teach me today. I think my students might just know more about the true meaning of the gift of nature than I do.

As I recollected myself, I announced the change of plans for the day. I explained that we are going to enjoy a new form of lesson for the remainder of our field trip. We were going to play under the sun and enjoy the nature around us. I was going to allow the students to be the teacher and open my eyes to the beautiful nature.

# FOREST ADVENTURES

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Written by Hannah Juhl

## Summary

In the story, two young sisters, Abby and Alex conquer their fears of animals in the forest. Their mother teaches them about amphibians and the dangerous situations that they encounter during their lifetime. The two sisters learn about the ways of the animals in their backyard, and learn a valuable lesson about how to take care of the wildlife that is among their community.

**Keywords:** curiosity, forest, help, salamanders

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<https://iastate.pressbooks.pub/steamchallenges/?p=58>

It was the first day of Spring, temperatures were starting to rise, and rain was starting to fall. A pair of sisters, Abby, and Alex wanted to go exploring in a nearby forest as it was the first day of Spring.

Abby and Alex put on their raincoats and rain boots and grabbed their umbrellas and they headed out the door, beaming with excitement of feeling warmer weather on their cheeks. They lived in a small town in Illinois and winters were harsh every year.

When Spring comes the sisters feel happier and more alive with the warmth of the sun on their skin. Abby and Alex skipped through the prairie grass in their backyard hand in hand heading for the forest.

Abby and Alex arrive in the forest and start adventuring. As Alex runs along gawking at the sight of the first Spring day, Abby falls behind.

Abby is trying desperately to catch up with Alex. Abby trips on a log buried underneath the soil and falls face first to the ground.

As Abby tries to move her head up from the ground, she comes face to face with a salamander. She screams in terror and Alex stops dead in her tracks. She turns around and runs towards Abby with worry.

When Alex reaches Abby, she is still on the ground struck with fear by the salamander. Alex holds in her laughter and picks up the salamander and moves her away from her sister.

Abby is shocked that Alex had such courage to grab such a scary animal. Abby looks at Alex and says, "How can you do that? Aren't you scared of those gross things?"

Alex replies with laughter, "They are harmless cute little animals!"

Abby is surprised by her sister's response. After that horrific ordeal, Abby begs her sister to head home.

The two girls run along home just in time for dinner.

As the two girls sit down for dinner their mother asks them how their afternoon went.

Alex replies with laughter and says, "Abby was scared of a salamander today it was SOOO funny."

Abby becomes red-faced and replies, "I was not that scared."

Alex laughs at that response from her sister. Mother looks at the two girls and shakes her head and says, "You know girls, salamanders are an intriguing species. I studied them when I was in college."

Alex stops eating, interested in what her mother has said and asks, "Really mom? What do you know about them?"

Mother says, "Well when I was in college, I studied the habits of salamanders for a semester or two."

Alex becomes curious, "What did you learn about them mom?"

Mother states that, "Well you see girls, salamanders live in multiple different areas. When it becomes Springtime like it is right now, salamanders move from forest areas to wetlands to lay eggs."



“REALLY? Like babies?” asks Alex.

“Yes, like babies,” Mother responds. She continues, “Salamanders have to move from the forest back to the wetlands to lay their eggs because when the eggs hatch the baby salamanders do not have developed lungs yet to be on dry land like their mother. Did you girls know that when salamanders lay eggs, they lay from 100-200 eggs at a time?”

The girls are astonished by that news.

Abby asks, “Well mom how are they able to carry all those eggs from the forest back to the pond?”

Mother replies, “Well Abby it is actually very dangerous for the salamanders to travel that far, there are other animals that prey on them and they have to cross very dangerous paths to get to the pond.”

Abby and Alex both look concerned.

Alex says, “Well mom what can we do to help them? I do not want a pregnant salamander hurt while trying to lay her eggs.”

Mother looks at the girls and smiles, “Well, girls maybe tomorrow we can go on a salamander hunt and help the salamanders make a safe trip to the pond without getting hurt.” The girls look at each other with glee.

After dinner Abby and Alex help their mother with the dishes and go upstairs to prepare for bed. Both girls struggled to sleep that night because they were full of excitement for their salamander hunt.

The next morning, Abby and Alex woke up bright and earlier for their salamander hunt. Each of the girls got dressed, ate breakfast, and put on their raincoats and boots while they waited for mother to come downstairs. When Mother finally came downstairs both girls darted out the door with excitement.

Throughout that morning, the two girls and their mother scattered around the forest looking for salamanders in dangerous areas. As they approached the road between the forest and the nearby pond, they found numerous salamanders that they helped cross the road.

At the end of the day, the girls and their mother watched as the salamanders slowly crawled down into the pond. The three walked back to the house with big smiles across their face.

The two girls asked, “Mom, can we help salamanders every Spring?”

Mother laughed with a big smile, “Of course, girls.”

# HENRY'S HARVEST LIFE

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Written by: Brooke King

Inspired by "The Honorable Harvest" in *Braiding Sweetgrass*

## Summary

Henry is a boy who likes to harvest. Henry grew up on a farm, living with a father who was a farmer. Henry's father never let him help with farming, but could always use an extra hand when it came to harvesting. Henry's favorite thing to harvest was sweet corn.

**Keywords:** harvest, farmers, corn

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<https://iastate.pressbooks.pub/steamchallenges/?p=59>

Henry grew up harvesting. For those of you who may not know, harvesting is when crops are gathered from the field.

Henry's father was a farmer. He planted and grew all sorts of vegetables. Henry's favorite vegetable was corn.

Henry was never able to help his father out much in the fields, but harvesting the corn was one thing Henry was able to do and couldn't wait for each year.

There's a lot to know about picking corn. At harvest time, the silk turns brown, but the husks are still green on the corn.

Once Henry's father determined that it was time for the corn to be harvested, Henry would wake up at 4:30 in the morning for multiple weeks in order to make it out to the field in time.

The early morning was the best time for Henry to pick the corn because the corn is still cool and dew-covered from the night before. Plus, it's a lot cooler in the early morning!

If Henry were to wait and go out into the field in the afternoon, the corn would be wilted and a lot harder to pick.

Once harvesting of the corn is all completed for the season, Henry gets to work at the corn stand with his older brother Bill. Henry loves doing this because the customers are always so eager to buy!

Even though Henry isn't able to help his father out much with farming, he really enjoys being able to help out with harvesting the corn. Maybe one day Henry will grow up to be a farmer like his father and have a son to help him harvest!

# MARVIN'S BOUNTIFUL REWARD

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Written by Jessica Lewis

## Summary

Marvin is a young boy who enjoyed playing outside. His mother comes up with the idea to plant a garden. Marvin and his mother plant a garden and enjoy all of the vegetables that grew in the garden.

**Keywords:** vegetables, gardening, seed packets, tending

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<https://iastate.pressbooks.pub/steamchallenges/?p=60>

Marvin was a young boy around the age of six years old. He has always had a passion to be outside all of the time. Almost every day, his mother would find him outside playing. She could barely get him inside to eat. Marvin would stay outside from sunup to sundown.

One day Marvin's mom asked, "Marvin would you like to plant a garden with me?" Marvin was too busy playing in the soft dirt to hear his mother ask him a question. So she asked him again but even louder this time. Yelling, Marvin's mother asked, "Marvin would you like to plant a garden with me?" Marvin looked up from the dirt as his mother finished her sentence and was silent for a moment.

After quite some time, Marvin replied back to his mom, "What is a garden?" He had never seen or heard of a garden before. Mother then explained to him what a garden was. She told him, "A garden is where you plant seeds in the ground and watch them grow. Then after all of the vegetables start to show up, we are able to pick them and cook them for food."

Marvin was still playing in the dark soft dirt, but now he had a stick and was starting to dig small

holes. As his mother was walking over to see why Marvin was not talking to her, she noticed the small holes. She squatted down to his level and whispered, "Those would be great holes to plant some seeds in."

Marvin looked up at his mom, "You think this would be a good spot to start a garden?" His mom looked at him and said, "No child, we need a place that will get sunlight for most of the day. This is a very shaded place that is too close to the house. I think we need to find a better place to plant our new garden."

As Marvin's mother started to walk inside, Marvin asked her one more question before she reached the door. He asked, "But mom I have never planted or even seen a garden before, how am I supposed to know how to start one?" His mother replied and said, "Oh son, I will be there every step of the way to guide you and tell you all of the tips and tricks to keep a garden healthy and bountiful."

It was a Thursday afternoon and today was the day, Marvin was so excited because he had been waiting for this day. The day his mom and him would get all of the seeds from the store and plant their garden. After they had finished at the store and returned home, Marvin wanted to see all of the seed packets that they bought. He asked his mom to show and read the packets to him. He begged, "Mom can you please read all of the seeds that we got today?" Marvin's mom said in a soft motherly tone, "Yes darling, I sure will."

His mother started to read off each seed packet to him, "The first one we got is a tomato, then this one is a zucchini seed. We also got potatoes, peas, and cucumbers. This packet right here is a yellow squash seed, and the last packet of seeds that we got were green beans." Once his mother was done showing Marvin all of the packets of seeds, they started to head to the fresh patch of soil that was in their backyard.

Mother says excitedly, "This patch of soil is perfect for our garden, Marvin!" Marvin does a little happy dance when he hears his mother say that. Marvin starts to dig the holes for the seeds. He uses his small hands and his mother hands him each seed to put in the hole. Once the seeds are in place, his mother tells him, "Now you need to cover each seed up with the surrounding soil and water each spot that has a seed."

After that day, Marvin and his mother tended to the garden everyday eagerly to see the fruit of their hard work. Marvin continued to do the chores for the garden as his mom requested of him.

One day when Marvin went to the garden to water each plant and pull the weeds, he noticed small little baby vegetables. He yelled for his mother to come outside. Marvin screamed, "Mom

you need to run to the garden as fast as you can. There is something amazing that you need to see!”

When his mother finally got outside to the garden, Marvin thought it had been hours since he told his mother to come. As she was walking closer to the garden, she could see Marvin jumping up and down with excitement. Marvin’s mother finally asked, “Marvin, what are you doing?” He replied and pointed to the vegetables, “I am so happy because I can see little baby vegetables growing.” His mother squatted down to where Marvin was pointing and looked really closely. She grew a huge smile on her face and said, “Marvin you just successfully planted your own garden. You should be so proud of yourself!”

Marvin looked at his mother with the happiest look a kid could ever give his mom and said, “Thank you, momma.”

As the month continued, the vegetables started to grow larger and larger. Finally on a Monday morning, Marvin went out to his garden to check on the vegetables. He came back to the house with handfuls to vegetables. He was trying so hard not to drop all of the vegetables out of his arms.

Once he made it inside with all of his vegetables, he was so happy, he started to dance. His mother joined him, and they both danced in the kitchen. Marvin was so proud of himself for being able to grow and tend to these vegetables. His mother was also proud of him and they both enjoyed eating all of the vegetables that Marvin grew in his first garden.

# THE GODS OF TAHAWUS

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Written by Makayla Manning

## Summary

This story is a short tale about a girl on a camping trip with her family. Her family has the tradition of practicing a ritual every morning when they are out camping. Curious about the purpose of the ritual the girl asks her father about it.

**Keywords:** Family camping ritual, coffee offering, Earth

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<https://iastate.pressbooks.pub/steamchallenges/?p=61>

“How did you all sleep?” my mother asks as we all eat our breakfast and get situated around the campsite.

“I slept like a log. The peace and quiet out here makes it easy for me to sleep,” my brother responds.

I open my mouth to answer my mother’s question, but before I am able to speak my father stands up and walks towards the stove. My whole family goes silent and we direct our attention to him. This is a ritual that we have all become familiar with and now know to pay attention to my father when it starts.

He grabs the coffee pot that was brewing on the top of the stove and walks over to the edge of the campsite. He holds the coffee pot straight out in front of him with his right hand and places his left hand over the lid to hold it in place. He slowly tips the coffee pot so coffee pours out in a thick brown steam and lands on the ground. Father looks up towards the morning sunrise as he continues to pour more coffee out and says in a clear and calm voice “Here’s to the gods of Tahawus.” After the poured out coffee makes its mark on the land as it creates a trail towards the river, my father pours a cup for himself and for my mother.



This is a ritual that I have seen done multiple times throughout my life and have learned that it is something of value to my family. I see it as something that relates us back to our ancestors and is a way for us to give thanks to the land for letting us use it. Although, I have never been sure of the reasoning behind the pouring of the coffee.

“Why do we always pour out coffee during our morning ritual?” I asked my father shortly after this morning’s ritual was complete. “Is it something that your father had taught you and his father had taught him that connects us to our ancestors?”

“No, it just seemed right,” my father replied and when he did my heart immediately sank a little. I had hoped this would be a connection that I had to my ancestors and there was a meaningful reason that we had been practicing it all of these years. I stormed away from my father because I was upset with the answer that he had given me.

I went to the river and sat on the row of rocks that lined the river bed. I slipped my shoes off and let my feet dangle in the mucky water that the trail of poured out coffee had merged with the morning. I had been sitting there only a short while when I felt a hand on my shoulder. I turned around to see my father looking at me with a peaceful smile.

“You did not let me finish,” my father informed me as he sat down on the rocks beside me. “The pouring of the coffee started out as a way to get the grounds that were stuck in the spout out before we poured our own cup to drink.” Hearing this did not make me any less upset. It was as if he was telling me that everything I have ever known to be true was a lie. I felt like my whole family consisted of frauds.

“But as time went on there were no longer grounds in the spout that needed to be cleared,” my father continued. “It started to become a symbol of respect. A way for us to show our thanks to those who have lived here before and to the land for supporting our ancestors and ourselves. It became our offering to the Earth that has provided us with everything that we need to survive.” When my father finished neither of us spoke for a while. I was trying to comprehend what he had said.

“I thought it was a thank you to the land, but it is more than that isn’t it?” I finally asked after some time of silence.

“Yes, it is a thank you, but it is also an offering. This Earth has given us many amazing things, the least we can do is give it an offering in return.” After saying this my father rose from his spot on the rocks and extended a hand out towards me. “It is getting late, let’s head back towards the campsite.” I reached out, grabbed his hand and helped myself up from the rocks. Then we walked back towards the campsite.

The next morning started as it always does. Mother asked brother and I how we slept, we responded as we ate our breakfast, and paused to watch father as he rose and walked towards the stove. He picked up the coffee pot and began to walk toward the edge of the campsite. Before he reached the edge, he stopped to turn and looked at mother, brother and I sitting by the stove. He looked at me and smiled.

“Would you like to join me?” he asked. Hardly containing my excitement, I jumped up and hurried over towards him. He handed me the coffee pot, I grabbed it with my right hand and placed my left hand over the lid then raised it out in front of me. I began to pour the coffee out of the pot then paused to look at the sun rising in the distance. I looked at father smiling down at me, looked back at the sun and calmly said, “Here’s to the gods of Tahawus.”

# REMI'S ADVENTURE

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Written by Julia Markert

## Summary

This is a story of an adventurous girl named Remi. Her favorite part of the day is walking to and from school discovering the outdoors. One day Remi was walking to school when she stepped on what seemed to be a bird egg. Remi found two remaining eggs. She told Mrs. Willow, her school teacher. As a class, the students learn about the eggs and take care of them during their hatching process. Remi discovered her love for the ecosystem and the community she has found.

**Keywords:** Balsam, Sporulating, Phenology, Ecosystem

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<https://iastate.pressbooks.pub/steamchallenges/?p=62>

Remi is a small but brave girl. She spent most of her time thinking during her walks to and from school. Whether that was about her friends or family, it usually had to do with the changing nature around her as the school year went on. She noticed the changes in seasons before they were even taught in school because she could experience it firsthand on long walks.

She would go to school every day with questions to ask her teacher, Mrs. Willow. Remi thought this was reasonable to do because, well... it's school. Remi would ask questions like

“Why can I see the moon some mornings and not others?” or “I came across Mrs. Figs flower plant this morning, and it's DEAD...What on earth did she do?”

One spring day, there was a balsam smell in the air and Remi had her new white sneakers on but was a bit nervous because she was so adventurous. She liked to jump in puddles, dig in the mud, and eat even the grass. She wanted to explore every crack and crevice that her little eyes could

see. She put her shoes on and headed out the door. There were always sporulating ferns at Mrs. Figs' house.

The sun was shining, and as Remi walked her regular route to school, she whistled to the birds, and they would sing back to her. As she pulled her backpack strap over her shoulder, she felt and heard a crunching noise. She stopped and refused to put her foot all the way down as she knew she had stepped on something that wasn't meant to be stepped on. She slowly raised her foot and squinted her eyes because she didn't know whether or not she wanted to look. Her eyes widened in pure fear. Remi screamed and said

"What have I done?"

She stepped on a... on a.... a bird egg. She broke the shell, and her sneaker had smeared the yolk on the cement. She panicked, and the last thing on her mind was the mess on her new white shoes. She tried to gather herself, but then, her eye caught two other bird eggs very similar to the one that she stepped on. They were about 5 feet from each other and had a blue tint to them. She looked around and grabbed the two eggs.

Remi decided to get out her lunch pail and put the two eggs in a plastic container with her peanut butter and jelly sandwich. She thought of the sandwich as a cushion for the eggs.

Remi got to school and was hesitant to tell Mrs. Willow about her adventure this morning because she couldn't admit what she had done. She thought to herself,

"What can I do to save these eggs? I mean I have to tell Mrs. Willow, but what would she do? Would she tell me to take them outside and leave them without a mother? I can't. I just can't."

During lunch, she sat next to her friends Rose, Lilly, and Rosemary, and she got out her lunch pail and decided she was going to tell her friends what happened this morning finally.

Remi told her three friends, and their jaws were wide open in surprise, and they all encouraged her to tell Mrs. Willow because they wanted these eggs to make it even more than I did. And that's why I love my friends so much.

After lunch, Remi finally told Mrs. Willow what happened. She got out her lunch pail and kept her sandwich in there because she wanted to keep the eggs safe. Mrs. Willow immediately took the eggs. She said to me.

"Remi, thank you for being so caring and letting me know what happened." I have a book that we can use to identify the type of egg and do what we can to save them."

Mrs. Willow took pictures of the bird eggs for students to use and got out their science books to identify the egg. Remi was determined to be the one to identify it. She looked through several pages and there it was... the House Finch looked exactly like the eggs.

We discovered that the eggs need to be in warm conditions and rotated to keep the eggs from overheating. Mrs. Willow discussed briefly the phenology and how the climate affects when birds lay eggs.

We kept the eggs safe throughout the school year, and when they finally hatched, I felt like I gained so much love and knowledge for the development of nature and the love and caring it takes for everything to grow around us. Our ecosystem is a community that needs to be respected. Such as Mrs. Figs' flowers needed love and care like the birds, which comes with every aspect of life.

# GENESIS AND WILLOW

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Written by Sydney Mathis

## Summary

Genesis is heading off to college within the year. Genesis and her mother, Willow, are two peas in a pod. Genesis decides to build a tire swing for her mother because Willow has many memories of time spent with her mother and Genesis on an old tire swing. Genesis rebuilds the tire swing and Willow can use the tire swing every time she misses Genesis and her mother.

**Keywords:** future, memories, tire swing, coping

*A YouTube element has been excluded from this version of the text. You can view it online here:*

<https://iastate.pressbooks.pub/steamchallenges/?p=63>

Hi! Nice to meet you! I am Genesis, or Gen for short. I go to a small high school in Loveland, Colorado. I absolutely love my family, friends, and community. This seems like such a great place to raise children. We have the most beautiful view of the mountains! My family isn't rich, and by family, I mean my mom and I. It has just been the two of us against the world for as long as I can remember. My mom used to tell me that my dad is an astronaut but I have outgrown those foolish fibs. My mom has been my everything. She took care of us. She kept food on the table and a roof over our heads. We didn't live lavishly, but I have no complaints here.

My mother, Willow (named after the whimsical tree), is the most beautiful woman. It is hard to believe my father left her behind. She has always been such a free spirit. I envy her. She never worries or stresses and always believes life will work out. But don't worry, I stress enough for the both of us. She has bounced around jobs in the past, but seems to have found some joy as a librarian a few towns over. Lately, she seems to talk a lot about a man named Steven, and based on our few interactions, I can't say I see what she sees. Despite my feelings, he still comes by the house to visit Willow, even when I am home.

Anyways, enough about her. It is the summer after my Junior year and I am dreading my senior year. I can't leave Willow. I need her, or she needs me. I have never been sure who needs who more. This is my last year before I am supposed to run off to the college of my dreams, but the problem is I have been so invested in the present that I haven't even thought about the future. College is not the biggest concern on my mind, it's leaving Willow. We have always had each other and that was enough. Now, I am expected to pack up and chase my own dreams. What dreams do I have that don't involve Willow. I know she wants me to be happy, but I am happy in the present...we are a little whimsical if you haven't noticed. I know I am going to have to move on to follow my own path, but I need Willow to know how much I love her before I am gone. I want to do something special for her to show her I will never leave and forget my roots. Something so insanely meaningful that she doesn't miss me when I am gone.

### ...2 weeks later...

I know she is going to remember this forever. I found the old tire at my grandpa's house. It wasn't in great condition but it would do the trick. I also managed to get my hands on some old rope from the local hardware store. Unfortunately I had to ask Steven, my mom's man friend, for help with assembling the project. Oh right, I forgot to tell you what the surprise is!

My grandmother used to push Willow on the old tired swing at my grandparents house. Every time we visited my grandparents, my mom would push me on that old tired swing as well. Until one unforgettable day a terrible storm tore through their town and destroyed the swing, tree and all. My mother was devastated because it was one of the last things she had that reminded her of her mother. Her mother was sick and passed away just before the storm came through. Every day for 2 weeks following my grandmother's death, Willow would go sit on the swing at my grandpa's house and cry until it was time to go home. I always sat inside with my grandpa to let Willow have her alone time to mourn the loss of her mother. I know she is still devastated today.

I am going to rebuild that tire swing, with the help of Steven, my mom's man friend. Steven arrived a little after lunch while my mother was away working at the library and I was off to school on summer break. We slung the rope over the largest branch on the tree. We attached each end of the rope to the tire, right where the old rope used to tie. We made sure each knot was fastened tight. Once it was complete I asked Steven to leave because I did not want to share this moment with him when my mother got home.

She got home around 7 just as the sun was setting over the mountains. It was perfect timing. I met her at the front door and asked her to close her eyes so I could show her the surprise. Willow is such a free spirit and loves surprises. I took her hands and led her to the backyard of our small

isolated home. I led her all the way to the largest tree that stood in the middle of our backyard. I finally told her to open her eyes.

Willow began to weep. I was initially worried that I had brought up sad memories for my mother, until she turned to me and smiled with tears still streaming down her face. I told her that I made it for her because I have to go off to college in a year. I said I wanted her to think of grandma and me and all the wonderful memories we shared on that old tire swing. Every time she misses us, she can go out and sit on that old swing and remember how things used to be. Life is changing and living in the present is amazing, but remembering the past fills our heart with joy and reminds us that we are not lonely when we are alone.

Willow was speechless in the moment. She was crying and smiling and laughing and sobbing. As the weeks passed I caught Willow staring at the swing from her kitchen window, and on some occasions swinging when I spent long nights studying at the library. I knew the swing was exactly what she needed and I don't think Willow will miss me as much when I head off to college next year. Now it is time to see where the future takes me.



# GENEROSITY IN THE POWWOW

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Written by Breelyn McMahon

## Summary

This children's story is inspired by the Epilogue: Returning the Gift in the Braiding Sweetgrass book. In this children's story, a young boy named Generosity learns about the meaning behind his name, while giving a gift in the gift exchange of his tribe's powwow. Through the use of creation of the berries, Generosity creates a crown to give in the gift exchange and learns the meaning behind his name during the powwow. This story teaches children about generosity and how to create things out of the items around them.

**Keywords:** generosity, Powwow, Potawatomi

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<https://iastate.pressbooks.pub/steamchallenges/?p=64>

The summer powwow for the Potawatomi is an extravagant party that happens every summer. Before the powwow begins, it is tradition to bring a gift to give away during the powwow. A young boy by the name of Generosity, is very excited for the summer powwow and he is finally allowed to bring a gift to give during the giveaway.

During the summer at the tribe of the Potawatomi, fields of green and red raspberries, and different fruits fill the tribe's land. Generosity loves to walk through the fields, and pick berries off of the stems. His mind filled with thoughts of what to bring to the giveaway. Generosity is very worried because he does not have any money, or anything to get a brand-new item for this giveaway. Generosity sits down in the field, and starts to look at his surroundings. A black bird lands a few rows away from him, the bird has a red stained beak from eating the berries off the stems.

As Generosity sits in the field, playing with a stem from the berry he has just eaten, he starts to grab more stems that he has placed on the ground, and starts to tie them together. While he is

tying the stems together, Generosity realizes something. He could connect each of these stems and turn them into a crown, so Generosity got to work on creating his crown. Once the base of his crown is set, he walks through the field with the first piece of his crown looking for things to add to it to make it more extravagant. After this, he sees berries and flowers that he can twine into the base of the crown, Generosity picks berries and flowers and starts to weave them into his crown. After a few hours of work, he is finally complete with his masterpiece. Generosity brings his crown home, and waits for the powwow to begin the next morning.

On the day of the powwow, everyone is gathered around dancing and enjoying each other's company. Generosity sees the pile of gifts and goes over to place his crown on the pile. There are a bunch of different things gathered in the pile, toys, different creations, things that people do not need any more from their homes. After Generosity places his crown on the pile, he goes over to his mother and asks her a question. "Mother, why am I named Generosity?" "Well, because I knew that when you grew up, and as you are continuing to grow you will be a generous boy." "What does Generous mean Mother?" "Generous is when someone is eager to give something more than necessary or expected." "So I am a generous boy?" "Yes you are, I can tell how hard you worked on your gift for the giveaway today, that is generous in itself, you did not know what you were going to give, so you made something. You made something more than expected and gave a beautiful gift."

After this discussion with his mother, Generosity and the rest of the tribe gather to start the giveaway, it is time for Generosity's crown to be given, he grabs his gift, and brings it to his meeting place where he is trading with another young boy. This young boy has brought one of his old toys, and is trading it with Generosity. The young boys traded their gifts and each of them were so excited! They danced around with their toy, and their crown and enjoyed the rest of the powwow.

# THE THANKSGIVING ADDRESS

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Inspired by the chapter “Allegiance to Gratitude”

By Lauren Meyer

## Summary

Catori is a young girl from the Potawatomi tribe. She attends a school that says the Pledge of Allegiance in the morning, but she does not like this. With the help of her friends, Catori plans a walk-out in order to start the morning with The Thanksgiving Address.

### Keywords:

- Skittish: nervous
- Fidgeted: make small movements out of nervousness

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<https://iastate.pressbooks.pub/steamchallenges/?p=65>

RIIIIIING. That was the sound of the morning bell. School was about to begin. I gathered myself and sat down at my desk to begin the school day. The principal started speaking to the entire school to let us know the announcements for the day. I fidgeted with my pencil as he spoke– all I wanted to do was start science class.

The principal finished up the announcements, and suddenly, all of my classmates stood up. It was time for the dreaded Pledge of Allegiance.

I did not stand. I had 26 pairs of eyes staring at me, including my teacher. The thing is, I did not believe in this weird chant. “Liberty and Justice for *All*.” What does that even mean!?

The truth is, I am a Native, daughter of the Potawatomi tribe. My name is Catori. I did not believe

in this silly thing they called “The Pledge.” In the morning, we express our *gratitude* to Mother Earth. My ma taught me the ritual. We stand over the hill at sunrise, and express our gratitude to the world.

After the Pledge, I went along with my day, learning about different studies. I have always loved science. The land, the fish, the crops... I love it all. As I returned home, I saw my Ma standing on the hill outside of our home.

This land was beautiful. Filled with wonderful wild flowers and a creek with fish. As a child I would explore this land with my little cousin. We would plant tiny seeds and watched as they bloomed into bright orange flowers.

Over this hill you can see the land of Onondaga.

“Ma, I wish I could go to that school on the other side of the hill.”

At that school, there are children who look just like me. Black hair, excited to give the Thanksgiving Address. Over there, children enter the school to recite the Thanksgiving Address, not the Pledge of Allegiance, something I will never understand.

“No, my beautiful girl, you cannot go to that school. I heard you did not stand for the Pledge. Why?” ask Ma.

“I don’t understand it. They force us to say it but I do not want to. I want to go to that school and begin with the Thanksgiving Address.”

Catori pointed to the school across the hill.

“I know my sweet girl,” Ma responded, “But you must stay at your school. It is where we belong.”

They both went back home to eat dinner together. Catori was not happy that she could not go to school with the other children that looked like her. She was determined to make a change, and make it fast.

Catori started working on her science homework. Her class was completing Moon observations. Catori was very familiar with the Moon as her family gives thanks to it every morning. As she looked out, the moon appeared to be big and bright. The moon gave her inspiration, which was exactly what Catori needed.

As days passed, Catori continued to sit for The Pledge, gathering more and more support from

her peers. As days went on, it went from only her, to her entire class sitting down. Not a peep to be heard.

Catori had been telling her classmates about her idea to start the day with the Thanksgiving Address. How could she convince the principal to make this happen?

Catori had a wonderful idea. She would just do it herself.

She gathered her classmates and told them of her master plan.

“Okay, listen closely. After The Pledge is said on the speaker, we will leave and enter the gym where we will begin our day with the Thanksgiving Address. How does that sound?” asked the girl.

“Are you crazy?” one boy asked, “We will get in so much trouble!”

Many students agreed with the boy. It was too dangerous to try.

The girl felt defeated. How would her plan work?

“Uh.. I.. I..”

The girl turned her head and saw that it was Dakota. He was a shy boy, also a part of the Potawatomi tribe. He was struggling to speak up.

“Yes?” the girl responded.

“I like your plan,” Dakota responded.

The girl and her peers were shocked. She found somebody to support her! The classmates became fidgety and rethought the plan.

“Okay...” one boy said. “We can try it. But only once!”

Catori was so excited that her plan was starting to work. Starting tomorrow, her entire class would walk out to the gym and start their day with the Thanksgiving Address. The girl went along with her day, nervous that her teachers would find out. Nobody said a word.

The next day came and the students were guttering in their seats. Their teacher had a puzzled look on her face. Catori began to believe that the teacher knew.

RIIIIIING. That was the sound of the morning bell. The principal began his announcements and began The Pledge. Nobody stood. The girl was starting to believe that her plan would work.

Soon, The Pledge ended. In one swoop, the entire class stood up and walked out.

The students marched to the gym. As Catori led the group, the principal stopped them.

“What do you think you are doing?” The principal asked.

All of the students looked skittish. They knew the plan wouldn’t work.

“We are here to begin our day with the Thanksgiving Address and you can’t stop us!” said Dakota.

The students were shocked that such a shy boy could say that to the principal.

“Well then, off you go. Do not be late to your second period class,” responded the principal.

Catori was shocked. Her plan worked!

The students began to recite the Thanksgiving Address. Catori was so proud of herself for sticking up for what she thought was right.

As days went on, the students began every day with this Address. Catori felt wonderful when giving gratitude to her Earth.

# PUHPOWEE

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Written by Katie Moore

## Summary

Laura always was connected with nature and felt connected to her tribe through her Grandma teaching her a new word, *puhpowee*. As her friends discouraged her for wanting to learn a new language from her tribe, she loses her excitement. She attends a tribal gathering, she learns about a new language that connects her to her tribe and dedicates itself to nature.

**Keywords:** Dedication (to nature); Puhpowee: the force which causes mushrooms to push up from the earth overnight; life cycle; Tribal; phenomenon

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<https://iastate.pressbooks.pub/steamchallenges/?p=66>

Laura was a young girl who loved exploring. Her family lived on 40 acres of land, where she could adventure through the trees and forest, along with the open fields. When she wanted time to herself after a long day, she sat out in the trees. To listen.

Laura loved nature, and loved learning about it. Science was always her favorite subject because she felt as though she could learn about the land that she loved being on.

She would sit and listen to the leaves blowing, the shhh of the wind, the water trickling down the river, and the bugs buzzing in her ear. These sounds made her happiest. They almost sounded like a new language. A language she loved to listen to. She would spend days and nights out in the trees. It was her happy place.

Laura used to spend lots of time in the forest when she was younger with her Grandma. Grandma would teach her words of a language she did not know that explained the wild and ever-changing nature of that spot. This language came from her tribe. It was something Laura believed to be as beautiful to her ear as the language of the trees.

Her favorite word she learned was *Puhpowee*. It sounds crazy, but to Laura, it was the most beautiful word she has ever heard. *Puhpowee* was three syllables and meant the force which causes mushrooms to push up from the earth overnight. As she would explore the same forest she saw from the day before, she would find new mushrooms and know what this phenomenon was called.

Laura loved hearing from her Grandma about these new words and the culture of her tribe. She found out that she would be able to attend the yearly tribal gathering this year and learn more from fluent speakers. She was extremely excited to learn more words to describe the nature and life cycle of plants that she had never heard before.

The next day, Laura went to her school and told all of her friends about her tribal gathering and how she would learn a new language. Much to Laura's surprise, her friends all thought it was weird.

"Why would you want to learn a new language? That is so weird," said one of her friends. The others chimed in saying, "Yeah Laura that sounds so boring." Laura, saddened by the response of her friends, tried to make it sound fun by explaining more. "No, it is actually cool. It is a language dedicated to nature and to the land of my tribe."

"Nature? That sounds like school. That is so boring," said her friends again.

Laura left school that day feeling more upset than ever. Going to the tribe gathering was something she was looking forward to, but now she felt embarrassed about it.

When Grandma came to pick her up, Laura did not want to go. Grandma assured her that this was something that she would enjoy, and reminded her of all of her time in the forest. Slowly, she started to feel better and was ready to learn more. She was excited to finally connect more words with her tribe and her favorite subject, science.

At the gathering, Laura was amazed by all of the fluent speakers. It was amazing that she could learn from so many different people and they were the only ones who knew the language in the whole world. She was inspired by the stories and tales each speaker told. One thing that stuck with her most was one of the speakers saying, "The language is the heart of our culture. It's too beautiful for English to explain. Nature is a wonderful phenomenon that we must preserve and highlight its beauty." Right then and there, she thought of the first word she learned in the language, *puhpowee*. To someone average, they would not think of the mushroom growing as something wonderful, but to her, it was special and had great meaning.

As the gathering continued, she was able to learn more about the language of her culture and see



how it explained different nature phenomena she wondered about all of her life. The words spoke to her in a way that made her happy because it represented a culture that she adored so much.

The next week, Laura's science class was given the assignment to give a presentation on something they were passionate about that had to do with a science topic. Immediately, she knew that she wanted to prove her friends wrong and show them and the rest of her classmates how wonderful this language truly was and how it highlighted her favorite thing.

She brought all of her school supplies out to the forest with her and worked on her project as she listened to the language of the trees. She worked for hours and hours until she had the perfect presentation.

As she went to school the next day, she volunteered to present first, something she never did.

Feeling the most confident she has felt in a while, she gave her presentation to her classmates. She talked about her tribe, the gathering, the dedication to nature, the connection to the life cycles and science topics, and even taught them a new word to explain a life cycle phenomenon. *Puhpowee.*

After class, everyone came up to her to ask her questions, even her friends. "We are so sorry we told you that was boring. It actually sounds really cool. Would you teach us more words? We want to learn more. Do you know other ones that mean growing flowers?" her friends exclaimed. Laura was so excited they wanted to learn and were so curious.

After an almost perfect day, Laura knew what she needed to do to make it perfect. After school, she went back home and sat in the forest. She listened to the leaves blowing, the shhh of the wind, the water trickling down the river, and the bugs buzzing in her ear. The language of the trees was something that truly made her happy. Almost as happy as her newly learned language of her tribe.

# JIMMY'S YUMMY GOODNESS

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Written by Chloe Mueller

## Summary

Jimmy lived on a pecan farm, and one day created a pecan butter that tastes delicious. Everyone falls in love with it, and Jimmy's Yummy Goodness becomes a well known product. This business is a family business that gets passed down through generations.

**Keywords:** yummy, goodness, create, tradition, passion

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<https://iastate.pressbooks.pub/steamchallenges/?p=67>

Jimmy Bones was an eleven-year-old boy that grew up on a pecan farm in Texas. He was an only child to his parents, Paul and Jane Bones. Jimmy's favorite thing to do was to help his father farm the rows and rows of pecan trees, but since he was still a young boy, he only got to help with the smaller tasks.

He dreamed of using the pole saw to trim the trees at the beginning of the year or drive the tractor around to spray against pests and weeds. His all-time favorite thing to watch happened in the fall when they clamped onto a tree with a tree shaker to shake all the nuts to the ground. Jimmy wanted to work on the pecan orchard forever because he had developed such a love for that farm.

One day he was bored at their house, so he began experimenting with some pecans they had in the house. He cooked them in their large skillet until they were perfectly toasted. Next, he blended them until it made a creamy delight. He was amazed that he just created a substance that looked like butter, but it was made out of his favorite thing in the world, pecans. He tried it, and he knew it needed something more.

He went to the cabinet that held all their seasonings and spices, and he found exactly what he

wanted at the back of the top shelf. He had to grab a chair to stand on just to be able to grab it on his tiptoes. He added this special spice to the creamy butter he just created. When he tried the pecan butter again, his eyes lit up. He just created the best thing he has ever tasted in his life. He ran to get his mother who was picking weeds out of her garden in their front yard.

“Mother, you have to come inside and try this yummy goodness I just created. Hurry!”

Mother wanted to continue to work on her beautiful garden, but she heard the passion in her son’s voice. She dropped her shovel and followed Jimmy inside. When she tried the pecan butter, her eyes lit up. She turned to her son and said, “What is in this yummy goodness?” Jimmy looked his mother straight in the eyes and said, “It is a secret that will stay in my head.” She just tried the best thing that she has ever tasted in her life.

Jimmy couldn’t wait until his father came in from the orchard, so he could try the new yummy goodness that he created. When he saw the tractor approaching the barn, he bolted out the front door to go get his father.

“Father, you have to come inside and try this yummy goodness I just created. Hurry!”

Father had more to do inside the barn, but he heard the passion in his son’s voice. He jumped off the tractor and followed Jimmy inside. When he tried the pecan butter, his eyes lit up. He turned to his son and said, “What is in this yummy goodness?” Jimmy looked his father straight in the eyes and said, “It is a secret that will stay in my head.” He just tried the best thing that he has ever tasted in his life.

Jimmy made more of his yummy goodness, and he took it to neighbors as a gift. Every time one of them tried it, their eyes would light up. They would ask, “What is in this yummy goodness?” Jimmy told them that it is a secret that will stay in his head.

Jimmy and his parents saw how delicious it was and saw other people enjoyed it too. They decided that they would try to sell this yummy goodness, but they had to come up with a name. They decided to call it, “Jimmy’s Yummy Goodness.” They each had their job to make the work go faster. Jimmy would make the yummy goodness, Father would pack the yummy goodness, and Mother designed labels to put on the jar.

They began going to farmer’s markets to try to sell Jimmy’s Yummy Goodness. Within weeks, the word had spread of this new product, and there were always long lines of people waiting to get their own jar of Jimmy’s Yummy Goodness.

Jimmy was my grandfather who started this business in our family decades ago. My father, Steve,

took over for many years, and now, it is my turn to take over Jimmy's Yummy Goodness. This tradition in our family will hopefully continue to get passed down for many generations.

# THE HONORABLE HARVEST

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Written by Hannah Mulholland

## Summary

In my story, Louise, harvests leek from her family garden. Her friend, Leo, also takes care of his family garden. Louise and Leo have different ideas on how to care for and harvest the garden. Louise teaches readers a valuable lesson about having an honorable and sustainable harvest.

## Keywords:

- Honorable: honest, moral, ethical
- Leek: a plant related to the onion
- Trowel: small, handheld shovel
- Sustain: to undergo, to go through
- Extinction: the termination of a kind of organism

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<https://iastate.pressbooks.pub/steamchallenges/?p=68>

“Loved them to extinction.”

It was a warm and sunny day on Louise’s family farm. Louise loved gardening and taking care of her family’s garden. When Louise was growing up her Papa taught her how to have an honorable harvest.

“Papa always said.. “Don’t take too much or there will be none left to take.”

On the other side of the city, Leo finally convinced his grandma to let him harvest a crop in the garden this year. Leo’s grandma said he could harvest the leeks since it is getting too hard for her

to get all the way to the ground to use her trowel to harvest them. Leo was so excited to have a job in the garden, he has never been in the garden before, but has heard a lot about it from his friend Louise.

“I can’t wait for the first harvest! I can’t wait, I can’t wait, I just can’t wait!!! I am going to have more leeks than Louise could ever harvest! I am going to find them all, and be the best harvester there ever was!

The weeks went by and before they knew it, both Louise’s and Leo’s gardens were ready for their first harvest!

“Louise, Louise, would you like to harvest the leeks after school my sweet dear?”

“Yes, I can’t wait!”

The day goes by and soon school is over and Louise is ready to harvest.

“I always check on the leeks and other plants in the garden before taking and harvesting them. I don’t want to take all of the leeks or else there will be none left for the entire season.”

On the other side of town Leo has been anxiously waiting for the day to come where he can harvest in the garden. Each day Leo has asked his grandma if it was time to harvest.

“Grandma, grandma! Is it ready to harvest today?”

“Yes, today is finally the day!”

Leo took the biggest basket he could find from the garage and ran into the garden.

Meanwhile, Louise skipped to the garden eager to check on the Leeks.

“Hello, hello, hello! How are you today my beautiful plants?”

The plants’ leaves were bright green and stretching to the sky.

“Is it okay to harvest you today? I won’t pick you all I promise, only the ones that are ready! If I pick them all, the wild leek wont keep growing.”

Louise carefully picked the readied leek, she made sure to leave a generous amount so there is enough for the rest of the harvest and so it will return next year.

Leo, on the other hand, took a very different approach to picking his family’s harvest of leek. Leo

spent the entire evening outside picking all the leek he could find. He couldn't wait to show his grandma his overflowing basket.

"I know that I have way more in my basket than Louise! Ha ha ha! I can't wait to brag to her tomorrow at school"

Louise gently finished picking her batch of leek using her trowel.

"You are so generous to let me take some of your amazing harvest. I will be back next week to check if you can sustain another harvest."

Louise knows that if she takes too much and doesn't leave any leek her patch will become extinct.

Leo returned to his grandmother to show her all of his findings.

"Oh goodness! Leo! Did you pick the entire patch my sweet grandson?"

"Yes grandma! Are you so proud? Didn't I do so good!?"

"Grandson, you did a great job, but did you pick alllll of the leek?"

"Yes, yes, all of it!"

"Oh Leo, I think you may have loved the leek to death."

"What? What do you mean loved it to death?"

"Well, Leo, since the leek in our garden is wild leek, it spreads and grows from itself. When we harvest, we want to be honorable and ethical with our harvest and not take too much!"

Leo became obviously upset, tears filled his eyes. He was so looking forward to this day and he messed up.

"Leo, sweetheart. I should have told you sooner. I feel so bad, I failed you and misguided you. Here, how about we spend time together each week and finish harvesting the rest of the garden together to learn? I should have never let you go without teaching you. I have failed you, I am so sorry."

"Grandma, you have not failed me. We both made mistakes. I agree, lets harvest together so you can teach me everything you know!"

"Oh Leo, you are so understanding and loving."

“Thanks grandma! You’re the best grandma ever, thank you for teaching me! love you!”

“I love you too Leo!”

Leo went to school the next day and shared with his friend Louise his mistake. Louise told Leo that everyone makes mistakes in gardening and it’s a learning experience for everyone! Leo and his grandma finished harvesting the garden together over the next several weeks where he learned so much. Leo learned what it meant to have an honorable harvest.



# ELLA'S SWEET SURPRISE

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Written by Karly Nederhoff

Inspired by "The Gift of Strawberries" in *Braiding Sweetgrass*

## Summary

This story is about a young girl, Ella, who grows up on a farm with a field of strawberries. She learns that these strawberries have much more meaning than just a fruit. Her momma teaches her that strawberries are a gift of love. Ella lives by this as she grows up, by sharing love through her family's strawberries.

**Keywords:** strawberries, family, love

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<https://iastate.pressbooks.pub/steamchallenges/?p=69>

Ella was a young girl who grew up on a farm with a field of strawberries surrounding her home.

These fields became her best friend growing up, and she loved to pick the fresh fruit of each year.

Her favorite thing to do was sleep outside and smell the ripeness of the strawberries on a warm, summer night.

When Ella was younger, her momma once told her that strawberries are a sign of love because of their heart shape and their sweet taste.

Ella loved this story, and she decided that it was going to be something she would share with her children someday.

Ella grew older and eventually had a family of her own. She shared her love of strawberries with them by sharing stories of her past.

Ella began to be recognized as the strawberry lady, as she would give strawberries to her family, friends, and community.

Ella shared love by giving out her strawberries, a sign of love like her momma once told her.

# WHO IS HIDING IN THE RAIN?

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By Andrew N.

## Summary

This story takes you along a journey through the woods. The main character makes many discoveries along their journey and describes them to the reader as it is happening. This story takes you on a thrilling ride and leaves you with a twist that no one is expecting.

**Keywords:** time, rain, exploration

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<https://iastate.pressbooks.pub/steamchallenges/?p=70>

It's a cool summer's evening with rain falling from above. As I am walking through the forest in my bright yellow raincoat, I notice the rain does not fall evenly. I hear the steady drum of rain overhead, the ticking of rain as it strikes the trees, the howl of rain weaving through the woods. As I walk, I notice the rain close to earth is almost silent. I come across a small village of moss sowed in the trees. As I move to take a closer look, I notice the movement of rain drops through the moss is like speeding down a slide. It hits with a woosh and slides like a ball down a hill until poof... it disappears. Venturing ahead, I notice a river. The water racing through it like a car crossing the finish line. The land is nestled up next to it cheering it on. They go as one like they were meant to be together. I close my eyes to bring it all in but am quickly awakened to the trickle of water falling down my neck. That's when I noticed... Are raindrops different?

Can raindrops really be different? Everything seems so perfect and simple; how can they be different? I look down, I am now in my lab coat and boots. I must investigate. Perhaps the different warmer temperatures make the drops smaller? Maybe the different leaves absorb more water so as they fall, the drops will be different? Could it possibly be an illusion like how a full

moon looks bigger at the horizon. Sitting here thinking, I start to feel bitter. I must head for home where I can sit by the fire and delight myself in a cup of hot cocoa. But wait, I have not yet found my answer about rain drops. I must continue to search, but first I must find shelter. I am too cold to continue being in the rain.

As I search, I stumble upon a cabin. A real-life cabin in the woods, I have only read about experiences like these. I am quick to explore and find that it is mangled and consumed by the vegetation of the forest. Its vines intertwined with the cracked walls like a snake coiled around its prey. The trees bursting through the roof like a rocket leaving for space. As I gaze into the complexity of the forest, I realize, this is the place I must be to find the answers to my question. I walk in and see a bench still sitting beneath a patch of roof that has survived the overtaking of the forest. I sit, thinking about the passing of time. If there is meaning in the past and in the imagined future, it is captured in the moment. When you have all the time in the world, you can spend it, not on going somewhere, but on being where you are. So, I stretch out, close my eyes, and listen to the rain. A few moments later, I hear a noise. I am quick to open my eyes to see a frog leaping amongst the vines. Oh, how peaceful it must be to spring across the land taking in all of nature's wonders. I notice myself becoming hungry, so I set out towards home. On my journey, I find a fallen tree with many leaves, perfect for testing my experiment. I hurry over and grab two leaves. These two leaves are different in color and thickness and two different water droplets form. With a smile, I yell, "AHA!" I have figured it out, raindrops are different depending on the relationship between water and plant! If there is one thing I have learned from being in the woods, it is that nothing is random, everything has purpose and meaning. Just as life amongst humans is.

I head towards home, with these new realizations. I feel satisfied. All my work here in the forest has paid off and I am on my way to becoming a real scientist. With that in mind, I stop to take in the sounds of the rain one more time. The swoosh of the rain is heard from above, the rush of the river ahead, the pitter patter of the rain hitting the trees around me. I feel joy in listening to the sounds of the rain. I have made my way inside, now dry, and warm, I lay in my bed, thinking about the disappearing of time. The wonders of the rain and the forest engulfing my world and stealing my time. I know it was worth it, I made so many discoveries and had so much fun that I would do it all over again tomorrow. And as quickly as I am thinking.... Crack.... A loud blast of thunder wakes me from my sleep. I am now awake and know what I must do in the morning.

# OUR LILIES

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Written by Alyssa Pask

## Summary

Lily is invited to Ellie's cabin and she is very excited. They immediately go to the lake and Lily discovers what a water lily is. Ellie explains to Lily the wonders to the water lily. They both take a moment to appreciate Earth's creation of the water lily.

**Keywords:** water lilies, Earth's gift, fascination, cabin trip

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<https://iastate.pressbooks.pub/steamchallenges/?p=71>

I start packing my shirts, shorts, sunglasses, swimsuit, and all my other necessities. Ellie invited me to join her and her family this weekend at their cabin. I am very excited since I have never been to a cabin before! I'm able to fit everything in my favorite backpack with my name embroidered on it, "Lily." I grab my backpack and run down the stairs after hearing a car horn; it must be Ellie's family here to pick me up! I run up to my mom and give her the biggest hug before leaving. My mom says, "Have a great time, dear! I can't wait to hear all about it!"

I say back, "I will miss you so much, I can't wait to tell you all about it!"

I hop in the car and excitedly wave and say hello to Ellie and her family. We sing songs and play over ten rounds of tic-tac-toe on the two-hour drive to her cabin. Her dad slowly rolls up to a fully-wood exterior house with pine trees surrounding every inch. I grab my backpack and follow Ellie inside. "We get the bunk beds! I'll sleep on the top bunk and you can have the bottom bunk," Ellie says.

I set my backpack down and we change into our swimsuits right away. Ellie and I run outside, and we grab life jackets that fit us perfectly. Ellie walks over to an inflatable boat and says, "Let's grab this boat together and go out on the lake. There's some cool flowers I want to show you!"

I excitedly grab the inflatable boat with Ellie, and we skip all the way down the hill to the shore of the lake. It is such a beautiful day with the sky filled with spots of small clouds. I can feel the sun on my skin and the mild humidity from the summer day. We prop the boat up on the shore and both get in. After we find comfortable spots in the boat, we grab the oars and start paddling over to the flowers Ellie was talking about.

Ellie says, "These flowers are called water lilies! They have the same name as you! Aren't they beautiful?"

I look at the lilies in awe, there's a variety of both white and pink lilies with lily pads surrounding each flower. "They are so pretty! I have never seen one of these before. I can't believe I have the same name as this beautiful flower!"

The flowers surround us as we paddle in the middle of the field of all the flowers. The area ranges from some lilies that haven't bloomed, and others are in full bloom. Ellie says, "My parents say the flowers are both underwater and above. For it to live, the roots stay in the water and the leaves give it oxygen from up here to keep it alive."

As Ellie is telling me the amazing facts and life of water lilies, I move closer to a water lily close by the boat I am seated in. I lean over the boat to smell the water lily and lean a bit too far over and fall out of the boat. As I submerge into the lake, I panic, but then remember I have a lifejacket on. I come up to the surface and see Ellie with a horrific look on her face.

"What happened?! Are you alright Lily?"

I begin to grin and laugh saying, "Yes! I am okay Ellie. I just wanted to smell the beautiful flower!"

We both begin laughing and Ellie does a cannonball into the water to join me. We are close to the shore, so we can walk around the water lilies and lily pads on our tip toes. We both plug our noses and open our eyes underwater to see the beautiful roots and ways the lilies stay connected within the water. As we both float back to the surface, bobbing in our life jackets, I take a whiff of smell from the lily, but only smell lake water and a hint of lemon.

We both jump back into the boat and lay on the floor of it. I look above at the light blue sky above me and I watch the small clouds sway by. We let the soothing waves move our boat back to shore as we both are in awe from the magic and wonder that water lilies bring to the water.

The lilies Ellie showed me are our water lilies now. They're the Earth's lilies. They're all our lilies. They are my lilies as much as they are yours.

# A GOOD HOME

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Written by Josie Pate

Inspired by “A Mother’s Work” in Braiding Sweetgrass

## Summary

This book is about a mom on a mission to make all her daughters’ dreams come true in their new home. Little does she know, she will discover her old passion for ecology, or her daughters’ love for all things outdoor, but the truth of building a good home, a good heart.

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<https://iastate.pressbooks.pub/steamchallenges/?p=72>

Have you ever considered what it would be like to pick up your life, not only your own life, but the lives of your two daughters. Well, welcome to my journey of moving and building a good home for my girls. Not only am I taking into consideration the mortgages and school districts, but what the girls have dreamed up for their wishlist as well. I am honestly finding their list to be quite intimidating, but I shall continue searching.

The search continued until I found the home that would be perfect for us girls. What to others may appear as a dreary farmhouse, to me we had struck gold. With the incredible trees surrounding the expansive property, a pond in the back and not to mention the incredibly darling room with purple walls, this was the house we were going to turn into a home, a good home. Checking off all the things on my wishlist but most importantly the girls’ too, I was excited for what this place had in store for us, however something wasn’t quite what it seemed.

The pond out back. I don’t think I have ever seen a pond so green and full of algae in my life and I was quickly followed by the emotions of disappointment over the pond situation which was met by the girl’s optimism, claiming it was not as bad as it seemed yet they too would agree that they would much rather swim elsewhere than step into the pond. This one thing was bound to

be imperfect because everything else had been, however instead of walking away from the pond feeling discouraged about the home I was building, I left encouraged because although it was imperfect it was still good to be with my girls in our new home.

My encouragement with our new home only grew, DUCKLINGS! The girls' faces lit up the moment they saw them and I knew from there that I could not disappoint. That's what it took to build a good home right? Give these girls everything they wanted, within reason of course, to ensure they loved their new home. The ducks were a great lesson for the girls and for myself of nurturing these animals. That's when it hit me... this new home we were building was not only a dream come true, but an incredible opportunity for learning! For goodness sake, I am an ecologist, someone who studies the relations of organisms to one another and to their physical surroundings.

This led to a series of discoveries and ideas I had for me and my girls to learn! We were going to spend our time settling into our new home, learning about the way the ducklings interact with the pond versus the way the geese did. We will also learn about how the ducks we raised grew up without a mother figure and how that shifted their survival.

We spent the time exploring, learning, growing and answering questions. In the midst of all of this our new house was becoming a home! It reminded me of what my grandma always used to tell me, " It takes hands to build a house, but only hearts can build a home." And that is just what was happening in this place.

The girls shared their learning and findings everyday as we sat around the dinner table. Their laughs filled the house with joy, their discoveries filled it with a sense of adventure, and the knowledge they collected filled the house with some great wisdom from all. Yes this house had everything the girls were looking for, but little did we know it would mean so much to all of us and the ways it would shift our perspective about certain things. Our house was coming to life with all that the girls and I were doing and learning.

What was once a dreary farmhouse was now a vibrant, full of life HOME, and if I do say so myself this was a GOOD one, too, a forever home, where there is more growing to do both intellectually, but most importantly in our hearts.



# GRACE'S GREEN BEANS

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Written by Jensen Pauley

## Summary

A young girl named Grace decides she wants to grow her own green beans to make her favorite dish for her grandma. Grace's green beans soon take a turn for the worse, and she has to learn to overcome these obstacles in order for her green beans to grow and her garden to flourish.

**Keywords:** gardening, growth-mindset, perseverance, patience, respect

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<https://iastate.pressbooks.pub/steamchallenges/?p=73>

One morning Grace was extremely bored in her room when a brilliant thought popped into her head. She wanted to make her favorite dish for her grandma because it was always their special tradition to make new meals for each other. Grace's favorite dish was a warm green bean casserole. When preparing for their meals, Grace and her grandma always just bought their ingredients at the grocery store because it was quick and easy. However, Grace had a different idea for this meal; she was going to grow her own green beans so her grandma would have the best, most flavorful green bean casserole with fresh green beans.

Grace wanted her famous green bean casserole to be perfect for her grandma, but realized quickly that she had no idea how to grow green beans! Grace knew her dad had a garden in their backyard where he grew a variety of fruit and vegetables, so she decided to ask him for help. Grace found her dad cooking his breakfast in the kitchen and said, "Hi dad, this morning I had the most brilliant idea that for my next meal with grandma, I want to make her my favorite dish, green bean casserole."

Grace's dad looked at her with a big smile and said, "Great idea Grace! Do you need to go to the grocery store today and get your ingredients?"

Grace then replied, “Actually, I thought I would grow my own green beans to put into the casserole to make it special and refreshing but I need your help, I have no clue how to grow vegetables!”

Grace’s dad laughed and with a proud look on his face said, “Yes of course I will help you, you can grow your green beans in my garden. I want to let you know that it will take about two months for green beans to grow, so you will need to be patient and wait to cook your meal for grandma.”

Grace’s face lit up with happiness and replied, “Thank you, Dad, I promise I will be very patient. I was thinking of buying the rest of my ingredients for my casserole at the store when my green beans are ready. Do you think I will actually be able to grow green beans?”

Grace’s dad pulled up his phone and said, “I know you will. Let’s research green beans and see what is needed for them to grow and how to plant them.”

Grace and her dad spent some time researching green beans and how to properly take care of them in order for them to grow. Once they had done enough research, Grace and her dad decided to grow bush beans and made a trip to town and bought green bean seeds. Grace decided to plant bush green beans because she learned that they are less upkeep and are easier to grow.

Grace and her dad spent the afternoon planting her seeds in her dad’s garden and exactly following their research so that her green beans can grow properly. She planted the seeds in the soil a couple of inches down, then watered them.

In the next few weeks, Grace’s green beans began to grow and became fuller and taller. She continued to water them regularly and weed out around the bean plants. Her plants continued to grow, but Grace and her family went away on a surprise family trip for a week, so she asked her friend to check on her bean plants and continue to take care of them for her. Unfortunately, her friend had forgotten to check her plants all week. Grace returned home and found her bean plants looking droopy and lifeless. Grace was so shocked and upset! How did her bean plants go from being full of life to this? Grace ran up to her house to find her dad. In a hurried voice, she said, “Dad, come to the garden quickly! There is something wrong with my green bean plants!”

Grace’s dad immediately followed Grace to the garden and observed the bean plants. After a minute of observing, Grace’s dad said, “It looks like your bean plants need water, did your friend come and take care of your plants this past week?”

Grace replied, “I thought so, but maybe they forgot. I will have to ask.”

Her dad responded, “Well, I think you need to water your plants now, especially because it was warm out this past week and if they have not been watered, they must be extremely thirsty.

Grace followed her dad’s advice and watered and weeded all her bean plants.

After talking with her friend later that night, Grace learned that her friend did forget to come and check on her plants. Her dad was right, her bean plants were dying because they did not have any water that whole week and were not cared for. The next few weeks, Grace watered her plants and took extra care towards them. Her bean plants now were full of life and continuing to grow and grow. Soon enough, Grace had her first green beans ready to be picked! She was so happy and proud of herself.

After picking enough green beans and getting the rest of her ingredients at the store, it was time to make her famous green bean casserole. She spent all day cooking her casserole, and then finally it was ready to eat. Grace’s grandma came over to her house to eat dinner that night and Grace could not contain her excitement. When she showed her grandma her green bean casserole and explained how she grew her own green beans, her grandma was so proud of her and could not wait to try it. The whole family ate the entire casserole that night and enjoyed every bite. Grace went to bed that night with pride all over her face and her stomach full of green bean casserole.

# MAPLE NATION

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Inspired by “Maple Nation: A Citizenship Guide” in *Braiding Sweetgrass*

Written by Morgan Petersen

## Summary

This story is in the mind of little fourth grader Nova Jane Smith, whose daddy is the mayor of the town which is called Maple Nation. This town runs on everything maple. Everyone in the town is passionate about keeping maples the main resource. Disaster strikes when Nova comes home, and her dad is very upset because the talk of climate change is happening, and the trees could be destroyed. He ends up having a town meeting and getting it figured out.

**Keywords:** climate change, community, maple, engagement

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<https://iastate.pressbooks.pub/steamchallenges/?p=74>

I live in a small town that is obsessed with maple everything, it sounds ridiculous, but it is true. Yes, we are even named after it. I want to start the story off with a little background. My name is Nova Jane Smith, and I am about to be in the fourth grade. I was born and raised in Maple Nation, my daddy is the mayor, and my mom is on the school board. I do not know life outside of Maple Nation, we are all family in this town. When I get lonely, I just visit my old friend Kent, he owns the only grocery store we have in town.

“Hey Kent, how’s it going today” I asked.

“Oh Nova, doing just fine. The maple trees are blooming, and I am about to get a huge shipment of maple syrup in today” he explained. Kent loves talking about how much maple we have in the store. He is always worried that we are going to run out and he insists on telling everyone who comes in to pay taxes and watch how the sap is running. I say goodbye to Kent and go on my way

to my favorite spot which happens to be the sugarbush, this is where thousands of maple trees are scattered and laid beautifully.

Maple Nation is an interesting town, I tend to wonder what other towns are like? Do they care so much about a particular thing in their town? Maple Nation, I swear has more trees than people in it. I think to myself how this town just keeps on running and all I think of is the trees. Just last week, Mr. Turner used firewood for warmth as he forgot to pay his oil bill. Or even how the fire department uses maple contributions to have a monthly pancake breakfast. I just think we all must do our part for this town to survive. If the trees go down, we are going down with them.

As I walk back to my house, I see my father in the window. My mother is standing over him and has her hand on his shoulder. My father looks unwell, he is rubbing his head and looks stressed out. I walk into the house and my mother jumps suddenly. "Oh, Nova dear, you scared me." Her eyes looked sad and sunken in. I knew something was wrong. "What happened" I said suddenly. My father looked at me and just mumbled something about "how he made a commitment to this town" and something about "how could this be happening." I looked at mother and she pointed to the room, and she followed me.

"Honey, your father is very stressed, and we need to just stay calm and be there for him" she said. I asked a million questions and she stated that "there is something called climate change happening" and "It is putting a lot of stress on the maples" I was very confused and did not understand. If there were no maples, there would be no Maple Nation. I ran to my father and said that we had to do something about this! He said there will be a town meeting and that it would be best to just tell the town then.

The next day, I could hardly wait. I was ready to stand up and explain to the whole town that we need to change how we have been acting. The town meetings are very important in our small town, this is where we discuss a lot of the problems that are going on. My father gets up to speak about this climate change and everyone goes nuts! "What is going to happen to us" and "This is the end of Maple Nation" commotion started running through the town. My father shushed everyone and said something I will never forget. "Our maples do not deserve our government. They deserve me and all of you to speak on their behalf. We will fight political action and show civic engagement in this climate change business. We will not lose our maples."

Everyone in the town was cheering and that is how The Maple Nation Bill of Responsibilities was made. We led with the wisdom of Maples and made sure that they were never going to end. Maple Nation lived on for years to come, thanks to the community caring about what is most important to them. This story should show you to fight for what you believe in!

# IT ALL STARTED WITH A POND

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Written by Kelsey Rincon

## Summary

This is a story about a mother and her two daughters embarking on a journey at their new house where they have a very soiled pond. The mom makes it her mission to transform the pond while her daughters uncover learning on their own about the water cycle.

**Keywords:** ecologist, water cycle, pond, research

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<https://iastate.pressbooks.pub/steamchallenges/?p=75>

Searching for a new house is never easy. Especially when your daughters give you a hefty list of requirements that they are counting on you to fulfill. Trees big enough for tree forts, a stone walk lined with pansies, and a pond to swim in were just a few of the many items on their list. After quite some time searching, I was finally able to find us a house that had great potential and thankfully fulfilled some of my girls' requirements.

It didn't take long for us to get settled and start to make this place our new home. Surrounded by the great outdoors, we truly felt like we were in the mist of nature's playground and the opportunities seemed endless. One of our favorite things about this house was the great big pond that was located right on our property. It had a lot of potential to be something great. Something my girls have always wanted. A pond to go swimming in. There was only one issue. The pond was absolutely disgusting. It was the dirtiest pond we have ever seen, and I would never dare to let my girls touch even an inch of that water. Of course, they did not like to hear that, and I was always hearing them say under their breaths,

"It's not that bad mom," "It's just water," and "What's the worst thing that could happen."

I tried to ignore their ever so sly comments, but I couldn't help being just as disappointed as them that we couldn't enjoy this pond that was sitting right at our fingertips.

As days went on, I soon began to think of ways that I could help transform this pond into something that would be more useful and enjoyable for all. Being an ecologist, who studies the relationship between living things and their surroundings or environments, I felt like I was adequately equipped to take on this great task. Excited about my plans, I immediately ran to tell my girls about my hopes and dreams for the pond. I sat them down, and I couldn't help but notice the worried looks across their faces.

"Did we do something wrong?" they both blurted out in unison.

"No of course not girls! I have some great news. I am going to take on the pond and transform it into a safe place for you guys to swim!"

They both jumped up higher than I had ever seen before and ran into my arms at lightning speed.

"THANK YOU THANK YOU THANK YOU," they both shouted as they clearly couldn't hide their excitement.

Eager for me to get started, they wondered what they could do to help. That immediately got me thinking, and I soon realized that this could be such a good learning opportunity for them.

"Alright girls, since this is such a large project that is going to take some time to complete, I want you two to embark on a project of your own. Do you guys know anything about the water cycle?"

They both looked at each other.

"Is that another name for a pond?" One of my daughters stated.

"No sweetie," I said with a giggle.

"It's the way water circulates between the different parts of our earth such as the earth's oceans, atmosphere, and land."

"You mean like they all share water?"

"Yes, that is one way to think about it," I smiled.

"That sounds so cool, I want to learn more," my daughter shouted.

"That is exactly the attitude I was hoping for. You both are going to research the water cycle using

some resources that I provide you and then, you are going to share your learning with me. This will be a great way to keep you girls busy, and I also think you will learn a lot along the way. You will begin your learning starting bright and early tomorrow morning. Get some rest and be ready to explore the water cycle.”

The next morning, I could hardly open my eyes before both of my girls ran into my room and jumped on my bed, eager to get started with their learning. I mustered my way out of bed and guided them to the dining room where I had laid out all the materials they were going to need for their research.

“Here is everything you are going to need. Use these materials to do your research, then create a poster using the paper and markers when you are done! I am going to work out in the shop today, but I will check in on you girls in a little bit”

“Sounds good, thank you mom!” they both replied.

Then, I shut the door behind me and headed off to do my own research for the day.

After a few hours, I headed back into the house to grab some late lunch. To my surprise, the girls had completely redecorated the house so that it was set up for a presentation.

“Take a seat,” they told me as soon as I walked through the door.

Once I sat down, they started walking me through each of their posters about the water cycle. They explained that the water cycle goes through the following process: condensation, precipitation, collection, and evaporation. Then, it keeps going in a continuous cycle. That is how the water moves between different parts of the earth, they explained to me. They then went into each of the different parts of the cycle, and I couldn’t help but be so proud of all their new learning. They really blew me away, and I can’t wait for them to learn more things about this wonderful environment we get to call home.



# JACQUI'S GARDEN

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Written by Morgan Robinson

## Summary

Jacqui, a young girl, decides that she is going to start a garden. She hopes to have success growing her garden; however, she runs into a few obstacles. She must problem solve and overcome those obstacles in order to be successful.

**Keywords:** gardening, researching, determination, trial and error, learning

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<https://iastate.pressbooks.pub/steamchallenges/?p=76>

Jacqui had a thought, what would it be like to create something that my family could use and enjoy? She continued to think about that and one day went over to a friend's house.

"What is all of this?" Jacqui says while looking wide eyed into what looks like a perfect place for gnomes and fairies to live. "This is beautiful! Look at the trees, and the plants, and the vines all over."

"This is my mom's garden!" Exclaimed her friend. "My mom loves to garden and grow different fruits and vegetables."

After Jacqui's friend took her for a walk around the garden, Jacqui thought that this could be a great project for her. She didn't know much about gardening, or really about growing anything, however she wanted to give it a shot.

She went home and talked to her parents. "I think I want to grow a garden!"

"A garden? That's a lot of work, do you think you can handle that?" her dad replied to her.

“Yes! I already know what I want to grow!” As Jacqui looked around the yard, there wasn't a spot to plant all of the plants that she had in mind.

Her dad had some 2 x 4s leftover, so he took some time to build a small raised garden bed. Once it was all built, they found a spot for it right between two trees where it could get a lot of sunlight. Then, Jacqui went to the Garden Center at her local store and started picking out some plants that she wanted to grow.

As she walked in, she saw racks full of different seeds, when she kept walking, she saw small plants that were already started and needed to be replanted. She went right for the small tomato starts. As she started picking some up, she noticed how many different options there were. She had no idea that there were so many types of tomatoes, her mom always just gets them from the grocery store. Jacqui was so confused, and she went back home empty handed, feeling defeated.

“There are so many choices, I don't know what I should pick, maybe growing a garden is too hard for me. I don't know anything about the different plants,” Jacqui said to her mom.

“Hmm, let's do some research and see if we can learn something.” Jacqui and her mom did some research and found information about when to grow certain plants, what plants grow well together, and the differences between types of plants.

“Wow! Now, I know exactly what I want! Let's go back to the store!”

Once Jacqui got back from the store with all of her plants in her hand, she started planting. She started to put Garden Soil into her garden bed. The garden soil has really good nutrients for the plants and it helps them grow. Then, she dug small holes into the soil to plant the plants. She had starts of most of her plants except for green beans, she had to buy seeds for those. She read the directions that were on the package and then buried them into the soil.

Every day, Jacqui went out and watered her garden. She started to see her plants growing and got really excited when she saw little shoots starting to grow on the green beans.

One day when Jacqui went out to her garden, she saw something that surprised her. “OH NO!! WHAT HAPPENED?!” Jacqui shrieked. “My green beans are ruined, what happened to my plants?” The green beans looked like they had been dug up and it looked like there were huge footprints that left huge holes.

“It looks like an animal ran through. They uprooted the plants.” Said her dad.

Jacqui was disappointed but determined to have a successful garden. Even though it was 90 degrees outside, she went out and planted new green beans. She picked the weeds, turned over

the soil, and watered her new seeds. She also added chicken wire all the way around her small garden bed so that nothing could jump in and ruin her creation.

Jacqui started to get busy hanging out with her friends, going to the lake, and swimming in the pool. One day, she went out to water her garden and noticed that the leaves were getting brown and the vegetables that were growing stopped. The plants were drooping, and they looked so sad. She didn't know what happened.

She continued to water the plants and watered them more often when it was really hot outside. Then, they started to turn green again! Her plants started producing vegetables that she brought inside and got to eat!

By the end of the season, her garden was producing so much that she gave vegetables away because her family couldn't eat them all! Jacqui's determination and hard work paid off. She learned so much about growing plants and gardening this summer. Hopefully, she will have just as much success next year.

# THE LICHEN TALE

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Written by Madeline Sabella

## Summary

This story is about the struggle between the Kingdom of the Algal and the Kingdom of the Fungus. Each one needs each other in order to survive, but are stuck in their own ways. Will they find peace or will their kingdom fall?

**Keywords:** teamwork, small but mighty, science, fantasy

*A YouTube element has been excluded from this version of the text. You can view it online here:*

<https://iastate.pressbooks.pub/steamchallenges/?p=77>

On a granite boulder deep in the forest of Adirondack lived two kingdoms. These two kingdoms were divided between a dry, crispy field that had looked more dead than alive.

The two kingdoms had not been united in over a million years! They believe that they could work on their own. However both kingdoms were facing problems that were bigger than themselves.

One of the kingdoms on the East side of the boulder was the kingdom of Algal. The people of the kingdom of Algal were made up of single cell organisms that created great food through photosynthesis (which is just a fancy word for changing light into food).

These people were geniuses that could live and survive on their own. Their bright green skin was due to their bright and helpful personalities. Even though the algae did not need help from others they were not capable of protecting themselves. Whoever could help them?

Directly across from the kingdom of Algal was the kingdom of Fungus. The fungi were very loyal people that focused on collecting minerals and special compounds. They were the decomposers of the granite boulder and were very fast workers.

Even though the kingdom of the Fungus were diligent workers, they were unable to make any

food. The kingdom was in desperate need of a good meal. Maybe there were some chefs close by that could help them?

As the days got hotter and hotter, the kingdoms started to feel the stress and pressure of their problems. They desperately needed help but were both too stubborn to reach out.

The king of Algal told his people, "The outside threat is not too bad! We can wait a little longer since our conditions are manageable."

One member of the kingdom yells, "Maybe we can reach out to other fungi kingdoms? We don't need the help of the Kingdom of Fungi,"

Another member yells, "Or we can do it on our own! We do not need anyone else but ourselves!"

"Hush! We will keep waiting to see if the weather changes and then we will figure out a plan" stated the king. He was feeling the pressure of the crowd to make a decision, but he was hopeful that protection would come soon.

Across the boulder, the Kingdom of the Fungus was having their own conversation about their current state.

The Fungi Queen called a meeting for all of her people to discuss their food situation. "As many of you already know, we have not had decent food in a long time. Many of you are very hungry from all the decomposition you have done. And your hard work is not unnoticed."

"Before the kingdoms split we worked very well with the Kingdom of Algal and vowed to only work with them. However, they are being stubborn and are refusing to accept our help."

The court jester chimed in "Why wouldn't the Algal want to work with us? We are all fun-guys."

The crowd grew silent and suddenly one young knight said "What if we crossed the brown field to show the Kingdom of Algal we are willing to help?" The crowd murmurs with agreement. The Fungi queen responded with " It sounds like it is settled then. We will cross the brown field to show our commitment to protect the Kingdom of Algal."

The crowd shouted with excitement because soon they will be able to have a delicious feast.

Soon after the Kingdom of Fungus decided to help, the conditions got even worse! There was no sign of rain or anything that could help the kingdoms. Panic struck the Kingdom of Algal and chaos started. The king made a decision to cross the brown field to ask for help from the Fungi.

Both of the kingdoms fled from their original locations to seek out help. The stress and harsh

conditions was enough for the two kingdoms to meet each other. From across the brown field the two kingdoms spotted each other and realized that they had been saved.

King Algal said “We need more help since we are unable to protect us from death. In return we can offer you food.” Queen Fungi exclaimed “We are in desperate need of food! My people will protect you from dying.” Both groups shouted and celebrated their success! Finally the two kingdoms were able to come together and help each other.

As the kingdoms celebrated, the sky began to rain. The brown field and the kingdoms turned bright green and moved closer together! Queen Fungus suggested “Let us change our name to *Umbilicaria americana* and create a united kingdom that moves as one.

At last the kingdoms had solved their problems and decided to work as one to help one another! There was peace and a feast on the sugars created by the Algal. The kingdom of *Umbilicaria americana* lived happily ever after. The end!

# DAHILA'S SUMMER GARDEN

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Written by Katelynn Shaiko

## Summary

Dahila is a curious ten year old. This summer she wants to get into gardening because she is named after a flower but doesn't know where to begin. Until she notices her new neighbor, Ms. Rosie, gardening in her backyard. Dahila is faced with completing her summer goal of gardening.

**Keywords:** garden, plants, observation, pungent, harvest, organisms

*A YouTube element has been excluded from this version of the text. You can view it online here:*

<https://iastate.pressbooks.pub/steamchallenges/?p=78>

Hi, my name is Dahila. I was named that because it's my mom's favorite flower. What's funny is that I'm 10 years old and I know nothing about gardening or flowers. A lot of people in my neighborhood have plants and flowers and they look really pretty because it's the summer and all the colors look so bright. My goal for this summer is to pick up a book or two about gardening and learn.

One day, I was looking out the window when I noticed my neighbor, Ms. Rosie, was planting something in her backyard. Ms. Rosie is new to the neighborhood and really keeps to herself. When everyone is outside playing and parents are talking, Ms. Rosie stays inside. I ask my mom if I can knock on her door because I'm so curious about her. I only ever see her outside when she is planting in her big woven floppy hat. She has me really curious about gardening which I assume that's what she is doing.

I finally get the courage after weeks to go out there and talk to Ms. Rosie. I don't want to bother her but I'm just so curious about who she is and what she is always doing in her garden. Ms. Rosie seems like she is about my grandma's age so I definitely know she is approachable.

I went outside and peaked my head through our white picket fence and blurted out “Hey my name is Dahila! I’m your next door neighbor. What are you doing out here?” Ms. Rosie looked over and said “Hi Dahila, I’m currently planting my garden. I used to have one back at my old house and I need to start one up again. It’s the best time of the year to do it.” I looked at her with amazement. I find myself wanting to know more. I tell her “I’ve never planted anything and honestly I think I would not be very good at it either. The only time I’ve ever touched anything outside is when I’m playing with my friends... outside.” I notice that Ms. Rosie smiled at me when I tell that I don’t know much about plants. She ended up inviting me to come over to help her plant tomorrow as long as it’s okay with my mom.

The next day I knocked on Ms. Rosie’s door in my clothes I knew I could get dirty in! She told me yesterday to bring a notebook. Ms. Rosie answered the door thrilled to start gardening together. She even handed me my own gardening tools and gloves! I’ve never had this and I honestly find it so nice that she gave this to me. “Woah! Thank you so much for these tools! What are we going to do today?” I said. Ms. Rosie handed me seeds and said “We are going to plant these seeds and then we are going to write in journals about what we observe from the other plants that I have planted.” Ms. Rosie then goes to tell me about all the vegetables she planted such as tomatoes, cilantro, cucumbers, jalapeños, banana peppers, and extra plants and flowers to make it look pretty. I’m planting and adding bell peppers, the scientific name, *Capsicum annum*. Ms. Rosie said Bell peppers are considered less pungent and are easy to harvest.

When I was planting my bell peppers I thought to myself how cool this was and the connection I’m creating with the soil and plants around me. After planting my seeds of bell peppers, I wrote in my observation journal the date and what I did. After writing the observations, Ms. Rosie told me to write down my thoughts on gardening too. I wrote down how intriguing I think gardening is now and how I’m super excited to watch how my plant grows and to see the garden all finished. I got done writing down everything before Ms. Rosie. When she got done I asked her “Why do you like gardening so much?” She responded, “It’s good for our Earth and it’s good for our health. I like to focus on nurturing my garden and my plants and focusing on their health. Plants are organisms. They are like humans and you should treat them like such once you create a relationship with a plant you have to love it unconditionally.”

After that day, I didn’t stop journaling and observing my plant or garden for the whole summer. My bell pepper plant didn’t stop growing and it was so awesome to see. I go over to Ms. Rosie’s every day to talk to her and do observations for the day. Ms. Rosie inspired me and taught me the importance and positivity that gardening brings and I will never forget that.



# FINDING YOUR ROOTS AGAIN

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Written by Savannah Shultz

## Summary

On the Shultz Family Maple Farm the family works together to harvest sap and make their famous and delicious syrup. However, when the family strays from their family's tradition of harvesting the sap, the trees dry up. Then young Maple comes up with an idea of how to bring their forest back to life.

**Keywords:** sap, axe, reed, grateful, generations, traditions

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<https://iastate.pressbooks.pub/steamchallenges/?p=79>

On a farm, not a normal farm, a maple tree farm, a family tends to the trees and cares for one another. The farm is called *Shultz Maple Farm* and it provides the maple for the whole town. The Shultz family has had this farm in their family for generations and now it is Father, Mother, David the oldest brother, Hidi the oldest sister, Trevor and Tinley the twins, and Maple the youngest of the siblings, who tend the farm. The whole family works on the maple trees. Mother and father work all day and the children work after school into the night and on the weekends all day.

“Time for school!” Mother yells up the stairs, acting as all the children’s alarm clock.

After a moment of rolling around in their beds and complaining about being tired, they all roll out of bed one by one. Then it is a fight for the bathroom.

However, clever Maple stays in her room to get ready. There is no fighting and she is able to have the whole room and mirror to herself, where she can tie her bows in her two braids.

“Maple, you are not going to have time for breakfast!” Mother yells up the stairs one last time.

“Coming Mom!” Maple yells as she runs down the stairs.

The spread looks as though Mother has been up for hours, and she made the family's favorite, maple syrup oatmeal, with strawberries and bananas. She also had all the lunches packed and cleaned up after cooking. Father was strapping his boots up getting ready to head to the farm as mother was preparing the lunch they would both have in the middle of the forest.

Finally, Mother sat down and poured herself a cup of tea and added drops of our family's maple syrup. We use our syrup in anyway we can, so does everyone in our town. Bill comes at the end of every week to pick up the supply we sell at the store in town, which is always sold out by Wednesday. Father looks at last week's report of the selling of the maple syrup.

"We have to spend more time in the forest today. The town needs more syrup and we barely have any for ourselves," father says disappointedly.

"We have been spending more time and drying up more trees faster than ever before," mother says with worry.

"It will be fine, we just need to go deeper. David, make sure you and all your siblings meet us at the west ridge of the forest after school. Please don't lolly-gag after school we need all hands on deck this week," father says as he finished his coffee and stands up to ready the truck to head to work.

"Yes, Dad, and Mom, don't worry, we will stay late with Dad to help," David says cheerfully.

Mother nods. She then turns to start packing up the book bags and handing them to all of us after we all finish up eating. Father walks out the door.

"I'll pack us all a supper to have tonight at work. Maybe some maple banana muffins?" Mother says with a bright smile.

"That sounds great Mom!" Maple shouts. The children begin to head to school.

That day after school everyone begins the long walk to the west ridge, which is past the house. From the house, school is about a mile and a half walk, and the west ridge from school is about 2 miles. The whole walk the children talk about their school days and play eye spy.

Once they all get to the forest there is no wasted time to begin the search for trees that don't have fresh axe holes. For generations the Shultz family only uses family made tools including the axe, reed and buckets. This is because the family has always made it from natural things made from the earth so there is no harm to the trees.

Trevor and Tinely are walking along the 4th row of trees and notice something. Trevor yells out, "Dad! Someone is stealing our sap! They put in metal reeds in 3 of our trees!"

Tinely follows in suit shouting with worry, "And it looks like the buckets are really full! They have probably been here for hours!"

"No, those are ours. I have not had time to make more supplies and when need as much maple as we can get from the trees," father explains. "I have more in the back of the truck that we need to put in the trees."

"But Dad, we are only supposed to use our tools. Remember Grandma's story says that if you respect the trees and don't use harmful tools the syrup will always flow," Maple says with worry.

"Maple, your father is doing his best. Just do as he says," mother says with a soft encouraging voice.

At the end of the week, the buckets had no more than a couple of drips each day. The trees were drying up and some were even dying. Father did not even have time to give the trees fertilizer. On Sundays, father would always have the family say a whole prayer for the forest. However, this Sunday father did not show gratitude for the forest. There was too much disappointment from the lack of sap.

Another week went by with no sap. The family stopped going to the forest, to see if waiting would help. The town began to wonder if they would ever taste the delicious Shultz maple syrup again. Sitting in school one day Maple's teacher was teaching the children importance of being grateful for each other and treating everyone with respect. The class also talked about how without respect you can't expect to get anything from anyone.

This made Maple begin to think about how father stopped their family's tradition that went back generations of respecting the forest that gave them so much. She wanted to show the forest respect again, and maybe the forest will give back the sap.

That night Maple said the prayer for the forest just like her father used to do, and all the generations before that. After school every day that week, Maple went and took away all the new tools father had brought into the forest, and she threw them away. She also fed the trees and continued with a prayer every night to hopefully help.

After a week Maple asked father if she could come with him when he checked on the forest. Even though father did not see the point, he let Maple tag along. On the ride there, Maple told father

what she had been doing in the forest. Father was not upset but did not understand why or think that it would make a difference.

“We learned in school that you have to respect things that you want something from,” Maple explained.

“Well, then maybe we should say a prayer before we go look?” father asked and Maple agreed. They said the prayer before getting out of the truck.

When walking up to the biggest tree in the forest, they saw it shining in the sun. They began to fill with excitement. Father took out his axe, the one he had made and always used, and cut a hole in the bark. When he put in his reed, sap came flooding out. Maple shoved the bucket under the reed.

“Maple, it worked! You were right!” Father said as he grabbed Maple and hugged her so tightly.

“No the trees did it!” Maple exclaimed. “Thank you trees!”

“HAHA! Yes! Thank you trees!” Father had a smile so big.

From then on they stuck to the ways of respecting the trees and praying for the forest. For generations this story was told, to remind the family that the trees will provide the sap as long as they are respected.

# BE A GOOD CITIZEN

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Written by Brittany Smith

## Summary

Mary Kate explores her community with her dad as she hopes to find a way to be someone who helps people when she grows up. Mary Kate learns that she can grow up to be a good citizen by giving back, helping others, and serving her community.

**Keywords:** good citizenship, core values, service

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<https://iastate.pressbooks.pub/steamchallenges/?p=80>

“Who do you want to be when you grow up?” asked Mary Kate’s teacher.

Everyone around Mary Kate waved their hands in the air. They all had an answer.

“I want to be a teacher!”

“Doctor!”

“A lawyer!”

“Soccer player!”

“How about you, Mary Kate?” Ms. Johnson asked.

“I don’t know,” she said. And that bothered her.

It bothered Mary Kate during lunch, during music class, and during gym.

It was still bothering her when her dad picked her up after school.

“I don’t know who I want to be when I grow up,” Mary Kate told her dad.

“Well,” her dad said, “what makes you happy?”

“Last week I went to the pool with Kayla,” Mary Kate said. “That made me happy. And selling cookies at the charity bake sale was fun.”

Mary Kate thought of another thing. “We found that man’s pet parrot, remember? It made me happy that we helped him.”

“Maybe you want to be someone who helps people, then?” her dad suggested.

“Helper’ isn’t a job, Dad,” Mary Kate replied.

“Of course, it is!” her dad said. “Lot of jobs are all about helping to make the world a better place.

Mary Kate wasn’t too sure.

“Let’s take the long way home,” Mary Kate’s dad said. “I want to show you some people who have jobs helping others.”

“We’ll start right here, at your school,” Mary Kate’s dad said. “Who do you see?”

“I see my teacher,” said Mary Kate. “And I see the crossing guard.”

“Your teacher helps you learn, and the crossing guard helps you stay safe,” said Mary Kate’s dad.

Mary Kate had never thought of it that way.

“Let’s see who else we can find!” said Mary Kate’s dad.

A man in a white coat walking a dog gave Mary Kate a friendly wave.

“He’s a veterinarian,” Mary Kate’s dad told her. “He helps people by making their pets feel better.”

“Some people help their town by joining the police force. Or they help their whole country by joining the military.” Mary Kate’s dad told her.

“They help by keeping us safe!” Mary Kate said.

Mary Kate and her dad overheard the policeman ask an older woman, “May I walk you to the library, ma’am?”

“Let’s stop at the library, Mary Kate,” said her dad.

“Hi,” whispered the librarian. “Do you need help finding a book? I could also sign you up for our book club!”

“Yes! Thank you,” Mary Kate whispered.

“Happy to help,” the librarian whispered back.

“Let’s go to the park, Dad!” said Mary Kate.

“Can you spot the helpers here?” Mary Kate’s dad asked her.

Mary Kate looked around.

She saw an activist asking those passing by to sign a petition.

She saw a gardener in a city uniform.

And she saw...

“The garbage man!” Mary Kate exclaimed. “He’s helping by keeping our city clean and beautiful.”

There really were helpers everywhere.

Next Mary Kate and her dad passed a church.

The pastor was out front.

“What’s your favorite think about your job?” Mary Kate asked him.

“Helping other people!” he said. “I also like volunteering at the soup kitchen next door,” he added.

“Can we help with that, too?” Mary Kate asked.

They worked at the soup kitchen until Mary Kate’s dad’s phone buzzed.

“Want to go meet Mom at her office?” Mary Kate’s dad asked.

On the way, a reporter was interviewing a fireman who’d rescued a kitten.

“Journalists make sure we know what’s happening,” Mary Kate’s dad said.

“You should take that cat to a veterinarian in case it’s hurt,” Mary Kate told the fireman. “There’s one right down the street!”

Soon Mary Kate and her dad arrived to meet her mom.

“Mom!” Mary Kate yelled, and ran to hug her.

Mary Kate’s mom worked at the mayor’s office, because Mary Kate’s mom was the mayor!

“I’m learning all about service,” Mary Kate said. “Do you help people?”

“I do!” her mom said. “My job is to help the people of this city by listening to them and passing laws to make their lives better.”

Mary Kate had a lot to think about. There were so many different ways of helping people and so many different jobs to choose from.

“I still don’t know who I want to be when I grow up,” she told her dad. “But I know one thing... I want to be a helper.”

Mary Kate’s parents smiled at her.

“Good citizenship is when one properly fulfills their role as a citizen,” her dad told her. “No matter who you choose to be, always choose to be a good citizen.”



# THE VALUE OF TEAMWORK

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Written by Claire Stalzer

## Summary

Rebecca is a talented soccer player and is preparing for her first game of the season. Her team has been playing together for as long as she can remember, and they use their teamwork and non-verbal communication to play the best they can.

**Keywords:** teamwork, nonverbal communication, all or nothing

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<https://iastate.pressbooks.pub/steamchallenges/?p=81>

Rebecca woke up this morning fresh-faced, and ready to take on the day. Today was the day of her first soccer game this season. Rebecca's team, the Fighting Squirrels, have been playing together since they were young girls, and they were about to begin their last season before they graduate from high school and leave for college. The team has had its ups and downs throughout the years, but each and every player on the team has a love for the game and the girls she plays alongside. As Rebecca was getting ready for the school day, her mom, Amy, was preparing a big breakfast to help Rebecca fuel up for the long day of running and playing that she had ahead of her.

Before the game, the team had to suffer through a school day before they could get on a bus and be driven to the field. The hallways were buzzing as the teammates were talking about their opponent for the night and what strategies they would use to defeat the Hawks, their rival team. The team captain, Jocelyn, checked in with each player and made sure that they were drinking enough water throughout the day so that they would be hydrated and in prime condition for the big game. Because the girls had been playing together for so long, they have had their game-day routines set in stone for years and hardly need reminders at this point.

As the bus driver pulled the big, yellow bus up to the soccer stadium, the girls spilled out of their seats and made their way to the Fighting Squirrels' bench. Each player laced up their cleats

and continued chatting about what they expected for tonight's game. As if each player had an internal clock, they all stood and got in position to begin the Fighting Squirrel warmup routine, stretching, and practicing kicking and passing the soccer ball to each other. Rebecca had a good feeling about tonight's match and could feel the team's chemistry as they assumed their positions while anticipating the kickoff.

Rebecca began to feel anxious about the two hours of game that stood before her. She decided to take a deep breath and spend a moment feeling the spikes of her cleats dig into the green grass to ground herself. After a moment, Rebecca looked up and made eye contact with her teammates and felt peace as she was reminded that her teammates have her back and they were in the game together.

When the referee blew the first whistle, the Hawks took the ball and darted for the goal. The Fighting Squirrels chased after and got into position as they applied their strategy and remembered that they could work together to keep the Hawks from scoring. When Jocelyn stole the ball from the Hawks' star striker, the team jetted towards their own goal and passed the ball between each other over and over again to distract the defense. It was almost as if the players knew exactly where their teammates would be before they knew themselves. Rebecca was passed the ball, and her mind went quiet, and her feet took over as they carried her to the goal, and she sent the ball into the back of the net.

The game continued, and the Flying Squirrel's confidence did not waver. The score was five to zero, and the girls were working like a well-oiled machine. When the second period was almost over, something terrible happened. Jocelyn went to kick the ball, slipped, and twisted her ankle. The team could tell that she was in pain and instantly ran to her side to help her get to the sideline to rest and get the ankle checked out by the team doctor. To make up for the missing talent, the rest of the team had to step up and perform even better than usual.

Despite the missing player, the Flying Squirrels blew the Hawks out of the water and finished the game with an eight to zero score. The team knew that because they had played together for so long and had practiced for this moment, they would know each other as they knew themselves and would succeed if they trusted each other and not let one missing link bring them down. Because of this teamwork, the players scored goals at a bountiful rate and won the game!

# GROWING SEASON

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Written by Sariann Uhlenkamp

## Summary

This is a story about a Mother raccoon that teaches her three babies how to grow crops in order to survive the winter, by giving each child an important task they must complete in order for their crops to grow and have enough food for winter.

**Keywords:** planting, harvest, exhausted, Gifts from Earth, seasons

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<https://iastate.pressbooks.pub/steamchallenges/?p=82>

Out in the wilderness, Mother raccoon looked at her three newborn babies. She was so excited to be able to teach them all the things she learned as a child. Planting and growing food so they can survive the Winter. The next few weeks would be hard and filled with lots of work. Mother gathered many different seeds during the night while her babies spent their days gathering water, digging holes, and planting the crops that mother brought back.

Mother would leave when the sun goes down and come back when the sun was coming up for the day. She expects her children to do their jobs. Bandit gathers the water into buckets and brings them back to the field. Rocky digs the holes for the seeds so Lulu can do her job of planting the seeds. At the end of winter and early spring, Mother knows it is time to leave and begin gathering seeds. But her children don't exactly know yet.

As Mother is returning from gathering seeds, she wakes up Bandit and says, "It's time to get moving, we need water for the crops to grow."

Bandit rolls over and says "Moooom why am I the only one that has to wake up this early."

Mother looks at Bandit and says “You aren’t the only one getting up. Now get moving!” So, Bandit gets out of the nest as mother wakes up the other two.

“Alright you two it’s time to get moving I’ve been out all-night gathering seeds and it’s your turn to dig the holes and get to planting”.

Lulu looks at her brother, Rocky and says, “Better get moving, your job has to be done before mine”.

Mother looks at Lulu and says “You better plant all the seeds I have gathered overnight while I get some sleep. When I wake up, I will go out and gather more.”

As Mother sleeps her babies do their jobs so they can ensure that they will have food for winter.

After a few weeks of planting their fields, they are finally finished.

Meanwhile, Bandit still complains that he is the only one that still has a job to do. He said, “Mom why can’t Lulu and Smoky help me with the water, there is so much to water and only one of me”.

“That’s a great idea,” says Mother. “Lulu and Smoky help your brother gather water for the crops so our food can grow before it gets too cold.”

“Ughh,” sighs Lulu and Smoky, “Why do we need to help, our jobs were to dig the holes and plant the seeds and we did that. We are done”.

Mother looks at the two and says, “You will do what I say, and I told you to help your brother.”

Finally, after weeks of watering the field, the family started to notice sprouts coming above the ground and the whole family celebrated with JOY! As the days went on, the family watered the field each day and the plants continued to grow taller and taller until they began to dry out. That meant one thing to Mother that her children were not aware of yet.

It’s Fall which is harvest time for the crops they had been taking care of all Spring and Summer long. The children thought that they could finally get some rest now from working, but their mother had additional jobs for them that they didn’t know about.

“It’s time to harvest the crops and I need your help,” said Mother.

“But it’s early and I’m tired” squealed her children.

“I will go through the rows and pick the crop off the stalk and Lulu you will gather it and take it to the nest,” said Mother.

Lulu looks at Mother and asks, “What are Smoky and Bandit going to be doing?”

Your brothers will be taking the stalk out of the ground and making more nests out of them to store the food in because not all the food is going to fit in our nest.

Smoky takes the job of building more nests as Bandit takes the stalks out of the ground.

“Why do I always get the hard jobs,” groans Bandit.

Mother snaps back, “we are all working Bandit, not just you. Now stop complaining and get back to work!”

After the entire field was harvested, cleared and nests were built, Mother looked at her children and said, “We have finished and should have enough food for winter.”

“Hurray” the children cheered! “We are finally finished!”

Mother says, “we can rest easy for the winter and get prepared to do it all again next year when spring hits.”

“I taught you how to grow food to make it through the winter and this is what life will be like for you when you leave the nest and have your own family,” Mother mentions to the children.

So, the family rests easy for the winter preparing to go out and teach their own children how to prepare food for winter as their mother taught them.

# WHERE AM I FROM?

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Written by Olivia VandeLoo

## Summary

In this story, a young girl named Lily has a talk with her Grandmother and she realizes that she does not know where she and her family are from. Her Grandmother shares her stories of her people and makes Lily promise that she will keep their culture alive. Many years later, Lily tells her people's story to her own child under the same tree that she and her Grandmother would walk to each day. The reader learns that culture is an important part of our lives and we need to appreciate how far we have come.

**Keywords:** heartfelt, uplifting, generational, emotional

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Lily was a young girl with brown eyes and black curly hair. She had a very curious spirit and loved learning about her culture and where her family came from. She lived with her mother, her father, her grandmother, and her two sisters. They lived in a small house with about an acre of land. There are lots of big, beautiful trees, grasses, and best of all flowers.

Lily loved to walk around her yard and enjoy nature. Most days her grandmother would join her on her walks. They would talk about anything and everything. Grandmother was very good at naming all the flowers; Lily was very good at asking questions.

One day in early August, Lily and her Grandmother were sitting on the back porch enjoying a cup of tea. Grandmother's was real, Lily's was pretend. Lily loved to do everything that Grandmother did. If she could not do what Grandmother was doing, she would simply sit and watch her with awe. Besides going on walks Lily loved to help Grandmother in the garden. They would plant flowers, fruits, vegetables, and herbs. They could spend all day together! Grandmother would braid Lily's hair, tell her stories about her people, and cook their favorite meals together.

While they were drinking their tea, Lily turned to Grandmother and took her time to admire her gorgeous, dark eyes and her long braid that was so neat behind her back. She looked at every wrinkle and every freckle that Grandmother had. Grandmother noticed Lily admiring her beauty, she smiled and said, "What are you looking at my child?" Lily didn't know how to answer that question. She was looking at her Grandmother on the outside but what she really wanted to know is who her Grandmother was on the inside. Lily hesitated, took a deep breath and said, "Where are you from, Grandmother? I know that you used to live with your family but where were they from?"

Grandmother smiled and looked up at the sky. She was thinking of her family that she would get to see again one day. Each time she saw a bird she thought of them. How they would always stick together and travel across the country together. "Let's go for a walk young one, we have a lot to discuss," Grandmother said, "I am going to tell you the story of our people."

Lily took Grandmother's hand, and they began to walk around the yard. They walked for a few minutes just enjoying nature. Lily couldn't help but notice the birds chirping, the bright flowers that she planted weeks earlier with Grandmother, and the swaying of the branches on the old oak tree. After walking for a while Grandmother motioned for Lily to take a seat under the old oak tree. Grandmother then sat down next to her, still silent and enjoying the sounds of the earth.

"Do you hear that child?" asked Grandmother, "The birds, those are our people"

"What do you mean?" asked Lily, "We are not birds! We are humans!"

"The birds remind me of my family when I was your age. I also lived with my mother, father, and Grandmother. We would travel together, learn together, and never leave each other behind. We are descendants of the Mohawk people."

"The who?" asked Lily confused.

"The Mohawks are a group of people who preach peace, sing songs about our Earth, and enjoy the land. We love each other and we love the Earth. You are a descendant of the Mohawk people, too!"

"How come I have never heard of the Mohawk before?" Lily stated.

"People try to make you forget where you come from. If you ask me that is the worst thing that you can do. Our history is what makes us special and different from those around us. Not everyone is lucky enough to say that they are descendants of the Mohawk people. Promise me

that when you grow older you will keep our culture alive. Tell your children about who we are and where we come from.”

“I promise Grandmother. I will never forget where we come from. Our people are special, and I will never let anyone forget that. I am proud to be of Mohawk culture, it is what makes us who we are, and I would not change that for anything,” said Lily with as much sincerity as she could muster.

Lily could see the light in her Grandmother's eyes. This statement made Grandmother very happy, and she reached over to hold Lily's hand. They sat under that tree for hours listening to the Earth buzz around them. These were the times that Lily would never forget.

Many years later, Lily took a visit to the old oak tree, this time she was not with Grandmother but instead she was with her own child, Thomas. Lily took Thomas's hand and walked out to that same old oak tree that she and Grandmother used to go to. She was silent and listening to the sounds of nature that she and Grandmother did years ago. She looked up and saw a bird sitting on a branch of the oak tree. This made her think of her Grandmother and all of the stories and laughter that they shared. She turned to Thomas and noticed that he was looking at the bird as well. She told him how it made her think of her Grandmother and of their native land. About how Earth and nature made her remember that promise she made to her Grandmother under that same tree so long ago.

Thomas, soaking in all of nature, looked up at Lily and said, “Momma where am I from?”

Lily smiled, the same way that her Grandmother did. She took a deep breath and thought about the wise words that her Grandmother told her years ago. She took Thomas' hand and told him to sit down.

“Let me tell you a story” she said, “a story that you need to promise me that you will never forget.”

Thomas crossed his heart and promised that he would never forget. From this day on, generations of Mohawk people take their children to this same tree and tell them their life story. A story that changed not only their lives but also.... the world.

So next time you see a bird in the sky or hear a babbling brook, take time to think about where you came from and what makes you who you are. Have a conversation with your family and learn about where you are from and what differences your people have made. I promise, you will never forget it.



# THE BACKYARD FOREST

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Written by Kari Weiland

Inspired by "Outgrowth-Children" in Braiding Sweetgrass

## Summary

Sarah and her dad are making a trip to California from their home in Nevada to visit Uncle Jason. He has a forest for a backyard and Sarah is very intrigued. She learns about the history of the forest and how the Cedar trees are becoming extinct. Sarah finds a way to keep the memory of the California forest with her forever.

**Keywords:** cherish, history, extinction, value, appreciate, memory, legacy

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"Dad, are we almost there yet?" Sarah asked as she was staring out the car window. "Yes, Sarah, we will arrive in 20 minutes. Your uncle cannot wait to see you!" replied her dad. Sarah was 13 years old. Her dad was taking her on a mini vacation to California to visit her uncle. She had only visited him one other time when she was 6 years old. She does not get to visit him very often because she and her parents live 10 hours away in Nevada.

As Sarah continued to stare out the window, the scenery began to appear different from the typical city view she was used to during the whole first half of entering California. "These trees are huge!" She announced as her eyes grew wide, face pressed against the window. Her dad had told her many stories about the forests of California, especially the one very close to his brother's house, practically in his backyard. Uncle Jason moved to California from Nevada when Sarah was not born yet. Even though it was a far drive, Sarah's dad went to visit his brother frequently. But after getting married and having Sarah, he could not travel much anymore.

After the long drive, Sarah and her dad finally made it. They ventured up the long driveway to

the door of the gigantic house. “Wow! This house is beautiful! Look at all of the trees in the backyard!” Sarah exclaimed. All Sarah wanted was for her uncle to tell her about the forest. “Hi, Sarah, how are you? It has been so long!” Uncle Jason asked. “I am good! I really want to learn about the trees in your backyard! They are amazing” Sarah replied.

Sarah’s uncle took her and her dad on a walk through his backyard forest. He had so much information to share. “The trees stretch from Northern California to Southeastern Alaska with several small bodies of water and mountains also included along the way. Some of these trees can be considered the biggest in the world!” Jason exclaimed. Sarah asked, “What is that stuff growing on the bottom of the trees?” Jason looked down to see what she was talking about. “That is called lichen, it is a slow growing plant that can grow at the bottom of trees and on rocks. There are so many more living plants and animals in this forest – countless mammals, birds, amphibians, wildflowers, ferns, mosses, fungi, and insects. Let’s keep walking a little bit and maybe we will see some of those things!”

Sarah was having a great time learning about the forest. “Sarah, did you know that people used to live here in the forest?” Jason asked. “What? Really?” Sarah questioned. Sarah’s dad chimed in and said, “He is right, native people of the Coastal Pacific Northwest made a living here with their families. They could catch salmon from the water bodies to eat and most of their tools they made out of materials from the tree. It is amazing how many uses a simple Cedar tree can provide for people. No part of a tree went unused.” Jason added in, “This forest is called an old-growth forest. It means that it is a forest that has reached a great age without much disturbance. The Cedar trees provided for the people, and in return, they responded with gratitude and reciprocity. Today however, the old cedars are almost gone. People want them, they will even try to find the leftover Cedar logs. There are other trees in this forest, but it is very sad to see the Cedars disappearing.”

“What happens if they are all gone?” Sarah asked. Jason said that once they are all gone, there is nothing much we can do. “It makes me sad that the Cedar trees may soon disappear. What can I do to solve this problem?” Sarah asked. “Follow me,” Jason said. Sarah, her dad, and Jason kept walking into the forest of trees, until finally they stopped. “Do you see that cone on the ground, Sarah? Go pick it up and look at it.” Sarah walked over and picked up a tree cone that was on the forest floor. She examined it, noting the details. “Is this from a Cedar tree, Jason?” She asked. “Yes! That cone fell from the nearby Cedar tree. I want you to keep this cone and take it home. You will find a good use for it,” Jason encouraged.

“I have a great idea! Can I plant this cone at home and grow a tree?” Sarah asked, enthusiastically. “Why yes, you can! Take the cone home, soak the seeds for a while, and eventually you will be able to plant it. You and your dad can do some research,” said Jason. “Dad I am so excited to take

this home! Now I can have a piece of the old-growth forest! Thank you, Uncle Jason for showing us around! I am so glad I got to learn about the history of old-growth forests! I cannot wait to come back next time!” Sarah exclaimed. Sarah and her dad returned to Nevada with the Cedar tree cone. Sarah began to research how to be successful in planting a tree from a cone. She was so thankful to have learned about the backyard forest. Now she will have a piece of it at her own home.

# THE SALAMANDER HUNT

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Written by Rylee Whitney

## Summary

Ally has just turned 12 years old and she loves animals, especially amphibians. Her parents have promised her that she would be able to go out exploring and research animals when she was older so she now gets to! On this adventure, she hopes to learn a lot and hopefully see her favorite animal, salamanders.

**Keywords:** amphibians, ambystoma, maculata, fascinated, salamander

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Since Ally was a little girl, she has always loved and remained fascinated by various amphibians, specifically salamanders. Ally's love for these animals came from her parents who have been studying amphibians since she was a young girl. Ally's parents promised her that when she was old enough, they would take her out exploring with them to research all different kinds of amphibians and if she was lucky, she could maybe find some salamanders!

On her 12th birthday, Ally got to invite her friends to go to the zoo! While she was there, she and her friends got to see and learn about so many amazing animals. Ally had such a special day already that she thought to herself: "how could this day get any better?"

When Ally got home from the zoo, her parents said they had a very special surprise for her. They told her that since she is now old enough, she was able to go out and do some exploring with them! "Ok, go get ready and all three of us will head out on your birthday adventure!" said Mom.

Ally was so excited she rushed into her room and began to pack up her exploring backpack like her parents had. She included her amphibian notebook, a pencil, and her camera to hopefully get a glimpse of a salamander.

By the time Ally and her parents decided to go searching for the animals, it was already getting dark outside.

“How will we see them?” Ally said to her parents. “Dad and I have packed up all our research equipment and a ton of flashlights so we can get a good look. Don’t worry!” said Mom.

Ally and her parents then loaded up the car and took a long drive out to their destination. When they arrived, they all got their equipment together and began their hunt. Ally and her parents began looking closely as they walked and right away they were able to find many amphibians. “You know, Ally, amphibians are very special because they actually breathe through their skin. They have to be extra careful with their atmosphere because if they aren’t they could breathe in a lot of toxins.” As they continued on their path, Ally was thinking about the type of salamander she just did some research on that she hoped to see which was an *Ambystoma maculata* salamander.

They went along on their adventure and Ally’s parents shared with her many facts about each animal they saw along the way. Mom pointed out so many different frogs that Ally really enjoyed learning about. She saw wood frogs, bullfrogs, green frogs, and leopard frogs. Mom shined a light on each one she mentioned and when she was done explaining what they were, they’d hop right along quickly.

As time went on, Ally was so happy that she was learning and seeing so much but she started feeling sad that she wasn’t seeing any salamanders. “We must be heading back home soon for dinner! It’s getting a little bit too dark to keep exploring” said Dad. Mom and Dad decided to go a little bit further and then it would be time to go back to the car.

They all began to turn back and once they reached the road where their car was parked, Dad yells “Wait! I see some!” Ally and Mom rush over and Ally is overjoyed at the sight she sees.

She shines her light on the road and she sees a bunch of salamanders crossing the road! Quickly, they all pick up the salamanders and put them back in a safe location so they aren’t harmed. Ally and her parents then notice their different colors and they try to decipher each kind.

As they are doing so, Ally realizes they forgot one salamander that is just about to step onto the road so she grabs it quickly. She inspects it with her flashlight and sees its vibrant yellow spots that resemble drops of paint and its very dark eyes. Dad joins Ally in looking at the salamander and they both agree that they have found an *Ambystoma maculata*!

Dad tells Ally that it is a female because of its size and larger sides. As they both feel the salamander, Ally takes note of its almost mushy consistency and wedge shaped head. Ally is overjoyed that she found a salamander and the exact one she was looking for. She also felt happy

that she and her parents were able to save the salamanders from crossing the road and possibly getting hurt. After discussing some more, Ally's parents decide to tell Ally she can bring the little salamander home with them.

Luckily, Mom and Dad had a jar big enough for the salamander to be safe in until they arrived at the pet store to get some things to build an environment that the salamander would be safe in back at home.

When the family arrived home and set up the new home for the salamander, Ally decided to name it "Amby" for short in relation to its kind. Her parents sang happy birthday to her and they even had some cake. Ally had such a fun day exploring with her parents and they promised her that from now on, she could come with them all the time to explore many different kinds of animals.

# LILAH'S FOREST

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Written by Danielle Winter

## Summary

This story is about Lilah and her desire for others around her, especially her fellow students, to learn about how important trees are to the environment. She believes that if people learn about how important trees are to our environment then maybe the world would do more things to care for our planet.

**Keywords:** curiosity, adventure, determination

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Lilah loved to take walks through the woods in the summer time. Every year since she was a little girl she would come and walk in the forest for hours and hours. She loved the rustling of the trees as slight glimpses of sun made their way past them. She loved to listen to the birds as they chirped mindlessly together.

One day, she was taking her usual walk into the forest and noticed a very desolate place. There was a part of the forest that had been cut down to make room for the growing town. She knew that people needed trees to use for firewood, paper, and space. However, she didn't think that it would be so much.

"There might be a better way to harvest trees more honorably. Otherwise, maybe there would be more of the forest here today," Lilah said quietly to herself. "All of the birds and other animals that I have made friends with, I let them down," she said sadly. "Next year this space will all be cut down trees and dirt."

She remembers reading a book describing how hunter-gather people with few possessions lived off the land and became an affluent society. "The Native Americans lived off the land hundreds of

years ago and were quite good at it," she thought to herself. "We get the food and supplies that we need from the earth and here we are destroying the planet by cutting down too many trees and other environmental things we do," she thought to herself.

"What would be a better alternative? And how do we get there? I think that one of the ways we can help the environment, especially forests, is by planting trees whenever we cut one down. In this way, we could learn to take better care of our environment. After all, trees give us the oxygen we need to breathe and they are very pretty to look at," she said again as she started to make her way back to her house.

When she got to her house, she went inside to find her mother. "Mom part of the woods have been cut down," Lilah said walking into the kitchen. "Yes, I noticed that the other day. I was planning on telling you since I know how much you enjoy walking in the woods," said her mother who was busy trying to prepare dinner. Lilah could feel her stomach start to gurgle. She didn't realize how hungry she had become from her long walk in the woods today.

"I wish the people knew how much I like walking in those woods. Then maybe they would not have cut them down. What if all the birds and animals disappear and I never see them again? Can't we tell the people to stop cutting the trees down and maybe do something else like planting a tree?" she asked.

"Well, Lilah, while some people do try to help the environment by relying on an alternative to help planting trees, sometimes it is not enough. It is not just changing in a policy that we need, but we also need a change of heart," said her mother.

"What do you mean change of heart?" asked Lilah. "If people could understand the benefit and the importance of things like trees, water, and the environment then they would realize that we need to take care of the planet. This is our home, Lilah and it is a responsible thing for us to."

"I want to tell my teacher about this tomorrow. I want my class to know about how important trees are and what can happen if we take too many of them down," said Lilah sliding in her chair as dinner time got closer.

"That is a very good idea," said her mother. "I think it would be very helpful to not just talk about trees, but tell everyone all the benefits and all the things that trees provide for us can help your friends to understand how important they are."

The next day Lilah went to school and told her teacher all about what she and her mother discussed yesterday. Her teacher loved Lilah's idea so much that she had Lilah give a speech to



her whole class. The students loved it so much that they started their own environmental club at the school.

# THE BAYOU

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Written by Kimberly Z.

## Summary

This is a story of the beautiful bayou surrounded by blooming magnolia trees, horrible construction projects to drain the bayou, and the red-eyed Windigo.

**Keywords:** Mother Earth, Greed, Swamp, Windigo, Soil

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<https://iastate.pressbooks.pub/steamchallenges/?p=87>

My favorite memories growing up always had something to do with Nana's house and the bayou just a few miles away. My brother and I spent our days splashing in the mud capturing toads and crawdads, and our nights listening to the orchestra of crickets and bullfrogs among the cattails and stars. Louisiana summer nights aren't like any other; the humidity and heavy sweet smell of magnolia blossoms stick to your skin, and you sweat well into the night.

In our culture, we share the land. Mother Earth has a life of its own, and she must be respected. In the bayou, I feel her presence. I connect with my native ancestors through this land. Here they lived, fought, and died, years and years before I could even speak or walk.

Nana warned us not to get too attached to that bayou, because the town council was determined to turn it into something useful. It already was useful in my opinion. Where else could you spend hours in the sun and with nature? Even the mosquito bites didn't bother me, as long as you paid them no mind and busied yourself with fishing or crawdad hunting, you won't even notice them.

That's not how the town council sees it. They look at the beautiful bayou surrounded by blooming magnolia trees and they see money. I look at the town council and see the Windigo, one heart full of ice that beats to the drum of greed and hunger. "Drain out the swamp," they say. "It's better off being a golf course or a hotel. Leesville needs more tourists, more revenue, more consumers." It

was always more, more, more with some people. They can't appreciate the beauty and value that nature brings to the table.

The day that Nana had warned about came, and the construction crews had arrived to drain the bayou. All the fish, bullfrogs, cranes, herons, mosquitos, and other wildlife would have to find other homes. Even the beautiful magnolia trees would be torn down; their roots ripped from the only soil they had ever known. Men in glowing yellow vests and hard hats began lowering a tube into the water, which sucked it up and pumped it elsewhere to be stored. But this is not what I saw. Instead of men, I saw the red-eyed Windigo drinking up all the water so fast, like he would never have enough. The thirst of the Windigo will never be satisfied, not until the whole bayou and even the whole world is gone. That was the story of old times, that the Windigo came in the winter and preyed on humans, turning them into Windigos, too. The new Windigo lives in mansions, drives fast cars, and never, ever, ever has enough.

I've thought about how to defeat the Windigo, although he always comes back. How can I keep him from eating up the bayou I'd spent sixteen summers of my life at? What softens the Windigo's icy heart, or at least chases him away? I, Kaya, must stop this. I think about how environmentalists stop forests from being cut down, or pipelines from being built. They block the progress of construction workers and keep damage from being done. I ask myself, can I do this, too? Can I cut off the Windigo's destruction?

I look at the ways that others have stopped these horrible projects, and I think about my ancestors and their peaceful but forceful way to stop things like this from happening. Together they overcame challenges, like sweetgrass blades rising from the ground. I realize that I must do the same with my own friends and family. I begin to bring up these issues with Nana, with my brother, and everyone else. I go to town council meetings, and I tell them how important that bayou is to me, my ancestors, and the environment. None of this makes a difference, they say. They still want the bayou to be a place for tourists, a golf course for the wealthy to bring in their business.

It feels hopeless, as though nobody cares about my people, who this land used to belong to, but I can't give up yet. Day by day, my bayou drains, but my determination grows stronger every day. I stand at the edge of the bayou, my heart racing as I stare down the Windigo. I smell the Windigo's foul breath, see its yellow teeth, and red eyes, but still I don't back down. "This bayou belongs to the people, to my ancestors, and to me. Stop draining it, you're destroying the home of bullfrogs, crawdads, herons, cranes, and even mosquitos." The Windigo stares back. The construction workers freeze their work, not sure of what to do or say.

"You're ruining the land, taking away its soul. It doesn't belong to you or the town council. Mother

Earth is owned by no one, we live with her, we don't claim and divide her." Tears prick my eyes. This is my last chance to save the bayou. If I can't unfreeze the heart of the Windigo by convincing the construction workers to stop consuming the bayou, another piece of Mother Earth will be lost to the Windigo.

One of the men in a blue hard hat turns to the others. "This isn't right," he says. "This is the ancestral land of the Choctaw Natives. Their burial ground is nearby, and this area is considered sacred. We can't do this." Hope springs in my chest, is this really happening? The Windigo's red eyes flicker, and I see them slowly drained of life. The greed of the town council still exists, but the Windigo is now powerless. If the construction workers won't drain the bayou, no golf course can exist. The Windigo has been defeated, for now.

# BOOK COVER COLLAGE ARTIST: CECILIA HINSLEY

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Cecilia Hinsley is a biologist and collage artist. Her art explores the cultural and scientific contexts of biotic material. She is currently pursuing a M.A.T in Science Education at Iowa State University.

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# DISCLAIMER

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