

THE SCIENCE OF JAR 17 by MattSeven

Session 1

Each summer select high schools across the nation hosted the prestigious “Sea of Life” science lab, an honor exclusive to the school’s top forty junior and senior science students. In actuality, these students were selected by a small and secret committee of teachers. Their selection criteria was also a mystery. While most of the twenty pairs held the top grades in their science classes, often a fair number of them were B students.

This is why Ronald Michault, an academically gifted seventeen-year-old aspiring scientist, groaned upon learning he’d be paired with Kylie Ariatta for the summer session. Ronald was one of twenty-three returning seniors — an honor he felt he’d earned. As far as he was concerned, the chubby red-headed junior must have been the committee’s charity pick.

It wasn’t that he found Kylie particularly odd, offensive, ugly, or dumb. What caused Ronald’s resentful confusion was much more challenging: he would be forced to work with someone with no remarkable qualities whatsoever. She evoked neither interest nor sympathy. In the mental vault of high school memories, Kylie would be the nameless, faceless body next to the person he really wanted to talk to.

Each of the twenty student pairs stood at their assigned table in the school’s cutting edge science laboratory. Although the summer sun glared off the floor along the eastern wall of windows, no one glanced at blossoming trees or drifting clouds. This first of two sessions was one of the most exciting moments of their young lives. The anticipation washed away every other care.

Dr. Joan Möettingen, a science teacher at the school for ten years, made her way to the front of the laboratory. Scanning the room for a moment, she pushed the button that pulled black shields slowly from the ceiling, and locked them over the windows with an airtight seal. As the room darkened, dim lights shone above each table. Dr. Möettingen began her introduction standing in front of a large video screen.

“As you all know, you are here to reproduce the pioneering work of eminent scientist Dr. Manuel Johnson. Dr. Johnson created the first inorganic medium that numerous mathematical models conclude will one day generate and sustain an evolving ecosystem. In other words, if you do everything correctly, then at the end of six weeks you will produce a jar of muck.” The students giggled on cue, and Dr. Möettingen went

on to explain their goal was to produce a four-liter jar of material containing unique properties. Properties that Dr. Johnson predicted would produce life. However, his specifications were held top secret. To everyone's knowledge no jar had ever fully met the criteria. It would be easy to dismiss the Sea of Life experiment altogether if not for the fact that almost all of Dr. Johnson's theories had already been proven correct across thirty years of chemistry research.

"Of course," she continued, "Dr. Johnson died eight years ago in a vehicular accident on the way home from this very experiment you are about to begin. Each Sea of Life laboratory contains exactly what was found at his lab the night he died, including a copy of his notes. These scribbled lab notes seem to represent a personal shorthand for his process. He felt the power in this particular project was too great to be properly documented and possibly stolen. He kept the process in his head. Unfortunately."

The National Department of Science Education has been conscripting students to replicate the experiment for six years, and in that time more than two thousand jars contained patterns that approach Dr. Johnson's predictions, representing approximately nine percent of all attempts. These have been selected for ongoing monitoring, but none of them actually fulfill his vision. The department now presents you Sea of Life high school candidates with Dr. Johnson's instructions with the actual chemicals redacted.

As your efforts produce more near-misses, we hope to refine the increasingly modified instruction sets offered to universities and professional labs. If you're accepted into a public university science program, you just might participate in those efforts, with more stringent success criteria. Patterns found across all those academic and professional institutions inform government lab experiments. This tiered method brings us closer and closer to a process we hope will one day yield a thriving ecosystem from inorganic material. This technology would be invaluable as we consider colonizing other worlds. The survival of our race may one day depend on it.

Due to his unexpected demise, we only have Dr. Johnson's rough, handwritten notes. We know the chemistry he predicted, we just don't know how to interpret these instructions precisely. This is good news for you, young scientists. Because as long as you follow basic practices, we don't know how to define a mistake at your experimental level."

Dr. Möttingen pointed to the stack of instruction sheets and Kylie jumped onto the forming line before Ronald said a word. "And so it begins," he thought with a sigh. He looked around the room, and mentally ran through the standard lab procedures.

"All the materials you will need are at your table. You're all experienced with biosuits and understand basic sterilization procedures as part of your school curriculum, so I

will not review those. You will only get a certificate of completion if your jar meets minimum criteria.” This certificate could make the difference in admission to a top college program, and was considered a sign of a promising scientific career. Ronald was certain he and his lab partner had executed the instructions adequately last summer, yet their jar had not been approved. He was determined to get that certificate this year, Kylie or no Kylie.

She returned with the instruction sheet containing the same procedures Ronald had memorized last year. He felt his chest get tight.

“This looks really simple,” Kylie said. “Or ridiculous. Yeah, it’s either simple or ridiculous.”

“The steps are vague. They’re basically just his outline. All the little variations in the way people do things will result in a slightly different process. The lab cameras capture everything. This way we have a record of someone stumbling into the right process if one of the jars produces life ten years from now. Heck, we could be on our way to making livable planets! Do you understand the implications?”

“Yeah. I get it,” replied Kylie.

“Kylie, I...I really want this certificate. It means a lot to me. Can we please just work together?”

“Sure. Follow steps. Make a swamp. Download certificate.”

“That’s it.”

Station by station, the students retrieved their biosuits from the south wall and sealed themselves in as the teacher reviewed the safety and emergency procedures. Each suit had a panic button, if necessary, and a two-way com unit. This allowed a student to hear the instructor and to communicate with their partner. With all forty students finally in their unflattering suits, Dr. Möttingen retreated behind the control room’s glass window. The lab’s airtight doors made their final clunking sound before her countdown started in the tiny speakers in each suit. The vacuum lab’s high technology had been tested and revised over ten years, then certified by the national Parents and Teachers Association before it was approved for school use. Of course, that didn’t mean everyone was completely at ease with it.

“...three, two, one...Sterilization.”

The anti-contamination system kicked in with a loud whoooosh as low level radiation blasted the room. Ronald had grown immune to the sound of rushing air, but noticed

several jittery junior students as various gases were pumped through the room in stages. While the air released from the room, he could still hear Kylie through her suit, humming the tune to Star People. A couple of boys at a nearby table started dancing with each other, their hip-holstered air tanks swaying to a silent beat.

“Enough with the lewd gestures, Gary,” Dr. Möettingen’s voice traveled through everyone’s suit. The dancers’ heads dropped and they dragged themselves back to their table.

“All suits are reporting no errors. So raise your hand or hit the panic button if you’re having any problems. Vacuum initiation in ten, nine, eight, seven...”

No one moved. Ronald listened closely to his suit for leaks as the countdown hit zero. He heard the metal walls creak under pressure until there was only the sound of his own breathing.

“Full vacuum.” He kept his breath shallow to enjoy the dead silence.

Between the radiation, the gases, and now the vacuum, the room was as sterile as it could get. Kylie tried to make eye contact with Ronald, who avoided making eye contact with Kylie. She pressed the button for suit-to-suit communication, and their radio lights turned blue, indicating they were linked up. “Do we start now?” Kylie asked.

“I got it,” Ronald replied, moving toward a bag of water. Kylie moved to the sealed ingredient packs at the other end of the table, which were typically referred to by their color code.

“Mix [red pouch] and [yellow pouch] with water,” Kylie read aloud.

“I know. I read it,” Ronald said, peeling open the bag of sterilized water. As Kylie reached for the jar and the red pouch he yelled, “No, no, Kylie, no!”

“I’m mixing the red and the yellow. Then you’re pouring the water in, right?” Her hands opened the jar, then poised to pull the red pouch’s tab.

“No,” he insisted. “It says we mix them with water. So you put the water in first, then mix them in.”

“That’s not how I read it. Is that how you did it last year?” Ronald and Kylie looked around to see what other people were doing. Nearly everyone seemed to be pouring water into the jar first.

“See?” said Ronald. “Water first. Then the yellow and red packets.”

“OK, the *first* thing mentioned is the red packet,” said Kylie. “So we put that in. *Then* the yellow packet. You can put the yellow packet in if you want. I don’t care. Then we mix them together. I guess we shake up the jar with the powders inside? Then add the water. Water is the last thing in the instruction.”

“But that’s...no. It’s a basic water mixture. Can’t you see that?”

“Is that how you did it last year?” Kylie asked.

“That’s not the point!”

Ronald held the water bag as his other hand clenched into a fist at his side. Kylie spoke in soft tones, and her hands moved between them in slow, soothing strokes in the air. “OK, Ronald. OK, please, just listen. If you’re right, and it’s all about the water mixture, then it won’t matter which goes first. Right? If I’m right, then you can pour the water in when I’m done and they’ll all mix just fine. Right?”

“Why did they have to pair me with Kylie Ariatta?” Ronald thought. “My rage has the power of a thousand suns.”

“Ronald?”

“Kylie, so help me, if you jump ahead of me again, I’m reporting you.” She held the packets above the jar without a word, waiting. Ronald still held the bag of water at the opposite end of the table, thankful that the vacuum prevented anyone from hearing their argument. Still, several of the nearby student pairs had stopped what they were doing to decipher Ronald’s body language.

“Fine. Do it. Whatever. I guess it doesn’t really matter,” he said.

Kylie poured the red packet into the jar, then the yellow, and closed the lid. Then she began dancing with the powders jumping and swirling in the jar. “Science dance. It’s a science dance! You can’t get mad about a science dance!”

Ronald put his hand to his chest. “You look like you’re about to fall in every direction at the same time. Please...Kylie, I’m begging you.”

“Alright, I’m done,” Kylie said after thirty seconds. She shoved the jar toward him as her visor fogged up for a minute. He quickly poured the water. By the time he could see her eyes again, the jar’s powders had settled to the bottom. Ronald held the instructions.

“Stir with iron rod, include vibration,” Ronald said without even reading the paper. He pulled the iron rod from its plastic wrapping.

“Which do you want to do?” asked Kylie.

“What?”

“Do you want to do the stirring or the vibration?”

“Kylie...that’s— What are you talking about? You shake the iron rod as you stir.”

“That’s what stirring *is*,” Kylie replied. “I mean, what’s the point of mentioning vibration if you’re obviously stirring?”

“Look, I’m going to stir with the rod. Don’t touch me or the jar. OK? You’re making me tense.”

“Okaaaaaay.”

Ronald moved the rod through the water in circles, shaking it slightly to avoid another argument.

“You’d think he’d have some kind of mechanism to vibrate the jar,” said Kylie. She tapped her hand on the table, quickly ramping up to a vigorous beat as Ronald stirred. “How long do we do this?”

“It doesn’t say. Last year I waited until nine of the groups had stopped stirring, so our jar would be closer to a statistical average.” He looked around. “I’ve been keeping an eye out, and so far only seven have moved on.”

“I say keep it going to the end.” Kylie’s hands slapped the table to an unknown tune. Ronald thanked the gods of science he couldn’t hear any of it.

“Let’s compromise. Fifteen,” he replied. A number of students noticed Kylie’s performance, but nobody mimicked her interpretation of “vibration.” Although Ronald thought the drumming was a dumb idea, he conceded that stirring longer seemed more helpful than harmful. He finished stirring and sighed upon realizing Kylie once again held the instructions.

“OK,” she started. “I think we add the orange packet, then—“

“What does it say? What does it actually say?”

“Orange Packet.”

“That’s right. The question is what to do between that step and the next.”

“I’m guessing we dump the orange packet into the jar, then...OK, after the orange packet it says ‘Bring to the light, spin five minutes.’”

“Last year most people stirred in the orange packet. Because we’re already stirring and then it just says ‘orange packet,’ as if we stir that in next.”

“I don’t think so,” said Kylie. “It’s separate from the stirring instruction. I think we just drop it in and seal the jar.”

“Well it doesn’t really say anything, does it?” Ronald asked. “For all we know he just stared at the orange packet and never put it in.”

“Fair point. But let me have this one,” Kylie smiled.

“No.”

“What did you do last year?”

Ronald silently wondered how and why the historically inert, uninteresting Kylie had become such a pain in the ass. He reflected that he was not Mr. Popular, but he was liked well enou—

“Ronald? What did you do last year?”

“We stirred in the packet, Kylie. We stirred it in! I stirred and it didn’t work. Is that what you’re getting at?!” He pounded the table in the airless room and found the silence completely unsatisfying. Everything seemed so much easier last summer.

Kylie spoke softly again, as if talking to a gun-wielding toddler. “I’ll...I’ll tell you what, Ronald. It probably doesn’t matter at all. Tell you what. Why don’t you let me stir ever so gently, and you can pour the packet in. OK? Then we’ll count to ten, and I’ll stop stirring. Alright? It’ll be our own special process. This way, you get the stirring you want, but maybe we don’t agitate the water too much. Alright? How does that sound?” She stared at him in silence.

“I’m sorry I freaked out on you.” He sounded deflated. “I just really need this to work, Kylie. This is my last chance.”

Kylie picked up the glass rod and held it over the jar, waiting. Ronald took the cue, grabbed the orange packet, pulled the tab open, and poured as Kylie stirred. Watching her wasn't as satisfying as when he stirred, but he held his tongue and let it be.

"Are you counting?" Ronald asked. "I don't hear you counting."

Kylie pulled the rod out of the jar, carefully capped the lid, and clapped at Ronald. Ronald slowly pointed beside Kylie, and when she looked around, she saw the other nineteen student pairs staring at them in silence. "Let's bow," said Kylie, who bowed vigorously before pointing at Ronald, who managed a slow, embarrassed bow.

"I see you're finally done," said Dr. Möttinger through the suits' comm system. "Air pressure will now return. Do not take off your lab suits until instructed." Ten minutes later, everyone's suits were off. There was one more step before they could leave.

"'Bring to the light, spin five minutes.' Ronald said.

"Is she going to open the window shields?"

"What? No. Look." He grabbed the jar and lifted it up to their table's overhead light.

"That doesn't make any sense."

"Remember this lab is modeled after his lab. It was a windowless room." He continued holding the jar near the overhead light.

"Right, so you would have to bring the jar to where the sunlight was. That's why it says 'bring' and not 'hold.'"

"How do you know?"

"We can do whatever makes sense to us, remember?"

"That's not exactly..." Ronald put the jar on the table, sighed, and stared off. "I don't think we're allowed to take it out of the lab."

"Well, we don't have to. She can just lift the shields." Kylie walked away, straight to Dr. Möttinger. Ronald looked away, hoping he would not be implicated in the scheme. He watched her talking and gesturing. He watched Dr. Möttinger's confusion. She looked at Ronald, who just shrugged his shoulders.

Kylie returned two long minutes later. "I got her to admit there were no rules about taking the jar out of the lab. She said we could take it to the window in the hallway if

we wanted, but only for five minutes. Let's go." Kylie grabbed the jar and walked off.

"Dammit, Kylie," Ronald muttered.

Ronald was thankful the hallway's window wasn't far from the lab door. Kylie had put the jar on a narrow bench and was slowly turning it when he approached. He sat beside her quietly for several minutes. "Sunlight is pretty intense energy."

"It feels good being out here in it, doesn't it?" she smiled. The sunlight bouncing off Kylie's pale, freckled skin seemed to brighten the entire hallway.

"Yeah," said Ronald. "It actually does." But was this destroying his chance for the certificate?

Session 2

Having left the jars for a week, Ronald hoped to establish some control of their second session by arriving early, only to find Kylie at the lab table staring into the jar.

"You haven't moved it, have you?" he asked.

"No, I didn't move it. I follow the same directions you do." She looked at him in the eyes and sighed. "I want this to succeed, too, you know. Why are you so tense all the time? It doesn't help anything. Just make the best decision you can in the moment, and see what happens. I do a lot of baking and I can tell you things don't always go how you think it should. Even when you follow the directions."

"That's not how I operate. Kylie, I want to be an organic chemist. You have to be methodical. Deliberate. I can't improvise everything and see what happens if I'm going to graduate with honors from a top program. In my lifetime we'll be colonizing the moon, and I want to be part of that. "

"OK, but where am I wrong?"

"We...we just have different ways of doing things. Look, we only have to get through this session. We can do this. I promise I won't melt down, and you promise to slow down and work as a team. OK?" He'd rehearsed that line a few times on the way to the lab.

"Sounds fair," Kylie smiled.

“Session two is easy. After the lecture, we should be out of here in thirty minutes. Maybe less.”

The teacher for session two was Roger Rafsanjani, widely regarded as the school’s most popular science teacher. He lectured for nearly four hours on the burgeoning field of terraformation, which combines particle physics, aqueous and terrestrial chemistry, and microbiology to transform barren landscapes into thriving ecosystems. Although their civilization had begun experiments on a few large asteroids, terraformation was primarily a science of complex computer simulations. There was no proven process for terraforming, and some therefore considered it purely theoretical. “Even so,” concluded Mr. Rafsanjani, “we are likely to discover the primary processes of terraformation in your lifetime. You should all be very excited, as this reflects a major milestone in our civilization’s advancement. We may soon have the power to sustain our species indefinitely.”

The teacher reached for a stack of instruction sheets and walked to each table, placing the page face-down. Ronald and Kylie both maneuvered to be close to the sheet, and prepared to quickly grab it.

“You are about to resume Dr. Johnson’s outline. What you’re doing today is important, so I strongly encourage you to be thoughtful about your choices. As usual, the instructions are so simple that they’re not scientifically operable. However, they provide you promising students valuable experience in confronting the basic issues of applied science. You may turn over the instructions, and leave when they’re complete.”

Ronald’s and Kylie’s hands slapped down onto the sheet instantly. They looked at each other smiling. “Kylie, I have seniority.” It was a lame effort, and he knew it. Kylie inched backward to stand between Ronald and the jar, which now looked like soup that had been spoiling for the week. Beside the jar was a syringe with ten cubic centimeters of blue liquid. Kylie stretched to pick it up and let go of the paper. “It’s all yours,” she said.

“Remember he said to think about it, right? Remember, we’re doing this together,” Ronald negotiated.

“Of course. Read it.”

He didn’t bother to turn the paper over as he said, “Inject [blue liquid].”

“Really?”

“Yes. The jar lid has an injection port.”

She gave him a blank look, then sighed. “I can see that. How do they know it isn’t twenty or a hundred cc’s that we need? I mean, we have a single syringe of blue liquid. Do we just empty the whole syringe into the jar and go home?”

“Well, there are two more instructions.”

“What did you do last time?”

“We followed the instructions. We injected the blue liquid.”

Kylie tilted her head and squinted her eyes at him. “Of course. All of it?”

“Yes, that’s what almost everyone does. They figure the national science people know more than they’re saying. They give you a syringe this size. Maybe there was a loaded syringe in Johnson’s lab. Nobody really knows why they fill the syringe to ten, or anything else. So how would you decide?”

“Well,” Kylie started, “first I decide that the majority of jars don’t succeed, and the majority of jars use the whole syringe, so maybe we shouldn’t do that.”

“Believe it or not, that was exactly what I’ve been thinking since last year.”

“Really?” she smiled. “Even though my logic skipped a few steps?”

“Yeah,” he smiled back. “Let’s use one cubic centimeter per liter — four cc’s. It’s simple, so why not?”

“Works for me.” Kylie sterilized the needle with the small burner, then looked Ronald in the eyes as she handed it over in an obvious gesture of good faith. He injected four units.

“What next?” asked Kylie.

“Agitate.”

“That’s it?”

“Yep. Agitate.” He moved toward the jar.

“What are you doing?”

“No offense, but I’m obviously the stronger person. I think if we’re going to risk—“

“Back away from the jar,” Kylie threatened.

“Why?” Ronald smiled. “It’s only logical.”

“It says agitate the jar, not perform a gymnastic routine with it. Besides, I trusted you with the injection, now you should trust me on something.”

“All right. Last year we jostled it a bit and let the water slosh around.”

“I propose bobbing it up and down like a baby. It’s about the right size and weight.”

“That sounds wonderful.” His face turned serious. “But think about how horrifying it would be if you dropped it, Kylie. Not only for me, but for your future children, if you ever have any. How could you live with that kind of foreshadowing? Seeing that jar break in your head, over, and over—”

She tilted her head. “Nice try, weirdo. I’m not going to drop it.” Kylie took the jar from the table, held it to her chest, then bobbed up and down as she eyed her partner suspiciously. Ronald kept his eyes on a timer app to avoid freaking out about Kylie cradling his future. After a few minutes he peered into the jar and said, “OK, I think that’s good. Look you can see little floaty things swirling around. That wasn’t happening before.”

Kylie returned the jar to the table gently with an exhale. “Wow. Sometimes I feel stupid. Like I don’t get how this project is such an honor.”

“Well, the next step is the hardest. You’ll feel plenty stupid any minute now.”

“How hard could it be?” Kylie wondered.

Ronald waited for the jar’s contents to settle and stared into the jar. “It looks different from last year,” he said. “Maybe we’re on to something.”

They both watched small globs move around the jar, with white specks contrasting against the dark gray liquid.

“Of course we are. We’re gonna get you that certificate, Ronnie boy.” Kylie sighed. “I still don’t know why I’m here. I just wanna run a bakery.”

“All right,” said Mr. Rafsanjani. “I know you’re all eager, so please attend to your jars as we begin. Take a minute to reflect on how different it appears from the jar of water you knew in session one.” Ronald grew hopeful. The jar definitely seemed more active

than last year.

A minute later the teacher broke the silence. “You may know this is considered the most difficult step of the summer. That’s because Dr. Johnson’s final scribble rises to the level of ludicrous. I’ve decided to read it aloud to you. Dr. Johnson wrote, ‘Love Creation.’ We don’t know if this was a personal reflection, or an instruction, or what. But that’s your prompt. You will then return in two weeks to see what has come of your jar.”

Ronald had been reading about this final instruction since last summer. Scientists of all nations pored over Dr. Johnson’s work and personal writings, and most agreed the “Love Creation” bullet point was worthless. Some had translated it into Chemistry formulas understood by a relative few, but certainly within Dr. Johnson’s expertise. “Love Creation” was left in the instructions mostly out of respect. Even so, Mr. Rafsanjani spent twenty minutes discussing the most common interpretations of this notation. Some seemed reasonable to a high school chemistry student, and others ridiculous, leaving the group confused about how to proceed.

Kylie turned to Ronald. “You were right. I have no idea what to do.”

“Just love creation. Obviously.”

“Uumm. Yeah.”

“Last year what we did was...well, uh...hugged the jar.”

Kylie looked at the jar of muck. “You hugged it? Maybe my baby cuddles already did that part.”

“Maybe. Some people just stare at it. I mean, you love the thing. Nobody knows what he’s talking about. Like he said, it might not even relate to an action. Then again, maybe it’s about the average temperature of a human body heating the fluid just right. Or our electromagnetic field? Some people just project loving thoughts.”

“How long did you hug it?” She giggled, pulling out her phone. “You need to do it long enough for me to make a video. Here, lay on the table in a seductive pose, and pull your shirt down on one side to expose your shoulder. There’s a growing market for science lab porn, you know. You could be the next—“

“I’m open to a better idea, Kylie,” Ronald scowled. Trying to dispel the thought of Kylie gawking at guys wearing only lab coats, he quickly redirected to Mr. Rafsanjani, who seemed ready to give the final lecture of the summer.

The last thirty minutes of lecture relayed Dr. Johnson's scientific philosophy and other information about him. For some reason it struck Ronald that Dr. Johnson was fond of saying, "We're all in this together."

"When you're done," said Mr. Rafsanjani, "you are dismissed. We will return here in two weeks to test everyone's jars. Good luck."

"I don't think it's going to hurt anything to hug it again," Kylie said.

"OK. You want me to time you?"

"Well, I did get to burp the baby. You wanna give her some love?" Kylie put her phone away.

Ronald let out a long exhale. "How long?"

"Let's say ten minutes?"

"Fine. I'll even project loving thoughts while I'm at it," he said. He put his arms around it and began the sweet, sing-song baby talk, "I love you, my little jar of shit. I bet you smell awful in there. I'm so glad there's a lid on you. Yes I am. Yes I am."

When Ronald was done, he and Kylie then glanced over the other lab tables. Most students hugged their jar for a period of time, then the partners left the lab. Some stared at the jar, projected loving thoughts, others pressed their mouths against the jar to speak loving sentiments, hoping the acoustic vibration was somehow helpful.

"If he truly loved his work, then he loved that jar like nothing else," Kylie mused.

Ronald hadn't realized it, but this was exactly what he needed to hear. She'd tipped the fight in his head, and his course became clear. Maybe he'd spent too long bonding with the jar. Maybe he was desperate. "I want to stay a while." he said. "You can go."

"All right. If you say so. You sure you're ok with it?"

"Yeah," he said bobbing up and down. "I'm good."

Ten minutes later, the last student stopped staring at the jar, then went to talk with Mr. Rafsanjani at the front of the room. This was the moment Ronald hoped for. It was a gamble, at best. Ronald kept his back to them as he held the jar to his chest and walked quickly to his car. He plopped into the seat muttering to himself. "Don't think, Ronald. Do Not Think. You'll just fuck it all up. Keep going, keep going!" He buckled the jar in the passenger seat and drove away in a blur. When he arrived home he

moved quickly to his room, placed the jar on his desk, and went about his day.

It took a couple of days for Ronald to trust that the school would not be banging down his door. When he could finally relax with the jar, he stared in awe for half an hour, appreciating every grey wisp and every brown speck. He felt its infinite possibility. “You really are amazing,” he concluded one evening. “You could become a seed of life, a world of your own. Or you might become evidence his process doesn’t work at all. Can you imagine Dr. Johnson pushing himself through so many experiments like this, for decades, never knowing what would happen next? How did he live like that? Never knowing if all the hours added up to anything.”

Throughout the week Ronald found himself spending more time talking to the jar, and began pretending it was a good friend. He played music, commented on online videos, shared his thoughts about life, and even confessed his fears about his future. He began to look forward to his evenings with the muck of infinite possibility. Pouring his heart out as he stared into its cloudy unknown, night after night, changed something within him. In the last days before the Sea of Life jar would be evaluated, Ronald’s heart finally felt peace with the life he was creating — uncertainty and all. “Even if I do become a scientist, my life could just be a long experiment. A long, drawn-out “maybe.” I guess we’ll just have to see. Won’t we, Jar Seventeen?”

On the night before he had to return the jar he ate dinner with his family, watched a game with his Dad, and returned to his room. He laid in bed looking at the cloudy jar. “Well...here we go.” he said aloud. He knew his idea was crazy, but nobody would have to know. Ronald stripped down to his underwear, pulled the jar to his chest, and turned off the light. A warm, gentle breeze passed the screened window, stroking his skin and coaxing long peaceful breaths. Just before he fell asleep, he whispered, “Here’s to you, Dr. Johnson. Loving creation.” Moonlight shone down on both of them, and soon the song of summer frogs blended with Ronald’s snoring.

I, Xymander, messenger of The Elders, inscribe these stone tablets for future generations. To reveal a tale the ancient ones passed down through the millennia.

Before the beginning, there was only the void — a silent darkness. No gods or devils. No heroes or epic tales. No oceans to cross, no villains to vanquish, no gentle word or loving embrace. All That Is was yet unborn.

Then came the pulse. From where, only The Elders know. Through the vast, lifeless expanse it moved. Wub-Whoosh... Wub-Whoosh... Wub-Whoosh... Wub-Whoosh...

Over billions of our years, its divine energy stirred the primordial elements, igniting countless candles in the darkness. The starry heavens you know. Their glow revealed

our universe, and it was beautiful! This was the beginning. Our beginning. The birth of all we know.

“Ronald? What *is* that thing in bed with you?!” His mother tapped his bare shoulder.

Through a sleepy haze, Ronald felt the smooth glass against his chest. The bedroom scene seeped slowly into his awareness, until the bright sun revealed a horrible reality. “Hmmm? No, it’s fine...I’m...Wait...Mom!” In a flash Ronald pulled the blankets over the jar and his underpants.

“What are you doing in my room?!” His heart pounded as he thought, “Dammit, I forgot to lock the door!”

“Don’t you have to do the science thing today?”

Ronald looked at the clock to find he’d overslept by more than an hour. There wasn’t a minute to spare.

“Please, Mom, I gotta get out of here. Please! Go! Please! Thanks, but I’ve got to go!”

“Are you going to be in trouble?” His mother’s feet shuffled slowly toward the door, as he readied his hand to toss the blanket.

“Mom!”

“All right, I’m leaving.” She looked over her shoulder confused, then closed the door. Before heading downstairs she yelled, “I love you, my strange son. Good luck!”

“Get used to it,” she heard Ronald say to himself.

Twenty minutes later, everyone in the lab watched Ronald’s weather-beaten green car swerve into a parking space. He walked quickly to the building entrance with one arm wrapped around the jar, attempting to act natural. After entering the lab, he stood frozen as nineteen students and Mrs. Jennifer Martinez stared at him. Not entirely silently. Denny Gupta struggled to hold back his laughter, and failed. He looked at Ronald and whispered, “You are so fucked.” Everyone giggled and gasped before Mrs. Martinez loudly proclaimed, “That is enough.”

Ronald turned pale and walked slowly toward the table, only mildly irritated with Kylie’s buoyant smile. For some reason he felt grateful to have her here. He stood quietly, waiting for Mrs. Martinez to continue as he set the jar on the table beside his amused lab partner. As Ronald took in a long, slow breath all the tension flushed out

of him. He awaited judgment with a strange calm. That's when he noticed Kylie's eyes wide with shock.

"Mr. Michault, do you have an explanation for removing your jar from the lab?" the clearly irritated teacher asked.

Ronald, visibly trembling, tried to get words past his dry mouth. "Um. Well, Mrs. Martinez. I know this isn't standard protocol, but Dr. Möttingen admitted there weren't any rules against it. And, well, we've been encouraged to take chances. You know, try different things."

Mrs. Martinez had to give him both points. It was always believed that the materials were kept in Dr. Johnson's lab. But it wasn't actually spelled out in his notes, and this school had never had a reason to issue a formal instruction against it. The students had been given a lot of leeway and were encouraged to use their imagination, so it seemed unfair at this stage to punish Ronald for his bold move. Besides, the jar would certainly be tossed out, anyway.

"I want you to assure me and your partner that you haven't opened the jar or added anything while it was away from the lab." Mrs. Martinez made her way to their table. Her eyes went wide as they explored the jar. She froze in place.

"I'd never sabotage my own experiment," said Ronald. He noticed everyone gawking at the jar, realizing the morning rush hadn't given him a moment to examine it. He looked down to see glowing specks swirling within what looked like jovian clouds.

"Everyone but Ronald and Kylie are dismissed, and I mean right now. Leave your jars on the table. You'll be notified of the test results." Disappointed moans, excited gasps, and a stray "What? You can't be serious." Mrs. Martinez pulled out her phone and pointed at Ronald and Kylie as everyone reluctantly cleared the lab. "You two stay right where you are. Do not move, do you understand me?"

"Yes, Mrs. Martinez," they said in unison. Ronald stared at the floor trying to work out what had happened.

The teacher appeared frustrated as she spent a couple of minutes pushing buttons on her phone. She turned to the two stunned students. "Fucking automated system. Can you believe—" She put up her hand, interrupted by the microphone in her ear.

Mrs. Martines rolled her eyes at her phone and said loudly "CODE ORANGE!" She turned to Ronald and Kylie again. "Can you believe this is actually a hotline? How many ways do I have to say I need a live human be—"

“Oh, hello! Yes, finally! Yes, this is Jennifer Martinez at lab CXB3455. I have a code orange.yes it’s an M Class.” After scrunching up her face and holding her breath a few seconds she closed her eyes and said, “Yes! I’m sure!”

Jennifer again turned her attention to Ronald and Kylie and was clearly trying to sound calm and comforting. “There’s nothing for you to be afraid of...However, you will be here a while. Just try to relax and enjoy the drama.”

“Yes. Yes, I’m still here. What happens next?” She looked at her phone screen a few seconds before resuming the conversation. “Yes, almost exactly like that...Listen, does this sound like a prank call to you? So help me, if you don’t move this to your supervisor I’m going to pour jar seventeen down the sink.” She shook her head at the students and mouthed “Never, I swear.”

“Who knew Martinez was such a badass?” Kylie whispered.

“I guess people will surprise you.” Ronald smirked even though he started getting nauseous. “I promise I didn’t put anything in it, Kylie. I don’t think we’re going to get in any trouble.”

“What happened to working as a team, Mr. Certificate? Maybe I wanna be in on the joke, here.”

“There’s no joke,” he started laughing and looked into Kylie’s eyes. “I just felt like I had to do this. You should understand, since you’re the pain in the ass who pushed me out of my box.”

Thirty minutes later the three of them heard helicopters landing in the school’s football field. The government haircut in the charcoal suit introduced himself as Mark. “Don’t worry, kids, everything is going to be just fine, he smiled. He offered Ronald a handshake as six men in black with assault weapons and bullet-proof vests surrounded the jar. Behind them a small entourage of suits entered the room and stood along a wall, seeming to wait for cues from Mark. He plunged a hi-tech syringe into the jar’s injection port, and its three tiny LED’s blinked orange. Then he looked at Mrs. Martinez. “That’s why they call it code orange, by the way.”

“We’ve already reviewed the video footage, Ronald. You two have some kinda chemistry don’t you?”

“Without Kylie, this would just be a jar of mud,” Ronald said as he turned to see tears running down his partner’s face. “Why are you crying?”

“Ronald, look around!” Kylie laughed wiping her eyes. She looked at Mrs. Martinez,

who tried to move toward Kylie but was immediately blocked by one of the armed men.

“Mrs. Martinez, you’ve been a great help. If you’d please stand against that wall, we’ll be out of your hair in just a few minutes,” Mark said. He nodded to a female agent, who walked over to interview Mrs. Martinez. Then Mark turned to Ronald.

“So. Is there anything you want to tell me about jar seventeen, Ronald?”

“Do I need a lawyer?”

Mark laughed, a bit embarrassed the genuine smile clung to his face. “Well, it wouldn’t matter. But no, sir. You won’t need a lawyer. Not right now, anyway. You’ve either just made the discovery of the century, or you’re about to piss off a lot of people. I happen to think it’s the former. As I say, we’ve already seen everything you’ve done here, including your theft of the jar. So I will ask you again. Is there anything you want to tell me about jar seventeen?”

“The Lord works in mysterious ways,” Ronald said, proud of his word play.

Mark leaned over to whisper in Ronald’s ear. “What no one knows, Ronald, is that Dr. Johnson took the jar from his lab for a few days. He died on the way home after returning it. And that jar looked very much like your jar. Most important, my new colleague, is that no one knows what Dr. Johnson did with the jar at his home. Do you understand what I’m telling you?” *Of course they have a jar. They just don’t know how to replicate it.*

“Yes, sir. I swear I have not tampered with the contents of the jar. It stayed sealed the entire time.”

Mark looked at Kylie, who seemed to be staring intently through a cascade of red hair. “What about Miss Ariatta, here? Have you two been together with the jar in the past 2 weeks? Has she influenced you?”

“This is the first I’ve seen Ronald since the last lab,” Kylie said - a little loud.

“Don’t say another word about it until we chat at National Science Administration headquarters. Like it or not, Ronald, you’re going to be with us for some time. Before it gets fun, it’s going to be an uncomfortable bureaucratic nightmare. We’ll call your parents from the chopper. They’re probably wondering why your house is under quarantine.”

Mark guided the now-queasy student toward the door. The men in black placed the jar

into a cushioned black carbon box, and followed close behind. As he passed through the lab doorway, Ronald fought back tears by yelling, “You’re going to be a fantastic baker, Kylie!”

“And you’re already an amazing scientist!”

And they were.