

# unboxed

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LEARNING IN SCHOOLS

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*Above: A student makes clay animals in art class at High Tech Elementary Point Loma.*

*Cover: Oysters gathered from San Diego Bay by eleventh grade students in Kalle Palmer's Biology class at High Tech High.*

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# Welcome

A few days ago I went to High Tech High Chula Vista, where I used to teach. It's a trip that always takes longer than I intend, because there are so many people I want to see. I was just saying goodbye when someone burst out of a classroom and shouted "Dr. P!!!!!"

It was a former student who I hadn't seen since she was in tenth grade. She was back because she's now working as an academic coach at the school.

It's always a pleasure to see former students, but there's something particularly magical when former students come to work in our schools. I've now taught two people both as high schoolers and as teaching residents in our credentialing program, and I hope to teach many more. There are all sorts of reasons that it's a "good thing" to have people from our school system choosing to return as teachers, but the reasons that it fills my heart to see them have nothing to do with institutional strategy. It's seeing awesome kids grow into awesome adults, and being able to reconnect with people who you fleetingly got to know during a critical moment in their lives. And it's



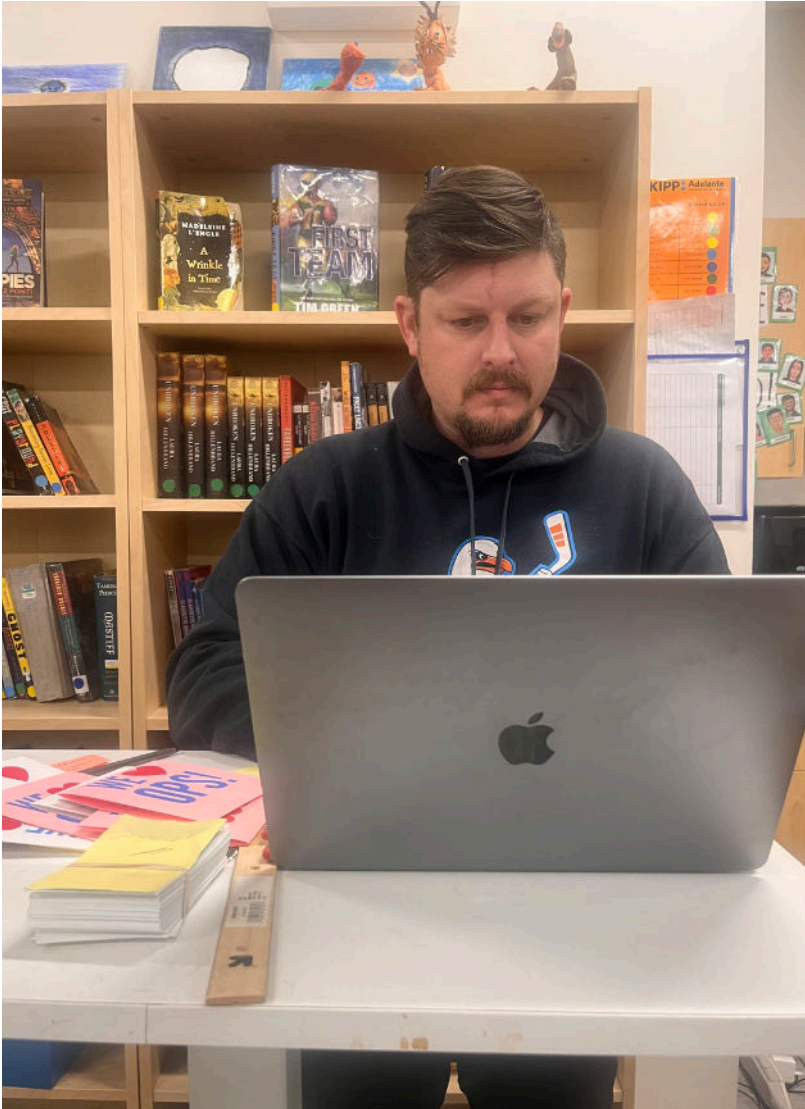
*Twelfth graders curate relief maps in the halls of High Tech High Media Arts.*

knowing that they are tackling the immense challenge, responsibility, and privilege of being an educator.

I was thinking about that encounter as I edited this issue. With my students-turned teachers in mind, we start off with practical advice for the teachers to facilitate learning gatherings: middle school teacher Sean Gilley explains how he “collaborates” with ChatGPT to plan his projects. Mike Cho explains his “never-fail” lesson plan that turns short story writing into a party game, and Geneva Clark combines standards-based grading with the Next Generation Science Standards. Then we move to advice for school leaders: Stephanie Antin shares the strategies she’s developed for welcoming parents into a school learning community, and Carol Battle and Curtis Taylor explore the conditions that enable Black teachers to thrive in schools. Michelle Jaconette tells the story of a “history dance” project from a teacher perspective, Drew Nelles tells the story of a filmmaking project from the student perspective, and Chet Flaum tells the story of... well you’ll just have to read that one to find out. Finally, Aneesa Jamal tells the story of a radically experimental school in India, and, in a piece that made me re-examine not just my time as a teacher but my own childhood as a student, Garrett Bucks reflects on the lessons he learned (both intended and unintended) as a young white male in school.

Thanks for joining us!

Alec Patton  
*Editor-in-chief*



*Sean Gilley in “conversation” with ChatGPT.*

# How I Planned a Project Using ChatGPT

*Sean Gilley  
KIPP Adelante Preparatory Academy*

I've been teaching middle school science for eight years. I gravitated towards teaching because of the lack of joy I had felt as a student. I wanted to come in and create a classroom of joy and excitement for kids who see learning worthwhile. Then realizing quickly this profession gives you a myriad of remedial tasks that make planning for joy quite difficult.

Five years ago, frustrated by this lack of joy in my classroom, and from often feeling more like a drill sergeant than a facilitator of learning, I started experimenting with project-based learning. I immediately saw excitement from my students and I was hooked. There was just one problem: planning took way too long. I couldn't keep spending this much of my evenings and weekends on planning, but I also couldn't go back to my old curriculum. Something had to change.

In my projects, I have felt I have seen a consistently strong start where all students are engaged and excited, but about three quarters of the way through, we always seem to lose our momentum and we never accomplish everything we have set out for. This could be attributed to not having a fully fleshed out idea for what I wanted the students to accomplish, as well as the project not being as clearly organized as I would like. It was also stressing me out: I was constantly scrambling to figure out what to do next. Then in 2022, a new technology arrived and changed everything.

As you know if you read the title, I'm talking about ChatGPT. I first saw the words "Chat GPT" on Reddit. The basic theme of the thread I was reading was "teachers freaking out about cheating." It made me wonder if this suddenly-famous AI bot would be any good at helping me plan my projects. So I gave it a shot. I was amazed at the ease this bot could have a planning conversation with me. I've now designed three projects with "assistance" from ChatGPT. Some have been completely new while others I have used to improve upon what I already have. To explain how it works, I'm going to share the process of designing my most recent project, "un-Powered Sustainable Living: Learning from Indigenous Practices for Affordable Housing."

## **My "planning conversation" with ChatGPT**

I normally start my project design by looking at the California state standards for my grade and subject, so that was the first thing I asked ChatGPT about:

**Gilley:** For solar energy what are the California science standards for 8<sup>th</sup> grade?

**ChatGPT:** The California Science Standards for 8<sup>th</sup> grade cover a range of topics related to solar energy. Here are a few relevant standards:

1. **Energy:** The law of conservation of energy states that energy cannot be created or destroyed, only transferred or transformed. Students are expected to understand the various forms of energy and the ways in which energy can be converted from one form to another. (California Science Standard 8.PS3.1)
2. **Renewable and Nonrenewable Resources:** Students should be able to differentiate between renewable and nonrenewable resources, and understand the advantages and disadvantages of using each type of resource. They should also be able to evaluate the sustainability of different energy sources, including solar energy. (California Science Standard 8.ES3.2)
3. **Climate Change:** Students should be able to explain the causes and effects of climate change, including the role of greenhouse gases and the impact of human activities on the environment. They should also understand the potential of renewable energy sources, including solar energy, to mitigate the effects of climate change. (California Science Standard 8.ES4.2)
4. **Solar Energy:** Students should be able to describe the basic principles of solar energy, including the way solar panels work to generate electricity. They should also be able to compare and contrast different types of solar panels and understand the factors that affect the efficiency of solar energy systems. (California Science Standard 8.ES4.3)



These are just a few examples of the California Science Standards related to solar energy that are covered in 8<sup>th</sup> grade. The full list of standards can be found on the California Department of Education website.

**Gilley:** From these standards build a PBL unit that deals with sustainable energy with a focus in San Diego

**ChatGPT:** Sure, here's a PBL unit that incorporates the California Science Standards for 8<sup>th</sup> grade and focuses on sustainable energy in San Diego:

**Project Title:**<sup>1</sup> Powering San Diego Sustainably

**Project Overview:** In this project, students will explore different types of sustainable energy sources and evaluate their potential for use in San Diego. They will work in teams to research and develop proposals for sustainable energy projects that could help power San Diego in the future.

**Project Duration:** 4-6 weeks

**Essential Questions:**

- What is sustainable energy, and why is it important?
- What are the advantages and disadvantages of different types of sustainable energy sources?
- How can sustainable energy be harnessed to power San Diego in the future?
- What are the economic, environmental, and social impacts of implementing sustainable energy projects in San Diego?

**Project Tasks:**

1. Introduction to Sustainable Energy (1-2 days)
  - a. Students will be introduced to the concept of sustainable energy and the different types of sustainable energy sources.
  - b. They will research the advantages and disadvantages of each type of energy source and evaluate their potential for use in San Diego.
2. Exploring Sustainable Energy in San Diego (1-2 weeks)
  - a. Students will work in teams to research the current energy usage patterns in San Diego and evaluate the potential for different types of sustainable energy sources in the region.
  - b. They will gather data on the availability of resources like solar, wind, and geothermal energy, and evaluate the feasibility of implementing different types of sustainable energy projects in San Diego.

3. Developing Sustainable Energy Proposals (1-2 weeks)
  - a. Students will develop proposals for sustainable energy projects that could help power San Diego in the future.
  - b. They will consider factors like cost, environmental impact, and social benefits, and develop detailed plans for implementing their proposed projects.
4. Presenting Sustainable Energy Proposals (1-2 days)
  - a. Teams will present their proposals to the class, using visual aids like slideshows or posters to communicate their ideas effectively.
  - b. They will receive feedback from their classmates and teacher and incorporate that feedback into their final proposals.

**Assessment:**

- Team proposals and presentations (50%)
- Individual research notes and reflections (25%)
- Participation in group work and class discussions (25%)

**Possible Extension Activities:**

- Invite a guest speaker from a local energy company or environmental organization to talk to the class about sustainable energy.
- Take a field trip to a local sustainable energy installation, like a solar farm or wind turbine site.

**Gilley:** Construct a project based learning project that uses the sun's energy to create a sustainable life. Focus on the history of indigenous people and how we can use their practices to design affordable and sustainable housing for all

**ChatGPT:**

**Project Title:** Sun-Powered Sustainable Living: Learning from Indigenous Practices for Affordable Housing

**Project Description:** This project aims to design an affordable and sustainable housing solution that uses the sun's energy to create a sustainable life. The project will focus on learning from the practices of indigenous people and their relationship with the environment. The project will include research, design, and building a prototype sustainable housing unit.

### **Project Objectives:**

- To understand the history of indigenous people and their practices related to sustainable living.
- To explore the potential of solar energy as a source of sustainable and affordable housing.
- To design an affordable and sustainable housing solution that uses the sun's energy as the primary source of power.
- To build a prototype of the designed sustainable housing unit.

### **Project Phases:**

1. **Research:** Conduct research on indigenous practices related to sustainable living. This will include reviewing literature, interviewing indigenous experts, and visiting indigenous communities to learn about their way of life and relationship with the environment.
2. **Design:** Based on the research findings, design an affordable and sustainable housing solution that uses the sun's energy as the primary source of power. The design should be modular and adaptable to different environments and cultures.
3. **Prototype:** Build a prototype of the designed sustainable housing unit using locally sourced materials and traditional building techniques. The prototype should be tested for durability, energy efficiency, and suitability for the intended environment.
4. **Outreach:** Share the knowledge and experience gained during the project with the wider community through workshops, seminars, and publications. This will help raise awareness of the potential of indigenous practices and solar energy for sustainable living and affordable housing.

### **Expected Outcomes:**

- A deeper understanding of indigenous practices related to sustainable living and their potential for modern housing solutions.
- A modular and adaptable design for an affordable and sustainable housing solution that uses the sun's energy as the primary source of power.
- A functional prototype of the designed sustainable housing unit.
- Increased awareness of the potential of indigenous practices and solar energy for sustainable living and affordable housing.

**Gilley:** What would a unit plan like this look like? What would be the standards met and what would the week by week learning be

**ChatGPT:** Here is an example unit plan for the project “Sun-Powered Sustainable Living: Learning from Indigenous Practices for Affordable

Housing.” This is just an example, and the actual unit plan would depend on the specific needs and goals of the class or group undertaking the project.

**Unit Title:** Sun-Powered Sustainable Living: Learning from Indigenous Practices for Affordable Housing

**Grade Level:** 9-12

**Subject Areas:** Science, Social Studies, Engineering, Art

**Duration:** 8 weeks (40 hours)

**Standards:**

- NGSS: HS-ESS3-4, HS-ESS3-5, HS-PS3-2, HS-ETS1-1, HS-ETS1-2, HS-ETS1-3
- Common Core ELA: RST.11-12.1, WHST.9-12.1, WHST.9-12.2, WHST.9-12.7, WHST.9-12.9

**Week by Week Learning:**

**Week 1: Introduction to Indigenous Practices and Sustainable Living**

- Introduce the project and its objectives
- Discuss the history of indigenous practices related to sustainable living and their relevance today
- Read and analyze articles and essays about indigenous practices and their relationship with the environment
- Standard: WHST.9-12.1, WHST.9-12.2

**Week 2: Solar Energy and Sustainable Housing**

- Introduce the concept of solar energy and its potential for sustainable housing
- Discuss the benefits and challenges of using solar energy for housing
- Explore case studies of solar-powered housing solutions
- Standard: HS-ESS3-5, HS-PS3-2

**Week 3: Design Thinking and Ideation**

- Introduce design thinking principles and their relevance to sustainable housing
- Brainstorm ideas for sustainable housing solutions that use solar energy as the primary source of power
- Evaluate and refine ideas based on feasibility, affordability, and sustainability

- Standard: HS-ETS1-1

#### **Week 4: Researching Indigenous Practices and Building Techniques**

- Conduct research on indigenous practices related to sustainable housing and building techniques
- Interview indigenous experts and visit indigenous communities to learn about their way of life and relationship with the environment
- Standard: WHST.9-12.7

#### **Week 5: Design and Planning**

- Based on research findings, design a sustainable housing solution that uses solar energy as the primary source of power
- Plan the building process, including materials needed and construction timeline
- Standard: HS-ETS1-2

#### **Week 6: Building the Prototype**

- Begin building the prototype sustainable housing unit using locally sourced materials and traditional building techniques
- Collaborate with experts in engineering and construction to ensure the building process is safe and efficient
- Standard: HS-ETS1-3

#### **Week 7: Testing and Refining**

- Test the prototype for durability, energy efficiency, and suitability for the intended environment
- Evaluate and refine the design based on feedback and test results
- Standard: HS-ESS3-4

#### **Week 8: Outreach and Reflection**

- Share the knowledge and experience gained during the project with the wider community through workshops, seminars, and publications
- Reflect on the project and what was learned about indigenous practices, solar energy, and sustainable housing
- Standard: RST.11-12.1, WHST.9-12.9

### **Assessment:**

Assessment for the project would be based on a variety of factors, including participation in research and building, completion of project milestones, and the quality of the final prototype and outreach efforts. Additionally, students would be required to keep a reflective journal throughout the project, documenting their progress and reflecting on what they learned.

And that was that! ChatGPT didn't "plan my project" but it took on a lot of the cognitive load of project planning. Previously in my class I had been doing a solar car project almost every year. I loved doing it, but it was not engaging my students as much as I knew it could. With so much high-level organization offloaded to ChatGPT, I was able to think creatively how to get the project centered around what students care about in their community.

Getting assistance from ChatGPT has saved me time and brain space. It has eased the load for me as a teacher and provided a resource that allows me to engage with my students more fully. Most of all, it's made project-based learning sustainable for me as a teacher.

## **Other ways to use ChatGPT for Project-based Learning**

Here are some other ways that ChatGPT can be used in classrooms for project-based learning.

### **For teachers:**

#### **Idea generation and brainstorming**

One of the initial steps in project-based learning is idea generation and brainstorming. ChatGPT can be used to generate ideas and prompts related to a given project topic. Students can interact with the tool to generate a list of potential ideas, which can then be discussed and refined by the class.

#### **Project planning and organization**

Project-based learning often involves complex tasks that require careful planning and organization. ChatGPT can be used to create project outlines, timelines, and checklists. Students can interact with the tool to create a detailed plan for their project, which can help them stay on track and ensure that they meet project deadlines.

### **For students:**

## **Research and information-gathering**

Once the project topic is selected, students need to conduct research to gather information about the topic. ChatGPT can help students find relevant sources of information and answer questions related to the topic. For example, students can ask ChatGPT about a specific concept or term, and the tool can provide relevant articles, videos, or other resources to aid in their research.

## **Feedback and evaluation**

As students work on their projects, they need feedback to help them improve their work. ChatGPT can be used to provide feedback on student work, including written reports, presentations, and other project deliverables. The tool can also evaluate student work based on predefined criteria and provide feedback on areas that need improvement.

## **Collaboration and communication**

Project-based learning often involves collaboration and communication among team members. ChatGPT can be used to facilitate communication and collaboration among students working on the same project.

## **Endnotes:**

1. For the sake of clarity, I've added formatting such as this bold text. This did not appear in the actual ChatGPT text box.



*Mike Cho with some of his students.*



# The Joy of Collaborative Short Story Writing

*Mike Cho*

*High Tech High International*

**F**ew things in life are foolproof, and even fewer things in teaching. However, the lesson plan I will share with you has yet to fail me. I present “Pass the Pen.”

## **Where it all began:**

I don’t have a single tattoo on my body, but for some mysterious reason, I was obsessed with tattoo art when I was about 28 years old.

There was something incredibly unique and bold about tattoos that drew me in. I watched a documentary series called *Tattoo Age* by VICE about modern tattoo artists.

I watched an episode called “The Master of All Tattoos: Chris Garver” and saw Chris and his friend Kiko, a fellow tattoo artist, collaborate on a project. They each shared one black Sharpie and took turns drawing peonies, Japanese-style Ryu (dragons), and Karajishi (guardian lions). Kiko would draw the eyes and then pass the Sharpie to Garver, who would continue the drawing. Collaborating in such a style also relieved the pressure of creating by oneself. It allowed someone to relinquish power and ego to work together to create something new. It didn’t matter what the result was; what mattered was the process.

Educators can apply this same game to create a short story. A student begins the story and *passes the pen* to the next student, who writes the middle, and *passes the pen* to the final student, who writes the ending.

Furthermore, what if students had yet to learn who would write their middle or end? This unknown would relieve every student from the pressure of creating something they deem worthy and “perfect” enough to present publicly. It also creates a sense of mystery in that the student would not know the direction in which their story would move forward. They have to relinquish that power over the material, allowing the student to be more relaxed and focus more on the enjoyment and creative aspect of writing. It will enable students to experience and glimpse what true creative freedom looks and feels like while being introduced to various writing styles.

I was so excited about this idea that I had to write it down on a Post-it before it vanished into the abyss. It was an idea that inspired me, and I was excited to see what direction it would take.

## **Developing the Plan:**

When I became obsessed with tattoos, I was a substitute teacher in the San Diego Unified School District and a graduate student at the University of San Diego pursuing a Masters in Curriculum Development and Instruction.

I was a substitute teacher with a purpose. My goal was to substitute sixty times at whatever school, grade level, or subject area would have me. My experience took me to over 15 schools in San Diego from grades K-12. When given the opportunity, I’d ignore the teacher’s lesson for the day to implement my lessons to test and assess their effectiveness. Other times I’d email the teacher beforehand and ask for permission. Whenever I could, I tried out “Pass the Pen.” No matter the school, this lesson plan produced the exact number of complete short stories as there were students in the class. It was exciting for me to dance around, urging students to feel free to write with absolute freedom.

“Write about ANYTHING you want!” I exclaimed with enthusiasm. “ANYTHING! If you arrive at a story that you find boring, then change its direction! You have the power.”

I was always welcomed back to substitute teaching in classrooms where I taught my lessons—even classrooms where I ignored the teacher’s assignments for the day. Perhaps I was just lucky; however, I believe it’s more similar to what Proximo said to Maximus in the movie *Gladiator*, “I was not the best because I killed quickly. I was best because the crowd loved me. Win the crowd, and you will win your freedom.”

Toward the end of my graduate school experience, I interviewed with High Tech High and was invited to their famous hiring Bonanza. Back then, everyone invited had to teach a one-hour class in their chosen subject area while being observed like a hawk by a gang of directors, teachers, and administrators. It was an opportunity to put your best foot forward and show everyone what you could do. What lesson did I choose? You guessed it. Pass the Pen. I'll save you from all the details, but I walked out of that ninth grade Humanities classroom at High Tech High Media Arts to the sounds of applause like a goddamn gladiator.

Since then, I've executed this lesson plan yearly as a tenth grade Humanities teacher at High Tech High International. It's my first lesson at the beginning of every school year to get the ball rolling. It's a lesson I'm incredibly proud of because it represents everything I want to embody on the first day of class: joy, laughter, freedom, creativity, flow, collaboration, focus, and movement. And now, I'm going to share it with you.

## The Purpose & Objective

This writing activity can be a great introduction to a unit or project that involves short stories. It can also be modified to include grammar and punctuation requirements for each section (beginning, middle, end). The purpose is really up to you.

*I have never set any grammar or punctuation requirements for my students.*

My **purpose** is to set students free, if only for a short while. I want to see students released from the pressures of education and society and enjoy the process. If they're going to curse, then I let them curse. If they're going to write about violence, then throw a roundhouse kick in there. They have my full support if they want to write a love story. What? Aliens come out of the sky right before Romeo proposes to Juliet, and a unicorn jumps from a bush and poops on the ring? Get after it. I want every student to feel comfortable enough to try. The quality of the story doesn't matter. What matters is that students enjoy expressing whatever comes to their imagination. Quality marvelously appears when writing in a comfortable, joyful manner. If it's still not good enough for you, let quality come in later lessons.

The **objective** is straightforward. Students will write a short story with a beginning, middle, and end. That's it.

# The Agenda

## Method 1:

4 minutes	Purpose and Objective
10 minutes	Creating the Introduction
36 minutes	<p>Creating the Story: Method #1</p> <ul style="list-style-type: none"><li>• Teacher Model - Beginning Section (5 min)<ul style="list-style-type: none"><li>» Live Drill #1 - Students Write a Short Story Beginning (7 min)</li></ul></li><li>• Teacher Model - Middle Section (5 min)<ul style="list-style-type: none"><li>» Live Drill #2 - Students Write Short Story Middle (7 min)</li></ul></li><li>• Teacher Model - End Section (5 min)<ul style="list-style-type: none"><li>» Live Drill #3 - Students Write Short Story End (7 min)</li></ul></li></ul>
10 minutes	Class Share-Outs and Reflection

## Method 2:

4 minutes	Purpose and Objective
10 minutes	Creating the Introduction
21 minutes	<p>Creating the Story: Method #2</p> <ul style="list-style-type: none"><li>• Live Drill #1 - Teacher &amp; Students Write Short Story Beginning (7 min)</li><li>• Live Drill #2 - Teacher &amp; Students Write Short Story Middle (7 min)</li><li>• Live Drill #3 - Teacher &amp; Students Write Short Story End *(7 min)</li></ul>
10 minutes	Class Share-Outs and Reflection

## Explaining the Process

I begin instruction by sharing my relationship with this lesson, where it came from, my experiences with it, and the students' purpose & objectives for writing their short stories.

Then, and this is important, I tell students about the twist: after they write their beginning, they must physically stand up and walk to another student's story, preferably not at their desk, and write that student's middle section. After that, they must stand up again, walk to an entirely different student's

story, and write that student's ending. Ultimately, the student will have written three different sections in three different stories.

I encourage them to use descriptive details, and well-structured event sequences (common core talk); however, I never enforce it. Not surprisingly, these appear magically when a student is excited to write their ideas down on the page. If they don't, you can note what's missing and focus on it in a future lesson.

## Creating the Introduction

The beginning is key.

With the courage to write that first word, things get done. I've found that handing a student a piece of paper, or a Google Doc, and then telling them to write the beginning of a story often leads to instant writer's block. Students stare at the white canvas before them like a deer in headlights, petrified to make a move. I also see students so enamored with their definition of "quality writing" that they too fail to produce results. Just remind those students that some rando will come along and change the direction of their story anyway, so don't be so possessive and learn to let go.

So what can we do to help them gain that confidence? That's right. Walk that runway and model for your students.

I present four different introduction examples for my students.

The first exemplifies an **action**.

I slammed the door and locked it shut. Sweating and gasping for air, I could hear the intruder's footsteps approaching the door. I didn't know what to do!

The second describes the **setting**.

The roaring winds of the hurricane pummeled the boat as the violent waves crashed upon the deck. I watched the rain pour and the thunder strike all around us as we desperately struggled to keep the ship afloat.

The third is **dialogue**.

"Maria," I said with longing in my heart. "Can you please give me another chance? I'm nothing without you! Please forgive me." I fell to the floor and hung my head low in shame. "Please, I'm nothing without you."

The fourth is a flashback.

Seeing tulips bloom in the spring reminded me of when I planted flowers, vegetables, and fruits with my grandma in her garden.

There are many different methods by which to model a proper introduction. Experienced and passionate teachers can find their way to modify or completely throw out my approach. Still, ultimately the objective is to give your students options and confidence to write.

## **Creating The Story: Method #1**

Method #1 was inspired by the structure of my jiu-jitsu (submission grappling) classes at 10<sup>th</sup> Planet San Diego. Every day, the instructor would demonstrate or model a grappling technique to their students. The students would then break off into pairs and drill, or apply, the technique relentlessly. After a short while, the entire class would gather together, and the instructor would repeat the process by showing the following sequence or a different move entirely. The students would then break off and drill again. Instructor models, students drill. It's simple yet highly effective.

**Step 1:** Before executing this lesson plan, write a nonfiction short story about a meaningful experience you've had in your life with a beginning, middle, and end. If you take this approach, explain the difference between fiction and nonfiction writing since your students will be writing fictional stories.

**Step 2:** Read the beginning of your meaningful experience, then have students write the beginning of their creative short story.

**Step 3:** Afterward, before students get up and move, you'll read the middle of your story, then have students physically stand up and move to find a different story to write a new middle.

**Step 4:** Finally, before students get up and move, you'll read the ending of your story. Repeat the previous step by having students physically stand up and move to find a final story to write its end.

Method #1 allows me to build that student-teacher relationship and connection. It allows me to set the tone and change the energy in the classroom. Ultimately, it builds trust, which helps students to feel more comfortable, thus paving the path to begin writing.

I tell a story about an art exhibition I performed in Riverside, CA, while studying music at the University of California, Riverside. I'll spare you all the details, but I destroyed a piano with a sledgehammer in the name of art and music in front of an audience of around forty sometime near midnight

in an artist friend's backyard. It changed my life; most students remember it for years even though I only tell it once.

## **Creating The Story: Method #2 (Simpler)**

Not a fan of method #1? Have no fear; method #2 is here for you and is much simpler.

Join in on the activity. Project your blank Google Doc onto the screen so students can see, or bust out a blank piece of paper and find a desk to sit at. When students write their beginning, you write yours. When students get up to find a different story to write their middle, you get up too and look for a story to continue. A student will come to your story and continue yours. When students get up one last time to write the ending to an entirely different story, you do it too.

Method #2 also provides many of the benefits of Method #1. You'll build the student-teacher relationship, set the tone and energy of the classroom, model, build trust, and create comfort.

## **Class Share Outs**

When students finish the ending to their final story, I ask that they also create a title for that final student. It's fun to see how a few simple words can capture the energy and imagination of the short story.

Afterward, students return to their original story at their original sitting spot. At this moment, it's gratifying for me to take a step back and take it all in. There are always some students still engulfed within the story they are writing, others who are a bit spent but proud that they got through the activity, and finally, those that are excited to see how their original story changed. I love to take this moment not to teach at all, let time be its own thing, and listen because I always hear laughter. Students that claim they hate to write are smiling, and students that are very shy when it comes to revealing their work are not as self-conscious simply because everyone else went through the same thing. There's always a student who's stoked about their beginning but doesn't like the direction their story takes; however, I remind them that now they have a clear example of what direction not to go. I used to end the activity right here and ask students to do their best to summarize their new story in a few sentences; however, during the Bonanza at High Tech High Media Arts, a ninth grade student enthusiastically raised her hand and asked if the class could read out their title, as well as their first and last sentence. It was new, and a student had suggested it, so I went with the flow; it went very well, and I've been doing it ever since.



*Geneva Clark's students analyze seawater.*



# Assessing Student Work With the Next-Generation Science Standards

*Geneva Clark  
High Tech High International*

## How I Learned to Love the Next Generation Science Standards

When I started working at High Tech High International (HTHI) in 2018, I was completely new to project-based learning. In fact, I was completely new to teaching other than my prior experience as a student teacher serving at different schools in San Diego. Creating a project-based curriculum in science was going to be a challenging albeit passionate undertaking, and like many teachers, I had high expectations for my practice. Luckily I started my career with a solid foundation in the Next Generation Science Standards (NGSS), and I knew that I could use them as a framework to design my projects. What I really wanted to know was whether my students were actually mastering the science standards from the different projects I implemented over the years. This meant that in order to effectively evaluate student learning I also needed to have an understanding of how to properly assess the NGSS. Through the creation of my own three step process, I have found a meaningful way to match the standards to student learning that could be applied across all science disciplines and grade levels. I hope you can find inspiration from my story to get through some of the academic rigor challenges you might have or be facing during your first or second year teaching, and use the rest of the guide to carve your own path towards equitable grading for student learning success.

## **What makes the Next Generation Science Standards Different**

The Next Generation Science Standards (NGSS) are K–12 science content standards that offer “performance expectations” for what students should be able to do by the end of the school year. The performance expectations set the learning goals for students, but do not describe how students get there (hence why I created this article!). The NGSS focuses on three areas of learning: disciplinary core ideas, crosscutting concepts, and science and engineering practices. At the time of writing, 20 states and the District of Columbia have adopted the NGSS.

## **The “Missing Link”: Using Standards-Based Grading To Connect the NGSS with Assessment**

In the fall semester of 2020 I started using standards-based grading in my class. What this means in practice is that I am grading student learning based on how they demonstrate their understanding. I do this by evaluating specific action items that need to be completed in order to meet a learning objective. I made this shift, because I wanted to encourage students to move away from focusing on meeting my expectations as their teacher, and rather move toward a goal of learning and improving their understanding through each learning objective. This also meant I would give students the opportunity to make multiple revisions throughout a learning activity or project since mastery requires growth in the learning process. This approach lends itself to the NGSS because the learning objectives, or “performance expectations” are focused on deep understanding of concepts and mastery of practical skills, rather than memorization of facts.

## **The Heart of my Standards-Based Approach to NGSS: Three simple steps**

I developed a three-step approach to assessing using the NGSS:

**Step One:** Select an anchor phenomenon

**Step Two:** Develop a rubric and decide what evidence you will collect to assess student learning

**Step Three:** Assess your students’ learning using the rubric

To illustrate this process, I will describe what it looked like in a twelfth grade project that I facilitated in the spring semester of 2022, in which students investigated human impacts to our local water resources.

## **Step One: Select an Anchor Phenomenon**

Selecting an “anchor phenomenon” is a critical component for aligning a science project to the NGSS because instructional sequences in science are more coherent when students investigate compelling natural phenomena the way that a scientist would. The NGSS defines an anchor phenomenon as an observable event or process which becomes the topic that anchors all of the learning within a unit. A good anchor phenomenon is grounded in students’ lived experiences, and is too complex to explore within a single lesson. Once I have selected the anchor phenomenon, I frame it as an essential question for the project. From here, I can refer to the Disciplinary Core Ideas (DCIs) in the NGSS to connect a specific performance expectation, or learning objective to the project.

Since I teach environmental science, I choose an anchor phenomenon based on socio-ecological impacts that my students and I can observe in our local community. In order to do so I need to have a basic understanding of what these impacts are, and where they might be located. If you are new to your community then I recommend conducting background research on your area. Otherwise you could also go out and do a basic field survey—I have done both! (For additional guidance you can also check out the phenomena database developed by the Science Resource Center for the San Diego County Office of Education). For this particular project I chose my anchor phenomenon as the effects of human impacts that could be directly observed at San Diego Bay and Mission Bay. From this anchor phenomenon I was able to frame my essential questions into the following:

Is there a relationship between human activity and the current “state” of San Diego Bay and Mission Bay? If so, is there a significant difference between these two natural resources?

For these essential questions, I measured “state” by using two variables: water quality and biodiversity. The essential question became part of my project launch that led students on an investigation of human impacts on our local water resources.

## **Step Two: Develop a rubric and decide what evidence you will collect to assess student learning**

The NGSS provides DCIs linked to each anchor phenomenon. The DCIs in turn link to performance expectations.

Once I selected the anchor phenomenon for my class project and used it to craft the project’s essential questions, I referred to the NGSS to determine which DCI would be appropriate for students to develop an understanding of the content they need to know in order to explain this phenomenon.

For this project I chose this one:

*ESS3.C: Human Impacts on Earth Systems*

I chose it because the big takeaway for this idea is that the sustainability of human societies and the various forms of life that support them requires responsible management of natural resources. At this stage it's important to plan the learning goals for the DCI. In this case, if I want my students to end up with an understanding of how humans impact our local water resources I first need to ask them what they might already know from the essential question. I started by introducing students to the anchor phenomenon.

To begin this, I asked students to discuss in small groups where they think their drinking water comes from, and how it gets into their homes. I then showed two aerial images: one of San Diego Bay, and the other of Mission Bay. At this point, I posed the essential question to the class, and asked them to form a hypothesis about whether or not there is a relationship between human impacts, biodiversity, and water quality in these two areas. Students wrote their hypotheses on sticky notes and posted them on our project discussion board that we would refer to throughout the project.

Eliciting student's initial scientific hypotheses gave me a sense of their current understanding and gave me a basis for planning further instruction. Since the hypotheses were formatted to describe relationships, one scientific practice that students could use to convey their understanding was to "develop a model" to visualize these relationships. I was then able to make a connection between this scientific practice and one of the performance expectations listed for this DCI:

*HS-ESS3-3: Create a computational simulation to illustrate the relationships among the management of natural resources, the sustainability of human populations, and biodiversity.*

Once I selected performance expectation HS-ESS3-3 to evaluate the first learning sequence of my project, I reviewed the corresponding evidence statements for this expectation and noticed that they were divided into three criteria: representation, computational modeling, and analysis.

I chose to focus on representation as my first assessment criterion for this performance expectation because students would be developing a model to represent their understanding of the relationships between humans, ecosystems, and natural cycles that may be present in the bay ecosystem. Therefore, I designed the learning evidence for my project launch to evaluate student models that were generated using computer program SageModeler to illustrate their understanding of the relationships between the biodiversity, human impacts, water quality, and natural cycles that occur within the San

Diego Bay.

At this point I made my rubric. I use a four-point scale for rubrics because it's easy to convert them into a traditional letter grade scale (4–A, 3–B, 2–C, 1–D, 0=F). I label the scale on my rubric as follows: 4–capstone, 3–second milestone, 2–first milestone, 1–benchmark, 0–incomplete.

I used the following criteria and ratings in my rubric:

**Assignment:** Students use SageModeler to create a simulation that contains representations of the relevant ecological components, including:

- A natural resource in a given ecosystem;
- The sustainability of human populations in a given ecosystem
- Biodiversity in a given ecosystem
- The effect of a technology on a given ecosystem.

**Capstone:**

Initial model is complete & includes the following components:

- Water Quality with one or more examples
- Biodiversity with one or more examples.
- Cycles & Ecosystems with one or more examples.
- Human Impacts with one or more examples

**Second Milestone:**

Initial model is partially complete. Includes the components listed under “capstone” but lacks an example for at least one area, OR one component is missing.

**First Milestone:**

Initial model is partially complete. Includes the components listed under “capstone” but lacks an example for at least two areas OR two components are missing.

**Benchmark:**

Initial model is partially complete. Includes the components listed under “capstone” but lacks an example for at least three areas OR three components are missing.

**Incomplete:**

All components missing or model is missing.

With this rubric, I was able to make expectations clear to students, and to assess their first drafts when they turned them in.

### Step 3: Assess Student Performance

Once students completed the first project task I used the rubric I designed to assess their proficiency level for a selected learning evidence statement within the specified performance expectation. I then gave each student a digital copy of the rubric with the rating highlighted to reflect the overall score for the assignment. If students scored below the highest rating, I gave them oral or written feedback on what they needed to improve based on the criteria description, and a specified duration of time to submit their revisions. To give a sense of the feedback I provided, here is the written feedback I gave to a student whose model I rated as “first milestone” because the model was missing one example of a natural ecosystem cycle and one example of biodiversity:

Nice work, [Student]. Within your first attempt you have nearly completed your initial model. In order to improve your score I recommend providing an example of a natural cycle that occurs within our selected ecosystem: the San Diego Bay. Consider how nutrients move through the ecosystem. I would also like to point out that even though there are a diverse number of invasive species that we can identify, this factor can actually threaten the biodiversity within a local area. You were correct in relating this as one potential human impact. Consider what different types of native species you may encounter at the bay.

From here, it becomes quite clear what each student needs to do in order to develop their work. If I use multiple rubrics like this throughout a project, students can create portfolios showcasing their learning progress, which the student and I can then use to determine the overall quality of student learning. With all this in mind, it is crucial to write the rubric before students initiate a task. That way students can use the rubric as a guideline for their first assignment iteration, and can take the feedback given on the rubric to make improvements during the revision period.

### Conclusion: The Conditions for Success

While the process for assessing NGSS using standards-based grading seems straightforward, effective implementation of the NGSS demands a great deal of collaboration and patience among states, districts, schools, teachers, and students. I attribute my own success to my credentialing and induction program providing coursework that focuses on the NGSS, monthly science teaching department meetings where we review NGSS alignment across grade levels, and my master’s program that has given me the opportunity to personally develop project-based curriculum that is aligned to the NGSS. I am also indebted to the other teachers at my school site who have decided to adopt this grading metric since it has been shown to more accurately reflect a grade that demonstrates student mastery of a given learning objective. With

all this in mind it takes time, research, and planning to assess, especially if you are new to the NGSS. Luckily the framework for these standards is highly organized and the guidelines are clear. In this sense we have a destination postcard (i.e. the learning objectives), but standards-based grading is needed to map the journey. I would personally recommend to start with the end in mind: ultimately what is it that you want students to know and take away from your class? How might you use an anchor phenomenon to route your students' quest for this knowledge? Which expectations from the NGSS can be used to direct student learning along the way? What is currently preventing you from conducting your own classroom pilot study? Making the switch starts with taking small actionable steps towards answering these questions. Don't be afraid to make mistakes along the way. After all, science in practice consists of a series of trials, errors, and breakthroughs.

## References

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## Online Resources

You can find a PDF of the rubric used for this project, as well as examples of a piece of student work rated “capstone” and one rated “first milestone,” by going to the online version of this article at [www.hthunboxed.org](http://www.hthunboxed.org).



*Students and families at High Tech High International's winter exhibition.*



# Strengthening Family-School Partnerships

*Stephanie Antin  
High Tech High*

When the director of High Tech Elementary Explorer called us and said we got off the waitlist for kindergarten, we were thrilled. We didn't know much about the school, but we knew that we wanted something different than what traditional education offered.

Our five-year old kindergartener seemed to grow up into a ninth grader in a flash. Over time, I realized that my role as an engaged parent was diminished. I received sporadic emails from the school, mostly about days off. As my daughter grew from elementary, to middle, and then high school, I was no longer invited into the classroom to read with students or volunteer. I never knew what was going on. I had to rely on my daughter to tell me. I wanted to support the school, but I felt like an outsider.

Other parents asked me all the time why there were no textbooks, why didn't the students get homework, why were there no AP tests? I knew the answers, but I wondered how they were supposed to find out. I joined the Parent Association and started to publish a newsletter for the school. That was well-received. Families said they felt like they knew what was happening and how they could better support the staff and students. But they still didn't understand the "why" behind progressive education. Why projects?

With 15 years as a producer and then executive producer in television news, I

started to question. How was the parent community connected to the school community? How could the school harness the greatness of the parent community? How could the school build relationships between families and the staff? How do families learn about progressive education?

That was the lightbulb moment for me. Could a partnership between the school and families with open communication be the key to student success? Data from Dr. Karen Mapp of the Harvard Graduate School of Education shows that family engagement is a key driver of student achievement. A study of standards-based reform practices done by Westat and Policy Studies Associates (2001) for the U.S. Department of Education looked at their impact on student achievement in 71 Title One elementary schools. In schools where teachers reported high levels of outreach to parents, test scores grew at a rate 40 percent higher than in schools where teachers reported low levels of outreach.

Mapp defines the term “family engagement” as “a *full, equal, and equitable partnership* among families, educators, and community partners to promote children’s learning and development from birth through college and career.”

My journey continued. I joined the staff of the school as the communications specialist and family engagement coordinator to build relationships and invite parents “in”, not just by asking families for money or driving on field trips, but by truly creating a partnership with our families. Finding ways to invite the genius of all the stakeholders into the classroom.

I tried inviting parents to Project Tunings, to be guest experts in the classrooms, to serve on panels, to help students practice interview skills and to be mentors during internships.

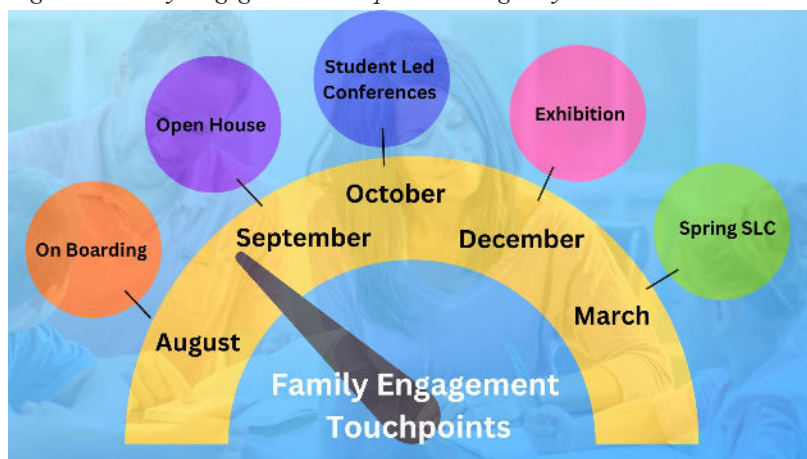
I’ve learned that there are touchpoints throughout the school year that make great opportunities to build relationships with families (see figure 1).

At High Tech High, we identified five of these “touch points”:

1. August: Onboarding new families
2. September: Open House
3. October: Student-led Conferences
4. December: Exhibition
5. March: Student-led Conferences

The question we asked ourselves was “How can we build trust and relationships with our families at each touchpoint?” Since High Tech High is a school system based on progressive education, which is new to most of our families, how do we bring them along on this journey and teach them along with students about what school can look like?

*Figure 1: Family Engagement Touchpoints during the year*



This is a work in progress, but here are some early answers to these questions that we have already put into practice:

**Summer Family Bridge**—“Summer Bridge” is a long-standing program to help students transition from middle school to high school. The students spend a week during summer break learning about Project Based Learning by doing a mini-project and then exhibiting that project for their families. Our innovation was to add a PBL workshop for families, so they get an introduction to PBL at the same time as the students.

**Project Tuning**—The “project tuning” is a protocol that High Tech High teachers use in order to solicit and give advice on project design. Teachers were already inviting students to take part in these “tunings” so it was a natural progression to begin inviting other family members to participate as well. We started out by holding these in August during staff days.

**PBL Workshop with Exhibition**—This year we invited our families to experience project based learning during a three-session workshop (over the course of six weeks). The families designed a “project” modeled on the projects that students do at High Tech High with an art teacher. They were even offered the opportunity to exhibit their project alongside their students at the all-school Exhibition in December. Parents said this experience was eye opening.

**Parents as Experts**—We invited our parent community to share about their industries on eleventh grade Internship Launch Day and host mock interviews with students so they could practice their skills. Our families are so much more than field trip drivers!



*A High Tech Elementary Chula Vista student shows her work to her parents at an exhibition at Chicano Park.*

Some of these may seem hard to do, especially without an engagement coordinator or communications director, so here are some small steps you can easily implement in your classroom or school:

- Teachers can make positive phone calls home. It takes just a few minutes to do, but families cherish those moments because they rarely happen and it starts to build that trusting relationship.
- At Open House or Back To School night, don't read the syllabus. Instead, do a project launch, gallery walk, empathy interview, letters to students, pair-share activity, or connections activity. Ask yourself, "how can I create a community culture within my classroom with the families and the students?"

Whether you take small steps in the classroom or larger steps as a school, building that culture of trust and of a strong school-family partnership can only lead to positive outcomes for our students and community.

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*Curtis Taylor teaching at the High Tech High Graduate School of Education.*

# How Do Black Teachers Thrive?

*Carol Battle*

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Think back to your experience as a K-12 student. If you had to recall the number of Black teachers whose classroom you sat in, how many of those teachers come to mind? Some of you may have had a great amount of Black teachers during your school years; but, for many of us we may only be able to recall one or two or, unfortunately, none at all.

Currently, our nation is experiencing a national teacher shortage that has disproportionate effects on students, particularly students of color and those living in poverty. A greater shortage of teachers of color adds to this inequity. While the national number of teachers of all races is rapidly declining, there has been a steady decrease in Black teachers since the desegregation of schools. Prior to *Brown vs. Board of Education*, Black teachers occupied up to 50% of the teaching force in the nation's segregated school systems. Fast-forward to present day, Black teachers hold 7% of teaching positions in our nation's public schools (Will, 2019; National Center for Education Statistics, 2020). After *Brown*, Black schools were closed and most Black educators were forced out of the profession.<sup>1</sup> Historical practices and current experiences of Black teachers are based on a legacy of discrimination including racism, microaggressions, biased policies, lack of peer support, and lack of administrative support. For decades, such experiences have caused Black teachers to leave the profession at higher rates than their white peers due to racially related issues, such as not feeling as valued as their white





*Carol Battle at the High Tech High GSE.*

peers, frustration over having to take on extra duties regarding racial issues without being compensated, and not having necessary professional or collegial support systems in place (King, 1993; Ladson-Billings, 2021). In contrast, some Black teachers do stay and thrive in our nation's schools. We are curious to understand why these educators tend to stay and what it takes for Black teachers to thrive in our K–12 schools. Let's begin with Carol's story.

### **Carol's Story—Abundance**

And there you have it, I'd been shot down again. "Why don't you try that out and let us know how it goes. Maybe we can do that next year." The bell punctuated the end of our weekly team meeting in which I was proposing we change our Social Studies units so more time was dedicated to studying the



culture and politics of South America, Asia and Africa—that is to say three continents that not only contained the majority of global population, but were filled with people who looked like me and many students in our school. I will just do it alone, I thought to myself. This is an amazing opportunity to reach students who so often don't see themselves in our curriculum. Students who honestly couldn't care less about the text I've taught for the last 8 years nor the folder filled with worksheets I pulled out year after year. And frankly, I felt the same way. So I proceed to tuck away my modified lesson planning calendar, plant a fake smile on my face and mentally check out of the team meeting; just like students check out in classrooms where they don't feel they belong and their voices are muffled.

With the exception of a colleague here and there, this was my experience for much of my career since I started teaching first grade in a suburban area of Texas in 1996. I'd become a teacher in order to make the world a better place by helping children find and hone their gifts, but I was ground down by years filled with attending both team and site meetings where there was one world view, undiscussable topics such as the abuse and erasure of wrongs done to those with black and brown bodies and resistance to change. So many times I'd been shot down and in effect, silenced. Like the time that I proposed we stop doing "country of origin" projects because those of us whose ancestors were enslaved don't know where we're from. Or the time I suggested we have parent conferences in the evening so that working parents without the luxury of paid time off would be able to participate. As the one Black staff member who was often the only adult speaking on behalf of students who looked like me and those in other minority groups, my assumed role became that of opposition, as was evident each time I raised my hand in meetings, heard the sighs and saw the eye rolls my peers thought I didn't see. The ironic part of it all is that I had been offered/voluntold/volunteered for a number of leadership roles on campus, but lacked the collegiality, kinship and support that I craved. I was somehow respected without being befriended, tasked with important roles, yet dismissed and looked to for answers without having my own heart listened to.

It became increasingly clear that I had very different ideas about what class should look like from my colleagues, especially for my students who were not white or "high performing." I knew each student needed to be seen for their unique gifts and challenges. They needed to experience a multitude of examples of texts and activities and cultural aspects of their art, music and food brought into our classrooms. They did not need to have their teacher dismiss their differences. They did not need to feel different at school than they did in their homes. Their whole selves came with them into the classroom and were not being honored by their teachers or administrators who tried to mold students into a one-sized version of success.

Isolation of pedagogical thought wasn't the only way I was made to feel like a

satellite orbiting the rest of the staff. My presence as “the one” Black member of staff was either met with an assumed role of expert in all things Black or it was assumed I was an expert on sourcing school appropriate materials and that I would automatically plan the Black History Month lessons. This was a role given to me after I pointed out that the widely-circulated premade MLK and Rosa Parks lessons were performative, saviorist and did not show students the power and brilliance in everyday folk and the power that lies within themselves. Add to that discipline issues, and my position as the “other” was complete. Yes, I intervened when I saw Black and Brown children being spoken to or about in a manner that othered them. Yes, I called out bias and inconsistencies when these same children were devalued and dehumanized. Because that child was, and forever will be, me. But why did I have to spend emotional labor shielding kids from unnecessary harm? Who was there to shield me?

So, I learned to work in isolation. I was close to my students and pleasant, yet distant from most staff. I created student-centered lessons that offered voice and choice where, for example, my students created a project after deciding they wanted to hear stories of real life heroes after studying mythology. They went to elders in the community and after learning the art of the interview, collected data and wrote memoirs they gifted back to those individuals. Students determined the types of individuals they deemed wise, developed interview protocols, determined what part of their story became the memoir and wrote nuanced tales of strength in which we could all draw from. I met someone years later who had been interviewed who told me it was the best interview she had ever been part of.

I ensured each student felt seen by me no matter their background, interests or abilities. I became the teacher I always wished I had and created an environment where we all could be our authentic selves, if only in the four walls of my classroom. I created an environment where students could thrive and one I wish was replicated in my experiences at work. It was not unusual for students I'd taught in middle school to come back to visit upon their graduation from high school. Young Black men like, “S” who I'd pulled aside one day after hearing some of his [white] teachers speak hopelessly about his behavior challenges and low academic progress. I kept the card he gave me that day that states, “Thank you for all your support, always lending a helping hand to me... Always keeping it 100.” However, despite my relationships with students, all the love they poured into me and little things like their begging to stay in class with me even after the bell and time to move to the next period, I did not thrive. I did not feel community. I farmed and created my own resources and felt professionally stagnant and sometimes disconsolate.

However, hope, inspiration and an energy-infused career trajectory came despite these experiences. I was a member and eventually conference presenter

and Board member for the California Teachers of English (CATE). It was at CATE where I found my people—well, people who were more like-minded professionally. While still a minority in that space as a Black woman, I didn't feel like one. The conversations we had, the initiatives we pursued and the openness to new ideas I experienced when working with them gave me hope, energy and resources to hold fast in the classroom and pursue my passions while guiding students through the same. My first time attending the CATE annual conference was due to a board member in CATE that I had worked with at a writing camp for kids seeing the work I was trying to do and nominating me for a scholarship so I could attend. A similar experience occurred when I found myself participating in a six week intensive writing institute with the San Marcos Writing Project. It was there I found my voice and there I found more of my people. It was there I was encouraged to dream, to write and to shout out my ideas to anyone who would listen. I was fueled by my time there and tapped again to lead other teachers. It was there I learned I could and enjoyed teaching adults and there the seed was planted to continue my formal education. My hopes were raised, I began to dream. I was surrounded with resources and people who encouraged me to grow and question and lead and continue to learn. I was finally seen, encouraged and pushed toward a future I hadn't seen for myself. But not at my district, not at my site. Not by my school leaders nor my peers.

## **Curtis' Story—The Road to Selfhood**

"Why is it so loud in here?" This is what my former principal asked as he swung my classroom door open. He had just walked in on about 25 excited fifth graders playing a game of Jeopardy to review their understanding of the parts of a cell before the next day's science assessment. He became a witness to young girls and boys jumping enthusiastically out of their seats for a chance to answer a question and extending their hands high in the air to make sure their team had the opportunity to demonstrate their brilliance as well as add points to the scoreboard. Voices boomed as they answered each question with joy and excitement. I was well aware of the volume levels in the classroom, but I didn't mind as I was thrilled that my students were engaged and having fun. My students' laughter and screams of "Oh, I know it!" or "I disagree" flowed throughout the classroom and into the hallways, which prompted my principal to enter. What I perceived to be a productive classroom, my principal perceived it to be a classroom out of control. Later that afternoon, I was pulled by my principal and reprimanded for what took place—a hard blow to my confidence as a beginning teacher.

Throughout my first three years of teaching, I felt that there was an unspoken expectation that I should be a master at managing a classroom of students simply because I was a young, Black male teacher. My administrators were equating my Blackness, and being male, to being an authoritarian in how I should approach classroom management. There was an expectation that

my classroom should feel orderly in which students were quiet, seated in rows, and did not deviate from what many of us know as the traditional norm of school. This expectation left me to constantly compare myself to fifth grade colleagues, who were all white and female, and who seemed to have things figured out. For example, I loved having my students sit in table groups of four. But, the majority of my colleagues had classrooms set up in rows or tables of two. One teacher even had a daunting management system called “The Book,” where students would write their names in for any misbehaviors or infractions, and no one wanted their name in the book! These teachers were left alone by the administration because they cultivated the culture that the administrators wanted to create and continue. Because of such comparisons, and because I deviated from the norm, I felt like I did not know who I was as a teacher—I felt lost. Most importantly, there was no one who looked like me at my school to support.

I wrestled with the idea of leaving teaching. Thoughts such as, “You aren’t good enough,” “How will you get all of your kids to meet the standards on the state test,” “You can’t even get some of your students to stay focused for a full lesson,” and “No one is supporting me” were running through my head. As I wrestled with the idea of possibly leaving teaching, I had just begun a masters of education program. Fortunately, before I made a definitive decision on my career, I took an action research course led by Dr. Joi Spencer at the university I attended. Dr. Spencer enjoyed having one-on-one conversations with her students, either in-person or by phone. She and I had a call to check-in on the progress of my research.

That day I had decided that I had enough of trying to figure things out on my own as a teacher and decided to be vulnerable with her, so I asked her, “How do you manage a classroom effectively?” It felt like a waterfall of thoughts flowing as I began to share with her my struggles and my thoughts of leaving the teaching profession. As she listened to what I had to share, she immediately responded, “Managing a classroom is all about who you are and what you expect from your students.” This simple statement was so profound to me as it resurfaced the idea that I needed to know who I am as a teacher and my values. She then asked me a series of questions: “Who are you?” “When you see your students, how do you greet them?” “How do you expect them to behave and be with each other?” “What do you value about learning?” and more. As she asked her questions, I felt like a veil was lifted and I could see myself more clearly.

My professor supported me in understanding that my identity as an educator should not be significantly different from who I am as a human being. For example, if I love to smile, then smile when I greet my students. If I want to have my students sit in groups because I believe in collaboration, then have students sit in groups. And if I want my classroom to be active, then it can be. In addition, she supported me in surfacing the expectations and hopes (such

as learning is a collaborative process and students should have ownership of their learning) that I had for my students.

From the conversation with Dr. Spencer, I felt supported and cared for in my growth as a young educator (what I was not receiving from my administrator). This support gave me the push I needed to continue teaching and, most importantly, I learned that I did not have to conform to someone else's ideas to be a wonderful teacher.

## Bridge to Thriving

Our situation is mirrored in countless experiences of Black and Brown educators in K-12 schools, particularly when they are underrepresented on a given campus. Neither received the multi-tiered systems of support that are pertinent to career happiness, longevity, and a thriving career. Identity marker mismatches (that is, different, race, gender, age, sexual orientation), lack of cultural awareness by school leaders and stereotypical biases often negatively affect experiences of Black and Brown teachers which inhibit their ability to thrive as educational professionals. In order to retain Black teachers, happiness, well-being, and a positive work environment are necessary components of the K-12 setting. For our students to be well, the teachers must also be well (Love, 2019).

The Bridge to Thriving Framework, developed by Kia Darling-Hammond, centers marginalized communities by going beyond resilience and emphasizing the need for supportive affirming communities, knowing the true self, abundant access to resources, and pleasurable activities that create a thriving model of simply being (Battle, 2022). Possibilities for thriving increase when people are invited to see themselves as someone who is entitled to thrive, imagines what thriving can look like, and receive affirmation about their thriving filled dreams (Darling-Hammond, 2021). When educators feel free to truly be themselves, they bring dimensions of community, selfhood, abundance, pleasure and relief into their work spaces (Darling-Hammond, 2021). The Bridge to Thriving Framework includes five tenets:

**Community** encompasses spaces where there is affinity and mutuality with those around you, social justice is centered and there is a critical consciousness among what is often chosen family.

**Relief** and **Pleasure** include the often absent professional moments of joy, purpose and play, and spaces that center well-being and freedom.

**Selfhood** and **Abundance** are the final two tenets which include both knowing self and feeling able to authentically pursue hopes and dreams with supporting resources available.

Carol's experience with the outside organizations that energized and boosted her experiences in the classroom are centered around the concept of **abundance**. Hopes, dreams, resources, truth-telling and expansiveness are elements that encompass this roadmap on the way to wholeness and well being. It was not the peers or administrators on site, but self sought after organizations that provided fuel for Carol's professional hopes and dreams. It was these outside organizations that provided resources for Carol to excel in her classroom and beyond and it was those outside of her school site that breathed life into future professional possibilities. Imagine the benefits to the school site had Carol received abundance from her peers and administrators.

Likewise, Curtis's story of **selfhood** reflects the need for the freedom to honor self in order to thrive as a Black educator . Being compared to fellow teachers, having labels and stereotypes cast upon him was only disrupted when a mentor helped to foster feelings of joy and determination and movement toward thriving. The strand of **selfhood** includes knowing self, loving self, asserting self, having a resistant identity and being self-determined. Curtis almost left the profession he'd grown to love, not because of the students, but because of peers and administrators. It was the adults on campus who did not allow him the freedom to teach in a manner that allowed him to lead, guide and speak with students in a manner that was true to himself.

This leads us to the question of how schools could utilize the Bridge to Thriving Framework as a way to improve the recruitment and retention issues regarding Black teachers. We will expound on each of the petals of the Bridge to Thriving Framework by sharing what we, as Black educators, have found in schools that supported our own thriving.

## **Pleasure**

The tenet of pleasure encompasses joy, love, passion, purpose, and play. When school environments focus on adversity or deficits it leaves little space for pleasure to take place. The act of claiming joy or pleasure is healing work, especially when in defiance of the norms of respectability (or what we know as "respectability politics") that schools may impose on their teachers. For example, this could be the denial of traditional Black hairstyles worn by Black educators, or objection to how Black educators express joy and laughter. When schools push for teachers to "norm" to the dominant culture, Black educators may feel excluded and lack a sense of belonging at their school sites. When schools attend to the tenet of pleasure, it supports in creating a sense of belonging for their teachers especially their Black teachers.

Here are ideas for school leaders to promote pleasure for the upcoming school year:

- Organize retreats with their teaching staff where a team may work

together through an obstacle or puzzle. These moments should be designed with intention in which vulnerability can be illuminated, and for teachers to recognize each other's strengths. This will support in building trust and learning how to lean on each other's strength areas.

- Participate in activities off school grounds such as karaoke or a recreational team activity.
- Provide the space or resources for Black teachers to explore their passions. What new texts or topics might they want to explore? What new club might they want to bring to campus?
- Make space for Black joy to take place through music, storytelling, dance, and creativity that allows a sense of freedom to simply be.
- Provide resources so Black teachers can have joyful experiences outside of campus. Support them in attending conferences or events where the joy they seek is centered.

## Relief

Relief for Black educators goes far beyond the smaller class sizes, ample resources and support personnel all teachers desire and deem necessary for longevity in the profession. Relief as a tenet in the Bridge to Thriving Framework includes attention to the safety, rest, and resources teachers need in order to maintain careers in the profession. However, this tenet also includes the ability to teach and live with a strong sense of well being. It's important to create, support and maintain an environment where healing can occur and the freedom to live and work authentically spawning relief from the often oppressive, white, middle class normed environments our schools are governed by no matter the makeup of the students they serve. This is relief from paying the "Black Teacher Tax" many Black teachers experience. The Black Teacher Tax refers to the expectation Black educators will serve as disciplinarians, provide uncompensated time in informal leadership roles, serve as curators of culturally relevant resources and often it is assumed they will fulfill the expectation to teach remedial courses with the most challenging students (Battle, 2022). This "tax" also includes the extra time and energy needed to navigate tense peer dialogue, explain intentions, and face potential professional retaliation (Battle, 2022) When an environment as such exists, healing can occur and career potential increases exponentially. Relief can only occur when the entire school is a place where each person can bring their whole selves to work without fear of judgment, being deemed different, difficult or demanding when asking for their needs to be met, and somewhere rest is recommended, healing is heralded and freedom to dream is a force that moves throughout all aspects of a campus.

School leaders can cultivate a sense of relief for the upcoming school year by:

- Allowing Black teachers to show up authentically in both dress, deed and disposition.



- Leading cultural affirmation that goes beyond celebrating a Black/Hispanic/Women's History Month bulletin board or theme in the workroom. Aspects of culture are visible throughout the school year round as evident in visual content throughout the school, the website and in correspondence to parents.
- Inviting diverse voices into the room when decisions are being made and opportunities are being handed out.
- Visibly supporting Black teachers when they receive pushback from staff and parents alike, rather than making excuses or offering support behind closed doors.

## **Community**

Every human strives for a sense of belonging. The most effective classrooms have a high sense of belonging that has been cultivated between the teacher and their students and their students to each other. The tenet of community encompasses the feeling of kinship with those who may share similarities in beliefs and backgrounds or finding a chosen family composed of a variety of different characters. The creation of a community should be a priority for schools. As stated earlier, Black educators make up 7% of teachers in our nation's public schools. This means that many Black educators come into school spaces with individuals who do not look like them or are in a space where many of their colleagues do not come from similar backgrounds as them. This can create a sense of isolation. A strong school culture allows for teachers to authentically be themselves, find their voice, and feel supported by their colleagues which requires vulnerability.

School leaders can cultivate community amongst their teachers by:

- Creating space for teachers to connect authentically with each other. For example, affinity groups support teachers in finding individuals who share similar interests, identities, or experiences.
- Organizing dialogic interviews between staff. These open up the possibility of teachers having richer, more informative interactions where they may feel validated and understood (Collins, 2016). By participating in dialogic interviews, teachers begin to develop vulnerability with each other which can lead to a high sense of trust.
- Actively seeking to diversify their staff so that no teacher is "the only one" on a particular campus.

## **Selfhood**

The tenet of selfhood encompasses knowing, loving and asserting self, having an identity unshakable by dominant culture norms like changing your hair or clothing styles and self-determination to accomplish one's goals. It is often these very traits that have gotten the Black educator thus far in a system that



was not designed for them to authentically succeed. Black teachers enter the profession with a strong sense of self and determination in doing so, to a great extent, to bring their views and voice into classrooms as a form of social justice (Battle, 2022). Many have had to face isolation, experienced a lack of peer and administrative support and have fought to ensure their voices and views have been heard despite the downplay and outright silencing that often occurs within their professional environments (Battle, 2022).

School leaders that want Black teachers to thrive for the upcoming school year can:

- Offer an environment where identity and self-expression is centered and celebrated.
- Cultivate environments where varying types and levels of support are abundantly provided and individualized for the betterment of the individual and school as a whole.
- Stand by Black staff members when they broach sensitive topics and set an example for your staff of how to respond and welcome alternative ideas.

## **Abundance**

All of the tenets of the Bridge to Thriving Framework feed into the concept of abundance, which includes the ability and opportunity to dream and aspire to what education and humanity could be. Without joy, love and passion, there is no abundance. Without a feeling of safety and opportunities to rest, how can we expect aspirations to be dreamed up and opportunities be taken? Without a sense of kinship and a supportive school family, how can Black teachers feel safe to dream? And without the ability to assert self in the work environment, how do we expect individuals to create and follow full, rich pathways to abundant careers. The Bridge to Thriving Framework not only defines ideology that serves Black educators, but can be used as a blueprint to building school systems that are inclusive, freeing, sustaining environments where every staff member's dreams are encouraged and fulfilled.

School leaders that want Black teachers to thrive for the upcoming school year can:

- Ensure Black teachers aren't siloed by being isolated from other Black educators or "solo'd" by having their differences spotlighted as if announcing they are different and should be treated as such.
- Create an environment that supports authenticity and fosters voice.
- Offer leadership opportunities to your Black teachers as they often have the pulse of the school at their fingertips

## Conclusion

Earlier, we stopped both of our stories after we had found support and validation—but not at our schools. So what happened next? After a stint in higher ed at Cal State University San Marcos in a special role as Distinguished Teacher in Residence, Carol left her K-12 classroom, something she never thought she would do. Though she loved working with pre-teens in middle school, a feat in itself, it was the loneliness, disconnection and lack of support that pushed her from her mid-sized suburban school district and out of K12. In essence, it was a community she sought, opportunities she desired, and an environment of growth and change she craved. Her doctoral studies opened doors her classroom experiences did not provide and she found herself at High Tech High Graduate School of Education ( HTH GSE) dreaming of what teacher education could look like and playing an active role in the development of tomorrow's teachers.

Curtis spent two years teaching fifth grade, then moved to High Tech High where he taught sixth grade math/science for seven years (first at High Tech Middle North County, then as a founding teacher at High Tech Middle Mesa). During his time teaching at High Tech High, Curtis was able to thrive as the conditions for thriving were set by the school principal (Juliet Mohnkern) as well as his colleagues. Curtis was able to find himself as a teacher, was provided the space to be creative in the projects and lessons that he designed, experienced a community of educators that shared similar teaching beliefs, and was able to just “be”. Now, he supports teachers as an improvement coach for the Center for Research and supports novice teachers in their growth as a faculty member at HTH GSE.

Carol's story and Curtis' first school are examples of what happens when schools do not attend to the needs of their Black teachers. In schools that have an absence of pleasure, relief, community, selfhood, and abundance, Black teachers either leave the profession or are forced to find these elements outside of their school contexts in order to be uplifted, energized, and fueled. This shouldn't be the case. Schools should strive to create a sense of community, belonging, and joy for their Black teachers so they, not only remain in the profession, but continue to positively impact the students that they serve. When all of these tenets are attended to, we create an environment where Black educators are free to dream, aspire, feel supported, and, most importantly, just simply BE.

## Notes

1. To learn more about this, read Madeline Will's 2022 piece for *EdWeek*, “‘Brown v. Board’ Decimated the Black Educator Pipeline. A Scholar Explains How”

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*Playing on a student-designed miniature golf course at High Tech High Mesa.*

# Project Cards

*Teachers and Students  
High Tech High Schools  
and other Innovative Schools*

*Project Cards provide quick glimpses of inspiring projects designed by teachers and realized in collaboration with students.*

*Our full collection of Project Cards is available to download for free on our website, [hthunboxed.org](http://hthunboxed.org)*





## **The Great Ceramicist Throw Down**

Gabrielle DuThinh Clark

Fifth Grade

High Tech Elementary Mesa

Our fifth grade artists learned from and were inspired by local San Diego ceramicists to create multiple pieces of claywork representing a diverse range of cultures and styles. They competed for the title of “Ceramicist of the Year” while learning how to form three dimensional pieces with a variety of techniques such as pinching, coiling, slab rolling, and pottery wheel throwing. They created all sorts of pieces like pots, bowls, cups, plates, figurines, statues, and wall art. They learned clay wedging and testing, glazing, loading and unloading the kiln. The artists worked very hard to craft their masterpieces and were able to showcase the fruit of their labor at an exhibition in a studio space in downtown San Diego. Students, loved ones, community members, and our artist experts were all in attendance to celebrate their amazing accomplishments and recognize the six appointed ceramicists of the year.

### **Teacher Reflection**

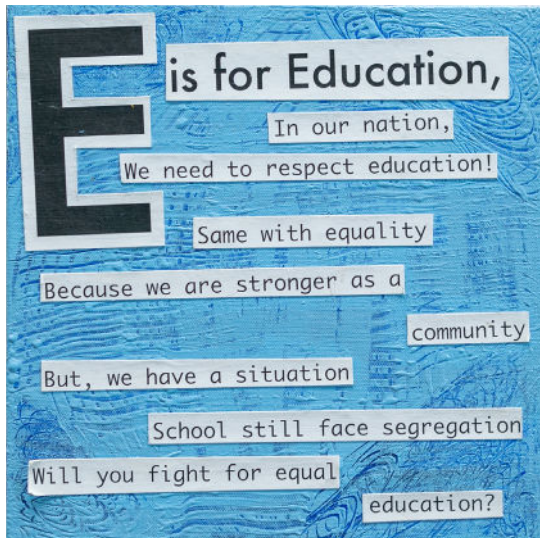
I learned how powerful it was to have professional artists come in and visit to demonstrate various clay forming skills. It made the project very special for our artists. I honestly could have taught the students most of the skills the visiting artists shared but it wouldn't have been as cool and powerful coming from me because they're too used to working with me. I found joy in taking the back seat in the classroom so the students could be wowed and inspired by new people. They got to see, hold, and feel their ceramic work and see their strong presence online and in the art world. If I could change anything in the next iteration it would be to have the expert artists come in and work with the artists for more than one visit. It could have been even more impactful to have that direct feedback from the original demonstrators of the skills that they were implementing.

—*Gabrielle DuThinh Clark*

### **Student Reflection**

I loved the project because we got to have fun with clay and learn a new form of art. I enjoyed using the pottery wheel to make different shapes and see how you can manipulate it with cool methods. Learning from an expert artist felt reassuring in the sense of “you know what he/she is doing” and is an expert. It felt powerful in a way being able to learn from a person who has done this many times to help you do your best. My experience overall was phenomenal, I would love to do the project/work with clay again as it was so fun. The finished product is something you can always remember and is more than just a ceramic item, you know the journey it took to get finished.

—*Hiroto T.*





## Art and Activism

Amanda Borow, Amber George, Matt Sheelen  
First & Fourth Grade  
High Tech Elementary Chula Vista

Inspired by the picture book *A is for Activist*, in this project students explored the power of “muralism” to create change in communities.

Students studied timelines of San Diego’s history, focusing on the effect of the creation of the border on San Diego’s communities, as well researching the history of San Diego’s Chicano Park and visiting the park itself to speak with muralists who are working today.

They also learned about tableaux and created “living murals” moving through a series of key words from the project, such as “community,” “resistance,” and “empathy.”

After that, each student created a poem for a letter of the alphabet. Fourth graders created poems for the upper-case letters and first graders created poems for the lower-case letters.

### Teacher Reflection

I loved seeing students fired up about important history in their communities, and connecting to the power of art to create change! It was also incredible to watch fourth graders and first graders connect and work together to explore important themes like community, empathy, and protest.

—Amanda Borow

### Student Poetry

#### *C is for Community*

They are friends,  
They are family.  
The community cares  
The community is strong  
Chicano park came together  
to create change.  
What can your community change?

#### *H is for Huelga*

Huelga means strike  
Strike means to fight  
for what is right  
The farmworkers fight  
for happiness and human rights  
To stop hunger and humiliation.  
Their strike wrote history!  
Dolores Huerta, Cesar Chavez  
screamed... Huelga! Huelga!



**Politics of the Personal**  
Paola Capó-García  
Twelfth Grade English  
High Tech High Media Arts

Under the banner of *Politics of the Personal*, HTHMA seniors were tasked with writing research essays about political topics that personally impacted them. In the final step of the project, students remixed their research into political piñatas with the help of local artist Diana Benavidez, whose work explores the political possibilities of the piñata tradition. As a bonus, students stuffed their piñatas with their original poetry to create a bridge between the course's two main modes of writing. The result was a room full of highly personal and highly political piñatas waiting to be smashed.

**Teacher Reflection**

This project sticks out as one of my HTHMA highlights of the past five years. Diana Benavidez's work out in the SD arts community served as the project's origin story, which to me felt like the most organic way to develop a project. I had seen her work for so long that it became an obsession of mine to weave it into an English project. The students were excited to tackle a childhood object in a more radical way and I was excited to have a final product that mixed research essay, poetry, and visual art through an unexpected medium. Visiting the Mingei Museum's piñata exhibition was a great way to prime student thinking, and having Diana come to our school to lead a piñata-making workshop made the whole experience feel more collaborative and authentic. Our exhibition felt joyful and thought provoking, and it was rewarding to see students proudly show off their creations to their families and friends. If I were to do this project again, I'd want to have more of a cross-discipline connection (the collaboration with the Video Production class wasn't as strong as I would've liked). But overall, this project reminded me of the importance of engaging with community partners, baking in field trips, and having a performance/interactive element at exhibitions.

—Paola Capó-García

**Student Reflection**

I really enjoyed this project because I got to explore a new medium and express my chosen topic in a unique way. My piñata was made to represent Filipino-American healthcare workers and was filled with different Filipino candies! It almost felt like a cultural fusion because this tradition is most commonly associated with Latin America, but a nearly identical game exists in the Philippines called pukpok palayok ("hit clay pot"), most likely because we were both colonized by Spain. I felt like I was able to represent a part of my heritage because it's such a flexible medium and it exists in my culture as well!

—Farnelle A.



## **Scream for Change: The Power of Songs**

Kristian Basaraba  
Tenth Grade Social Studies  
Next Step High School

In this project, students wrote, recorded, and performed a protest song for an audience. Students first explored the history of protest music and its power to evoke change. Working alongside local musician Braden Sustrik, the students drafted ideas for their song and chose musical instruments to learn and play. They decided that the Woody Guthrie classic “This Land Is Your Land” would form the backbone of the song. Each student wrote their own verse on a social justice issue identified earlier, and as this process unfolded, the group of students evolved into a band named Morality Control Unit—a name used ironically in order to raise awareness of the Pisces Bathhouse Raid in Edmonton on May 30, 1981. Armed with their newly penned verses, instruments, and song, the band recorded the students’ song, entitled “Scream for Change (This Land Is Your Land).” The band then embarked on a three-school tour to perform the song for a total of 250 elementary students.

This project was made possible by the Aspen Foundation for Labour Education grant in support of social justice learning.

### **Teacher Reflection**

The ultimate goal of the project was to write, record and perform for an audience a protest song at a May Day assembly; for the most part mission accomplished! The initial plan was for the song to focus on the labour movement and workers’ rights, but it deviated from that to be a song about social justice issues of climate change, mental health, sexual equality rights and Indigenous rights and reconciliation. The students all felt strongly about these issues, and the project focus shifted to accommodate that. If I did this again, I would like to have had a tighter timeline and more frequent jam sessions to carry the momentum.

—*Kristian Basaraba*

### **Student Reflection**

I didn’t have much musical experience before joining the band and I thought that would be a problem. I ended up playing the bass for the first time and was happy to find it was not as difficult as I thought it would be. Going on tour to different schools was also a refreshing experience because we got to perform the song we wrote in front of elementary classes. At first I was nervous about performing, but I got over my anxiety once we started playing and ended up having a good time. I was surprised when so many teachers came up to us after the performance to tell us how much they liked the song. I never expected it to have such an enormous impact on people, and I’m glad they enjoyed listening to it as much as I did making it.

—*Becca M.*





# TWO SIDES TO A SCREEN



**Two Sides to a Screen**  
Guy Maclaury, Humanities  
Vanessa Medellin, Math  
Alicia Trout, Science  
Sixth Grade  
High Tech Middle North County

Students took a deep look into screens to see how they can both negatively and positively affect our lives. The first part of the project explored how excessive screen time and especially the use of social media can negatively impact our relationships with others and even impact our mental health. They also saw how important sleep is for our overall brain health and how screens can disrupt sleep and consequently impact their adolescent brains.

Next, students explored how screens can help our community. We partnered with memory care facilities in our area to learn about dementia and create game-based apps that stimulate decaying neuron connections for the residents, with the aim of slowing down the disease. While visiting and interviewing the residents at the memory care facility, students practiced Reminiscence Therapy by having residents recall specific past memories. With these memories, students made “memory collages” which were gifted to the residents once the project was finished.

### **Teacher Reflection**

I was excited to show students how social media and excessive screen use can impact their lives, but quickly realized that the most impactful part of the project would come from our community partners. Students really took to learning about dementia and Alzheimer’s. They thrived in what could have been awkward situations: pairing with an elderly resident suffering from dementia and simply talking with them. We went to the facilities several times throughout the project and each time it created deeper reflections on very big themes such as life itself, compassion, understanding, and how to not take what we have for granted. We realized towards the end of the project that the simple theme of something such as brain health would have been more tangible for students to grasp.

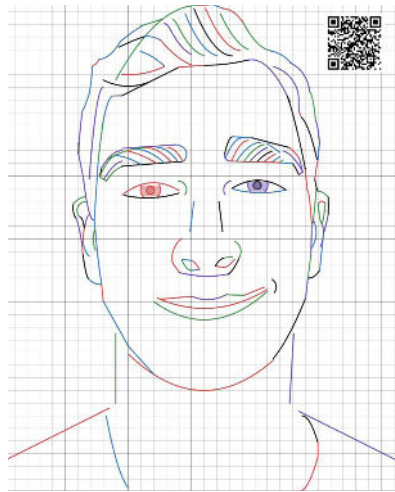
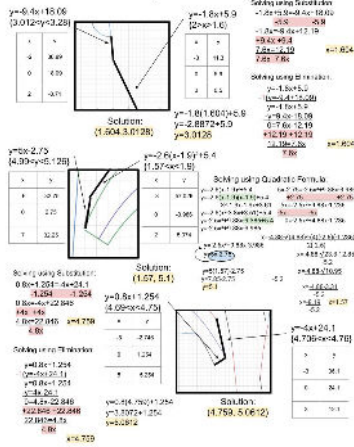
*—Guy Maclaury*

### **Student Reflection**

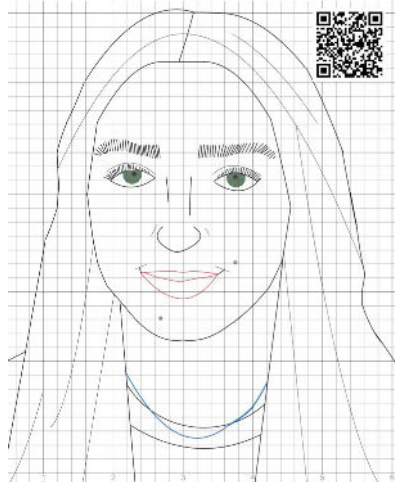
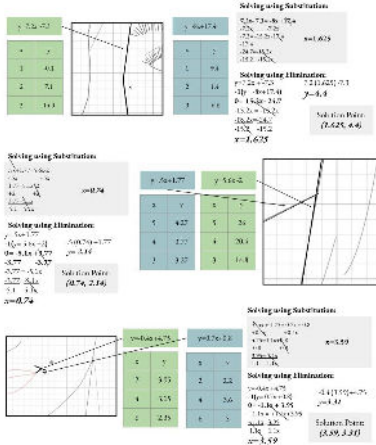
When we learned about how screens can help delay the symptoms of dementia, it felt good to do something that would impact someone’s life. Talking with the senior citizens with dementia was so cool; they were so excited to share their life with us, and pass on their surprising wisdom. After constructing the memory collages for our senior citizens, we gifted the collages to them, and the seniors were tearing up with happiness. This project helped me learn how one simple act of kindness can make someone’s day, and how that act may make the world a little bit better.

*—Jay*

Desmos Self Portrait Annotations  
By Clark Walters



Thomas Self Portrait Annotations  
Lindsey Arlt





## **Double Exposure**

Ari Bernabei, Physics

Taya Chase, Math

Juli Ruff, Humanities

Ninth Grade

High Tech High

Students explored the questions “What pictures tell a story?” and “How do we tell the WHOLE story?” through an integrated Math, Humanities, and Physics project. Students created graphic novels, pinhole cameras, photo journals, identity cards, and more!

In Math, students created their self portraits using hundreds of linear and quadratic equations. They then annotated their portrait by solving intersecting lines using substitution and elimination. They looked past just what the eye can see to get a better understanding of the story behind every image.

### **Teacher Reflection**

This project challenged students to examine their identities and the world around them through photographs. One of the things students made was a tri-product that included a Desmos Self Portrait, Annotations of the portrait and a Dear Math letter. What I found inspiring in the students’ work was their dedication. Since the portrait was personal to each individual, students spent a significant amount of time ensuring that their image represented the story they wanted to tell. They also mastered the linear equations math unit because the self portrait required them to understand slope, y intercept and how to solving the equations of the intersecting lines. I was astonished by each and every one of their final products.

—*Taya Chase*

### **Student Reflection**

This was my favorite assignment of the semester. We started it off by going on a field trip to the Balboa Park Photography Museum. After taking a look at the museum, we took self portraits. These self portraits were the foundation of our main product, the desmos self portrait. We created these by going on desmos.com and inserting in our portraits. Then over the course of a month we outlined our portraits using linear, circler, and quadratic equations. We then followed up our portraits with annotations. These annotations solved for the intercepting points of three sets of two equations using substation and elimination. Finally we wrote a letter to math. This letter expressed how we feel about our relationship with math.

—*Audrey*



# SHIFT



## **Shift**

Philip Estrada, Engineering  
Sabelle O-Connell, Math  
Twelfth Grade  
High Tech High Media Arts

For this project students made several topographical maps. The first iterations were of fictional locations where they imagined the changes that may occur over ten thousand years. Their next maps were of real locations that the students found interesting for one reason or another. They made two maps: one depicting the current appearance of their location and one after ten thousand years of changes. They studied the geological processes of changing the land via erosion, human impact, and other forces to model gradual change in area and make their projected changes as accurate as possible. As a finale, everyone made a map of a location that their family would recognize to be assembled live at exhibition and given as a gift.

### **Teacher Reflection**

This was a project which required detailed work from every student which we achieved through weekly critique sessions and frequent documentation in digital portfolios. A highlight for me was watching my role as facilitator in critique sessions diminish. By the end of the semester students would own their critique sessions and run them independently. I loved listening to them justify the degree to which their maps had changed because this represented a shift for my own practice; student critiquing their content knowledge instead of the artistic merit of their work. At exhibition, every student had saved the last 5% of their project to complete live and in front of their families. Students planned out what tools and safety equipment was required and purpose built tables for the event (which fit in the school vans). I felt incredibly proud to watch parents gather around their student oohing and aahing at their ability with the tools. Due to enthusiasm from students and the wonderful work of my incredible partner teacher this project exceeded my expectations.

—*Philip Estrada*

### **Student Reflection**

The part of my project that represents my greatest success was the outcome of my family map. There were many layers and more difficult cuts. I have come out of this class more confident about using bigger tools and drills. A couple of weeks ago a teacher asked me if I can help her use the drill, in the beginning of the semester I was terrified to use anything and there I was helping people use the tools to this day. My experience at the exhibition was great, it was exciting being off school campus to have our exhibition. The best part of my night was seeing my mother's reaction when I told her the place of my map, it made her face light up. I learned that I have to ask questions and not just keep myself wondering if I'm not sure about something.

—*Clarissa B*



**A Walk In The Parks**  
Michelle Jaconette, Noel Gikling, Emmanuel Parello  
Fourth Grade  
High Tech Elementary

During this semester-long project, students researched one of the 63 US National Parks specifically focusing on highlighting information that other fourth graders would enjoy learning about each park, as well as uplifting stories of the indigenous communities that first lived on and took care of this land. As part of their research process, students wrote letters to park rangers at each of their national parks to gather information. We also went on an overnight camping field trip to our nearest national park, Joshua Tree, to experience firsthand the beauty that these parks aim to preserve. Throughout the pages of this book you will find an overview of each park, information about ecology and recommended activities for kids and families to enjoy. Through the “Every Kids Outdoors” program, all fourth graders and their families in the United States have free access to all US National Parks for one year. We hope this book inspires other adventurers to explore and help protect our beautiful park system!

**Teacher Reflection**

Aside from learning all about the beautiful national parks in our country, my biggest learning takeaway from this project was the power a published book has in terms of promoting high-quality student work. Knowing that their writing would be professionally published, students worked hard to craft thoughtful and informative paragraphs. I would absolutely have students create a book as a final product again for this reason alone. For future iterations of this project I would love to have more experts involved sooner and involve them in giving us feedback on our work along the way. The help and support we received from the US National Park Service was instrumental in launching our project, but including experts throughout the project instead of just at the beginning would help build a stronger partnership between our students and the national park community.

*—Michelle Jaconette*

**Student Reflections**

I learned that national parks are amazing and there is a lot to learn about each of them.

*—Sumi N.*

I learned that there are special layouts for making books!

*—Benjamin L.*

My favorite part of this project was when we got to Zoom meet with a park ranger who helped us launch our project!

*—Penelope S.*





*A scene from the final performance.*

# Dance Dance Reconstruction

*Michelle Jaconette  
High Tech Elementary Point Loma*

I never intended to become an advocate for teaching history in elementary school; it's something that just sort of happened. What began as a mini-project on the California Gold Rush during my first year as a teacher has since morphed into a year-long study of American History, specifically highlighting and elevating the often untold stories of historically marginalized groups of people in our country. It has taken eight years to get this far, and there is still a long way to go, but through the process of re-learning the history I was taught, and refining how to teach that history to kids, I have come to find that this work is a crucial and joyful challenge.

The challenge is, and has always been, how to make studying the past relevant and interesting to the students I have at present. Let's face it, the idea of studying history doesn't exactly conjure up the most exciting memories for many of us. I can recall the mindless memorization of names, dates and places I labored through in my own education. Luckily for the generation we now teach, the theory behind learning history has shifted towards a literacy-based approach (Aguilar, 2010) where historical events are presented featuring their main characters and conflicts. Common themes can be mapped across centuries, and the stories of those who have been intentionally silenced are surfacing. I've attempted to bring histories to life through projects in a variety of ways over the years including hands-on building, art installations and comic books. For this particular iteration of a history project I decided

to take on a storytelling medium that both intrigued and terrified me: dance.

To be very clear, at the outset of this endeavor I knew nothing about dance or choreography. Our own limitations as teachers, however, cannot limit the experiences we can offer to our students. Through a generous grant and additional funding through our Parent Association, the fourth grade team at High Tech Elementary was lucky enough to partner with Arts Education Connection San Diego (AECSD), an organization that aims to bring the arts back into classrooms through collaborative teaching. With guidance from AECSD's arts integration specialist and dance teacher extraordinaire, Wilfred Paloma, we began to bring our vision of a history dance performance to life.

Our initial idea was to tell a story that spanned hundreds of years of American history; from colonization to the Civil War. We envisioned students creating sets and costumes that changed to show the passage of time, highlighting the "key moments" within our historical timeline. To intentionally highlight the stories of historically marginalized groups, we wanted to incorporate music and dance central to these cultures: indigenous dance and music to tell the story of colonization, traditional Chinese dance and music to tell the story of the California Gold Rush, and African dance and music to tell the history of slavery in our country. As a teaching team we talked at length about how to appropriately tell the stories of groups of people to which we did not belong, and bringing in dance teachers from these groups seemed to us to be a necessary, though not sufficient, step towards that. Unfortunately, coordinating with that many different groups of people and dance teachers, along with our 75 students, was a feat we couldn't overcome. We talked with Wilfred and decided that we would still create multiple dance pieces depicting different narrative perspectives, but we would not appropriate music or moves that did not "belong to us." The vision was an hour-long performance, choreographed primarily by our students. We assumed that after a few months of dance and choreography instruction our students would be able to pull together a show-stopping piece that not only demonstrated the history content they learned, but their dance and choreography skills as well.

Now, I know what you're thinking: "Didn't Lin-Manuel Miranda beat you to this idea years ago with a brilliant, billion dollar Broadway hit?" And the answer is yes, absolutely, and thank goodness he did. The popularity of *Hamilton* has sparked a huge and renewed interest in history, even among our young community of elementary students. Many of our kids knew the words to his songs and had seen the performance either live or recorded. At even the mention of a history dance performance, they were sold. Most of them.

Even the most well-planned and exciting project isn't always going to engage





*Rehearsing in the classroom.*

all learners, at least not right away. When we began this dance project, we were met, much to our surprise, with a great deal of resistance from students who were reluctant to dance, or who flat-out refused. We often had five to ten students in each of our three classes hiding under tables or in the bathroom to try to avoid our weekly dance classes. In fact, up until the moment the curtains parted on exhibition night we weren't sure that we would have a successful performance. Resistance, though, is not a reason to stop moving forward. While it is important for students to feel connected to and contributors towards their work, it was challenging to achieve this with five to eight out of my 25 students refusing to participate on any given day. The easy thing to do would have been to assign them "alternate roles" or "other access points" and press forward with dance for those who were actually interested. We discussed what types of jobs the kids who refused to dance could do, and in the end we decided that there wasn't going to be a back-up plan. We believed in the power of dance to tell stories; it was a cornerstone of our project design. Allowing students to miss out on that experience would prevent them from a major portion of our learning goals. While it was a constant frustration to have to beg our students to participate, to repeat the same moves over and over again, to develop self-control over their bodies, we held to the conviction that it would be worth it for the final performance we envisioned in the end.

As teachers we carefully walk the line between recognizing what the behavior of our students is trying to communicate, and how to both acknowledge

their feelings and gently push their boundaries. Sometimes students are simply not ready for what we are asking them to do. Sometimes they need to stay under the table (whether literal or metaphorical) a little bit longer, and that's okay. In our case, we knew that the nerves our shy students were feeling could be coaxed down, and we had many whole-class and individual conversations about confidence, making mistakes and supporting each other in taking risks. And you know what? We ended up getting everyone out from underneath the tables eventually.

Over the course of the project we made a few key changes to our initial idea. We simplified the performance to encompass just the history of the Civil War. Narrowing the scope shortened the total performance time to about 20 minutes which was easier for everyone to manage. We broke up the history of the Civil War into four categories and assigned a different style of dance and music to each: enslavement and the Underground Railroad, the Union and Confederate armies, the Battle of Gettysburg, and Reconstruction. We knew we wanted the Battle of Gettysburg to be a whole-grade hip hop dance battle, but we let the students choose which of the other three dance pieces they wanted to be part of. This element of choice empowered many reluctant dancers. Each group choreographed their own dance piece (with the exception of the soldiers who learned a traditional Civil War era dance called the Virginia Reel) and the students' ideas for choreography took center stage in each piece.

Our final dance performance wasn't perfect. We had only two rehearsals in the High Tech High Mesa theater prior to Exhibition Night and the novelty of being in the theater gave the kids a level of energy we had hoped would dissipate and didn't. We spent all night begging them to wait quietly backstage until their turn was up. Kids missed cues, even after multiple months of practice. Moves were mixed up, costume pieces were forgotten backstage and even despite this the final performance was the best the kids had done all semester. Families walked out in awe and many shared the same sentiments: "I had no idea he could dance like that," or, "she didn't tell us the dance would be so good!"

If I were to do this project again there is plenty I would change—this is how I know we were onto something with this work. A project that runs smoothly from start to finish doesn't leave room for the human element of trial and error, rarely involves risk, and often has limited learning. Even with its shortcomings, this dance project did accomplish its main goal: we were able to take a group of 75 fourth graders and turn them into dancer choreographers who were able to tell the story of the American Civil War from four different perspectives. The performance told the story of Black resilience and their fight for freedom via the Underground Railroad. Soldiers partook in a traditional dance that helped provide respite on the battlefield and improve their tactical footwork. The Union and Confederacy

battled it out for their unwavering beliefs, and the audience walked through Reconstruction as our country tried to heal from the deep wounds this war caused. If you are also a teacher, whether or not you want to take on your own dance project, I encourage you to consider the importance of elevating non-white voices in history, the opportunity to build empathy through taking perspective, and the relevant and lasting impact our history has on our present and future.



*The empty stage, before the performance.*



*An eleventh grader doing fieldwork for the “Behind the Scenery” project.*

# Learning Behind the Lens A Student's Take on a Documentary Film Project

Drew Nelles  
*High Tech High Mesa*

*In this article, high school senior Drew Nelles shares his experience of the “Behind the Scenery” Project, a collaboration between eleventh graders and tenth graders at High Tech High Mesa.*

The launch of the most transformative project in my academic experience was exciting, yet equally unexpected. All 52 students in my eleventh grade team gathered in a classroom as our teacher and project creator, David Roney (known as “Roney” to his students) explained the basis of our coming project. He began the conversation by explaining that we would be developing and publishing short documentaries reflecting ecological landmarks around San Diego County... Sounds interesting, right?

It wasn't until we came back from winter break that we received an unexpected twist to our initial plans: this project would be a collaboration with our tenth grade counterparts. The class groaned in unison. We couldn't believe we had to work with these kids, these... youngsters. This was going to be a disaster.

As class ended and we started lunch, there was much discussion about the upcoming partnership. Most of us expected the cooperation between the lower and upper class to be dreadful. This wasn't just an anti-tenth grade prejudice: after two years of remote learning, many of us hadn't ever met one another. And for many of us, this was our one chance to be eleventh graders



and we had to spend it with tenth graders. In a sense, this did bring us closer together: we bonded over the shared disappointment.

## **The Film Before the Film**

Just one week after our return from winter break, Behind the Scenery officially began and we were assigned to our groups (our eleventh grade groups, that is, the tenth graders had not yet arrived). Each of us was tasked with interviewing a member of our group and designing a draft documentary around their interests. My group consisted of two other juniors and myself, and the deadline for the minifilm was tight—four days to be exact.

Describing our mental state as panicked would be an understatement: how on earth were we each supposed to create our own high-quality mini-documentary that told a valuable story about our subject? There was a great deal of hysteria as the assignment started to sink in. However, in the midst of the panic, many of us missed that Roney specified that the intent for this was to get to know each other, not make professional-level films. My group, specifically, really homed in and used this assignment as a fun way to get to know one another.

Quickly enough though, our anxiety was no longer relevant. We had to begin work immediately and didn't have time for such reservations. While some students complained the entire four days, the week was quickly over and most of us had a rough version for our mini-film launch. This, however, was simply a launch and the idea was to get to know one another. We had a whole 'nother product that was just beyond the horizon, and this time, we'd have company...

## **Arrival of the Sophomores and Getting Our Instructions**

Following the mini-project launch, Roney brought together the entire tenth and eleventh grade team of students for the first cross-grade meeting. It was during this time that he more clearly outlined our process for the next few months. He gave a speech. It covered a lot of ground, but ultimately only one sentence really mattered: "In 12 weeks, you will create a professionally developed mini-documentary that tells a story about your ecosystem."

After the speech, we gathered with our ecosystem groups. These groups were split among five different ecosystems. They consisted of the eleventh grade groups that had made the mini-documentaries, plus two or three tenth graders, ultimately each group had a total of five or six members.

Now, it is important to note that even though we were working in cross-grade groups on a single product, each grade was in charge of a different element of filmmaking. Specifically, the tenth graders were in charge of all the sound



aspects, and the eleventh graders were responsible for the visual elements. In addition, the tenth graders were making a podcast, but we didn't have anything to do with this. We were to collaborate with one another to make sure the audio and visual elements actually lined up and told a convincing story, whatever that may be.

In order to achieve this, we would need to do the following, though not necessarily in this order:

1. Co-construct a rubric.
2. Get into groups.
3. Students rank individual preferences for a spot in San Diego to focus on.
4. Mix students across grades.
5. Identify two to three community partners to interview.
6. Make a storyboard.
7. Go out in the field and shoot footage.
8. Film, fieldwork, and footage (B-roll).
9. Edit our footage.
10. Gather feedback.
11. Share with our subjects.
12. Exhibit our work.

### **Getting Into Groups**

The eleventh grade portion of our group was the same that had made the mini-documentary. There were three of us: Me (Drew), Frankie, and Mitchell. The tenth grade team consisted of four members: Alex, Kayla, Lia, and Ryan.

After some hemming and hawing about the topic of our story, we were still torn. In fact, we had pretty much no better idea than to tell the story of human impact as our presence encroached on the local wildlife. However, after our initial field trip to Mission Trails, we drove past a mountain that appeared to have been cut in half. The entire van went suspiciously quiet as we pondered the reason that half a mountain would be sheared off. That very suspicion is what drove our interest in pursuing industrialization as a story later down the line.

The first few weeks went considerably smoothly as the cross-grade groups started to settle in with one another. Our initial field trips proved successful as we worked together to begin the development of our story. In fact, the time we spent together every week became something that some of us actually really looked forward to.

## Co-Constructing a Rubric

Co-constructing a rubric refers to the process of creating an evaluation tool collaboratively with the students and staff involved in the project. The essential co-construction process in this project took three full days (five-plus hours) and began by having students choose from a list of professional, full-length documentaries to watch.

There were a variety of films to choose from with options ranging from climbing Everest to befriending an octopus. I chose the octopus film, *My Octopus Teacher*. While three days may seem like an awfully long time to create a rubric, it's important to remember that this step was what set the expectations and goals for us to follow throughout the remainder of the project, all 12 weeks of it.

After watching the entire film, we were asked to take notes and share our thoughts on what we liked and disliked about the film. Smaller groups (about five to six students) sat around a table and filled out a graphic organizer with our peers who watched the same film. What we liked, disliked, and would like to replicate in our films was also an element of this organizer. After mini-conferencing with our smaller groups, we came together with the rest of our class to share our thoughts. In total, the co-construction process lasted about five hours and was broken down as follows:

**Monday & Tuesday:** Watch and evaluate full-length model documentaries independently.

**Wednesday:** Discuss thoughts with smaller groups of students who also watched the same film.

**Thursday:** Roney presents a synthesized version of the graphic organizer to the class for review.

**Friday:** Final rubric developed and presented based on graphic organizer revisions with further edits made as needed; finalized “indicators of excellence” for our films.

By co-creating the rubric, everyone had a clear understanding of the standards and expectations, which helped guide our work and focus our efforts on producing a high-quality documentary.

## An Unexpected Twist: The Deliverables Split!

Towards the end of stage one (pre-production) and about six weeks into the project, the project gods pitched the nastiest curveball. It started to become very clear that the tenth and eleventh grade partnerships weren't working

according to plan. Specifically, there was an increasing concern in the amount of workload being put on both grade levels as the planning moved towards execution. So in the name of student voice, Roney decided to survey the students. The results? Well, my class of eleventh graders expressed concern that we were pouring too much time and energy into this and were worried that many of the tenth graders wouldn't step up to match the sound design to the quality of visuals that we were producing. On the flip side, the tenth graders' survey responses showed that they were stressed about having to manage a second major project deliverable.

So, the proposed solution? Split the deliverable, but keep working through the process together. This meant that we would continue our partnership in fieldwork, but gave the eleventh graders the ownership we were seeking and the tenth grade a more manageable workload. What this meant in practice was that the eleventh graders were now responsible for the full film (audio and visual) and the tenth graders were focusing exclusively on a podcast on the same subject. This was tremendously helpful: the tenth graders were able to focus on the podcast and stop splitting their attention, and the eleventh graders had full control over the film.

I asked Roney about what it was like to make this choice from his perspective. Here's what he said:

It wasn't like we were switching things up and had a lot of things to figure out. It was more like our original plan was going to require us to figure all these things out and if we made this shift, we would just eliminate a lot of stress for everybody.

Now, with the tenth grade firmly focused on producing podcasts, it was time to record some interviews.

### **We Find People to Interview—Industry Professionals & Community Partners**

Going into weeks six and seven, the work towards the final (group) documentaries began, our group divided work based on our known strengths and weaknesses. Besides a few little communication hiccups in the beginning, our group functioned remarkably well together. That said, however, many of our peers struggled with this delegation process as they shared skills and interests with one another and there were tasks left unclaimed. Once the time for planning and interviews rolled around, many groups felt overwhelmed as they approached what my group so fittingly referred to as “the contact phase.” The three of us were thrilled to finally be meeting some professionals who would hopefully be able to tackle some of our unanswered questions.

After a great deal of back-and-forth with prospective interview candidates,



*Students take field work notes in a forest.*

we scheduled a time to sit and chat with two in particular. In the case of my group, we selected our interview subjects based on profession, with the intent to highlight perspectives from two totally different professions. So it was set: in the coming week, we would interview a politician and an isotope geochemist Ph.D. student. It was important that we got a story from both a political and a scientific lens.

It was becoming increasingly apparent that this phase was going to be a logistical nightmare, trying to coordinate several interviews per group with a combination of dozens of different professionals. What made it even more complicated was that many of our interviewees followed a nine-to-five schedule rather than our school hours of 8:30 to 3:30. This added an extra layer of difficulty in coordinating schedules and finding suitable times for interviews that worked for everyone. To counter this evolving schedule issue, Roney used the floor-to-ceiling folding whiteboards in our classroom to coordinate which groups were doing interviews and when. It was a massive calendar with sticky notes labeling groups on certain dates and times.

We started interviews with a unique sense of excitement; we were anxious for answers and thought surely our community partners would be able to help us with our presently fruitless research. As we began, each of the interviews was unique in the sense that we framed questions differently for each of them. We asked local district member, Raul Campillo, questions like “How are you involved with Mission Trails?” and “What steps can be taken by members of the community to help preserve regional parks?” Contrary to that, our time with Emmet Norris (Geochemist) was spent on more scientifically technical

questions like “Why is quarry mining so environmentally damaging?”

## **We Storyboard... and Storyboard... and Storyboard**

After completing the interviewing phase of the Behind The Scenery mini-documentary project, it was time to move on to the storyboarding and b-roll footage shooting phase. During this phase, we learned about the importance of b-roll footage in helping to tell a visual story. B-roll footage is, in essence, the stuff you show while somebody is speaking (when you aren't just showing that person's “talking head”). So, for example, while someone talked about a hurricane, you might show “b-roll” of trees lashing in hurricane-force winds. This footage is important because it provides additional context and helps to illustrate the main narrative of the film. By including b-roll footage, we were able to show the behind-the-scenes process of creating a film and give the audience a more immersive and comprehensive understanding of the story we were trying to tell.

As we delved deeper into the world of film production, we were taught the importance of storyboarding. With this powerful tool, we were able to bring our vision for the film to life on paper, mapping out each shot and scene with vivid detail. We carefully planned out the visual narrative of the film, crafting a series of storyboards that would guide us through the b-roll shooting phase and help us capture all of the necessary footage. However, as we moved through the editing and post-production stages, we found that the process was not always linear. Sometimes, as we reviewed the footage and made revisions to the film's narrative, we needed to go back and rework the storyboard to fit our current vision for the project.

At least, we thought we needed to go back and adjust the storyboard. As it turns out, this was not what Roney had in mind: our storyboard was intended to be the launching point for our film, not an accurate recreation of our final product. But at the time, we assumed the two had to match perfectly, and so, every time we edited the film, we went back and edited the storyboard as well.

## **Field Work**

Once we had a storyboard, we needed to actually shoot the footage we'd dreamed up. As we prepared for fieldwork, I couldn't help but feel a mix of excitement and angst. On one hand, I was thrilled to finally be out in the field, free from the classroom to capture the footage that we had spent so long storyboarding and planning out. On the other hand, I knew that this phase of the project was one in which the tenth and eleventh grade collaborative aspect would really become a crushing reality.

When we showed up at the Mission Trails Visitor Center, we were greeted

by majestic views throughout the valley and that oddly familiar smell of sage. We were set free to go hike, walk, and most importantly, document. We took pictures and shot b-roll footage while the tenth graders got sound clips of the creek flowing. As our day trip was drawing to an end and we made our way back to school, something caught our eye. On the outskirts of the park, there was an unmarked construction site that resembled an industrial mine and had carved out a noticeable portion of the mountain. The views were both breathtaking and bewildering, leaving us wondering what kinds of things could possibly be going on behind the green fence. After hours of research and a little help for our community partners, we were able to identify the Superior Ready Mix concrete quarry. In the following days, this quarry became the focal point for our documentary and was the topic we built the story around.

Despite my class' constant whining about the tenth graders in the beginning, working together proved to be a bonding experience. Everyone ended up getting along pretty well in my understanding and we built a strong community. Nearly every single one of us had never previously met; distance learning proved especially difficult when it came to hallway chatter and cross-grade bonding. That made these field trips into our ecosystems so valuable, both for our research and for our relationships.

### **Editing our Footage**

The organizational element was a huge roadblock for so many teams. It was kind of a trial-by-fire situation where the groups who were diligent about organization, in the beginning, were set up to be much more efficient in this stage than those who didn't. My group didn't. It was purely an oversight. In the beginning stages of editing, we found that our lack of appropriate file naming made it exceedingly difficult to track down and use desired clips, including all the different takes and angles. Obviously, hindsight is 20/20, but I wish we had been more diligent about organization from the beginning. It would have saved us a lot of headaches later on.

The editing process involved a lot of collaboration and teamwork, particularly between the tenth and eleventh grade students. Although we were working on different final products, we shared the process and many of our resources during the stages of editing. We had been paired up with community partners and professionals in the field, so it was essential that the editing for the final films created a cohesive and polished product.

During the editing process, we incorporated sound design to enhance the overall impact of the film. We used a variety of techniques to make the documentary a more immersive experience. For example, we learned about splicing clips, and adding background music, sound effects, and voiceovers (particularly those from interview subjects) to enhance the storytelling and



really help us convey the message that we wanted for the final product.  
Preliminary Feedback

Most of our preliminary feedback for our project took place in the form of gallery walks, where we presented our work to our classmates, peers, family, and then our teachers. The process of critique happened such that it was a very “layered” system, where students would first critique each other (several times), and then the teachers would cycle around for their critique

With the feedback we received, we took it back to the “editing room” to start many parts over. While it wasn’t a complete overhaul, my group quickly realized that we were missing vital clips to match the interviews that we conducted. We took the feedback and, after a brief moment of angst, began the process of reshooting several clips and editing them in. Throughout the feedback process, it was sometimes difficult to remember that people were being critical of the product, not of us. Looking past our momentary personal difficulties, we found that nearly all of the feedback was helpful in some way or another; oftentimes it was just a matter of figuring out how to interpret what we received. The feedback helped us to improve our project, and we are grateful for it. I remember a brightly colored sticky note on my desk near my project after a critique session that instructed us to “fix the colors.” The critique was oddly vague, but it gave us the opportunity to consider a variety of possible adjustments and experiment with color grading.

### **Sharing With our Subjects (and Getting Their Feedback)**

After completing our rough cuts, we shared them with our interview subjects (community partners) to ensure that the films accurately portrayed the message we wanted to convey. This was an important step in the process as it allowed us to get feedback from the people who were most closely tied to the subject matter. We also took part in several gallery walks to collect feedback from our peers. This feedback helped us to make revisions and fine-tune our films before moving on to the final stages of production. We made sure that we addressed any concerns or suggestions that were provided by our interviewees, as it was important to us that the films were a true reflection of their experiences and perspectives.

As exhibition grew closer and weeks turned into days, my group became increasingly anxious about our final deliverable. We became extremely critical of the film, and the pressures of the upcoming deadline only amplified these critiques. Even after our formal “critique deadline,” we continued to make adjustments to the film. Oftentimes, the critique we received was from parents, siblings, or peers who happened to glance over our shoulders and see something. Although this feedback was sometimes unsolicited, we greatly appreciated it, as it helped us to see our project from a fresh perspective. Each time we made an edit to our then-“Final Cut,” we had to re-export and

upload the film all over again. We continued to make edits up until the day of exhibition, each time naming it a different variation of “Team 3 Final.” In total, we re-exported our final cut seven times.

## **The Premiere**

Exhibitions are a big part of our project-based curriculum and the exhibition for this project was no different. It required weeks of planning, during which students stepped up to lead different aspects of the planning. There were dedicated sub-teams to lead the event coordination, IT and systems, and even a social media and public-relations team. All of which were instrumental in the process. The exhibition took place at the Mission Trails Regional Park Visitor Center, where all groups presented and screened their films from the previous 12 weeks. The exhibition was an amazing chance for students to present their hard work to the community and for everyone to gather together and witness the project’s impact firsthand. It was also an opportunity for us to reflect on the process and to see the final product that we had created as a team.

Finally, after hundreds of hours, countless late nights, and a handful of weekend field trips, the three of us stood with a sense of pride in front of the Mission Trails auditorium and shared our work. We described our process and introduced our interviewees. We had a whole presentation prepared that, naturally, we veered away from in the moment. With that, our film began. During the eight minutes and eighteen seconds that our documentary screened, we stood awkwardly right up front, trying not to move. Why we chose to stand is still a mystery to me; it would have made a whole lot more sense for us to sit down and watch the work that we poured so much into. I like to think that our awkward posing was a deliberate choice, but the more likely reason is purely that we were paralyzed at the thought of being done.

## **The Inside Scoop – Tips for Teachers:**

Clearly outline the project and expectations in writing from day one

- Have a clear understanding of the project that will provide both vision and motivation for the remainder of the project.
- Include both a clear and understandable rubric and also a detailed schedule.
- The project outline helps to establish academic goals and actionable steps toward them.

No exhibition is too over the top

- Celebrate and share the finished projects with the school and community to build a sense of pride and accomplishment among students.

- Exhibitions/premieres allow the community to see the impact and value of project-based learning, not to mention fostering an important marker of completion for the students.
- If at any point an exhibition plan begins to feel unattainable, rope in some students to see what they think!

Let students wonder... Not every question requires an immediate answer

- Sometimes it's ok to let students wonder and figure it out themselves.
- Query helps develop critical thinking and problem-solving skills.
- Inquiry-based learning encourages autonomy, and ownership and allows connections to real-world issues and problems.

Allow room for flexibility, but stick to the point of the project

- Even the most coordinated and thought-out projects don't go perfectly according to plan.
- It's important to be flexible to embrace and accommodate change throughout the project without changing the entire premise.
- Even if you've carefully planned out every day of your project, be ready to make adjustments to your timeline in order to accommodate challenges while maintaining the spirit of the project

Make it "real world"

- Whenever possible, incorporate real-world examples into the project. For example, a project centered around aliens doesn't have to be a completely fictional project. You could tie in some real-world meaning by exploring extraterrestrial life and methods of scientific research in space.
- Ground student-learning in real-world contexts or problems, or in conjunction with community partners or experts.
- It's immensely helpful as a student when you can connect what you're learning in school with something real outside of the classroom, not to mention it's way more engaging!



*Students in Chet Flaum's class.*

# The Price of a Good Education

*Chet Flaum  
High Tech High*

**H**ey, I'm gonna need that hundred dollars by the end of the day," Max said as he double-checked the owed amount on his collection sheet.

"Look Max," Sam replied, "you know I'm good for it. I just don't have it right now. It's been... tough these last couple days." Max, usually known for working by the book, felt unusually generous that day, "Get it to me by the end of the week. I don't want to have to have this conversation again." Sam sighed audibly, took a large bite of his snickers bar, put his backpack in his cubby, and hurriedly made his way over to his desk in the third row.

Okay, time for a bit of context. Max and Sam were in second grade. I was their teacher, but I was not really a "trained" teacher. My senior year of college, I'd wound up realizing that after eighteen years of schooling, tens of thousands of dollars towards a liberal arts education, and majors in both Asian studies and Chinese, I had no prospects for a real job. I'd always loved the idea of living abroad, and after talking to a good buddy of mine, Addi, who shared both my majors and my predicament, we decided to move halfway across the world to start a new adventure. We consulted our favorite Chinese professor, Pin Pin Wan, who told us there was only one place to go—the land of amazing food, beautiful mountains, and his hometown: Taiwan. So it was settled. Now all we had to do was find a job. It turns out that if

you're from America, have no skills whatsoever in teaching or any real grasp of the mechanics of the English language, you're a perfect fit to be a teacher at a Taiwanese "cram school." Cram school is the place that students go after a full day of school, to sit in even more classes, trying to get ahead in their English abilities. I knew that my first year of teaching would be a challenge, but I had no idea what I was getting myself into.

Addi and I had taken a job at the largest cram school chain on the island. We'd been placed at a school in a suburb of a mid-sized city that was known as the Taiwanese Silicon Valley. It was a tough transition, as there were few people our age and almost no foreigners besides our co-workers. There was no public transportation, no easy way to make friends, and as we worked in the afternoon and evening, all restaurants were closed by the time we got off. Trying to find solace and put our passion into our work seemed our best bet to get adjusted to this new way of life. We'd signed a one year contract, and we were both determined to stick it out.

The cram school I worked at was a three story brick building, with four to five classrooms per floor. Each class had a primary Taiwanese teacher, whose English was nearly fluent, who would teach the students for the majority of the week. These teachers were always amazing in their craft, well trained, and held the students to high standards. Most of them had been at the school for years. Once or twice a week, a foreign teacher would come in and spend roughly two hours working with the students, while the Taiwanese teacher assisted. Most foreign teachers didn't last more than a few months at this school, as they'd either move to a bigger city or find a higher paying job, which meant that by the time students reached third grade, they'd already spent time with more than a dozen foreign English teachers. On top of that, most of their foreign teachers had, like us, no real teacher training, and no experience leading a classroom. To make matters even worse, the curriculums we were provided to teach consisted of the same blueprint on repeat. This was great for teachers with no to little teaching experience, but terrible for trying to inject creativity or ingenuity into the classroom. Each class culminated with a long written test that determined the vast portion of a student's overall grade. The students were well behaved, and did what you asked of them with no fuss, but they were tired after a long day and of doing the same things in class over and over, year after year. Behaving in class and getting good grades was of the utmost importance to their families, but there was no time for play or personal engagement with what they were learning. The students in that classroom had learned to succeed at "school" but hadn't been taught how to be curious to learn.

At around the six month mark, I decided I needed to mix things up. I'd learned the system inside and out, and could predict the regurgitated formulas for the lessons: sing a song, dance a dance, play a game, take a test. I was good at it, and my colleagues were happy to see me catch on so quickly.



Unfortunately, I felt like a fraud. It was difficult seeing these extremely bright kids be fed the same type of lesson every day, without exception, where little deep learning or critical thinking was possible. My favorite class of the day was a group of twelve second graders who were full of energy and loved to learn, so I decided this would be the class where I'd try to spice things up. Instead of rewarding students with stars on the whiteboard like I usually did when somebody shared a correct answer or helped a friend, I decided to reward them with fake paper money instead. They couldn't buy anything with the money, and it was useless by the end of the class, but they loved it. I had never seen them so engaged, and even the shyest kid in class was raising his hand with all his might hoping his contribution to the class discussion might lead to a crisp new hundred NTD (New Taiwanese Dollar) bill.

At first, the money played a small part in the reward system, but it soon took over the entire curriculum. After the introduction of the money was such a hit, I decided to allow students to buy a small piece of candy if they'd earned enough cash. Harmless enough I thought. One of the great parts about continuing to improve my Chinese was that I was able to understand the conversations students had with each other during breaks. It was actually perfect: at that time my Chinese was near a second grade level and I was teaching second grade students. I'd introduced the candy rule on a Monday, and that Friday I heard a conversation between two students during their last break of the day.

Louis: "Mark, Can you please give me \$50? I really want that last piece of candy."

Mark: "Hmm, I'll give you the \$50 today, but next week you have to give me the first \$300 you make."

Louis: "300? No way. How about \$100?"

Mark: "250"

Louis: "Come on man, please?"

Mark: "250"

Louis: "Fine."

Mark hands Louis the \$50 and they both walk back to their seats, unaware that I have any idea what sort of transaction they'd just made. These were kids who were singing songs about animals at the zoo in their English textbooks, but behind the scenes they were making deals under the table. They were capitalist masterminds, bargaining with interest rates, and were testing their loyalties and their word. I couldn't believe what I was seeing. That night I

kept wondering how I could bring this level of engagement and depth into our classroom? By the end of the weekend I'd devised a plan to start our own mini-economy.

I started by introducing fake money as a means to buy certain needs you might have in class. Needed to turn in homework late? Gotta pay a fine. You wanted to sit next to your friend during reading time? A small fee. There were ample ways to make money as well: Anything from turning in your assignment notebook with a parent's signature to picking up trash on the floor without anyone asking could earn you cash. Each student worked to make money. Everyone had a job that rotated each week. Jobs included candy sellers, selling candy each day at the beginning of class, desk inspectors who made sure everyone's desk was clean, and tax collectors who collected a certain portion of all student's income towards the bank that would go towards a pizza party at the end of the year if a fiscal goal was met.

Each day, students would get a basic income at the beginning of class, usually in the ballpark of \$300. The income would cover a number of standard expenses. For example, buying a piece of candy cost \$100, going to get a drink of water outside of break time was \$50 and going to the bathroom was \$20. I never said no to a kid asking to go to the bathroom, however if they didn't have enough money for a bathroom pass, they would take on debt. Sam, an outgoing student with big yellow and blue glasses, was infamous for spending money he didn't have, trying to nurse an insatiable sweet tooth. Each day, without fail, as soon as he walked into class and received his daily stipend, he'd buy three pieces of candy. The class would cheer at his bravado as they knew the comedy of errors about to unfold. Like clockwork, twenty minutes later, he'd need to go to the bathroom, and without any money he'd try to figure out a way to get some. Making deals with friends nearby or promising to sweep the floor afterschool, he'd get the twenty dollars and race off to the bathroom.

Sam was an exception. Most of the students adapted quickly to the financial rules of the class, and enjoyed the process of saving, spending, and working together to make the classroom a (literally) more enriched learning environment. Students proposed rules, and if I thought they seemed fair, I would try them out. We would watch a movie on Fridays for the last hour of class if everyone turned in their homework on time for a week. Some of the more capable students would stay after school and help those who were struggling to make sure their homework was submitted on time. We'd have extra "No Homework Mondays" if the classroom met a certain standard of cleanliness by the end of class each day the previous week. Students worked together to make sure all the glue sticks were back in the glue stick box, the markers had their caps on and the glitter (the ultimate danger to a clean second grade classroom) was placed far out of reach in the back of the cabinet.

The whole economy seemed to be going great, but I doubted whether I was truly helping these kids out. Like any capitalist society, the rich seemed to get richer, and the poor remained poor. Students were kind to each other at first, but once it was known that someone wasn't good for their word at paying money back, that student lost nearly all social (and financial) credit.

The irony in all of this was starting to become very clear to me. In the first six months of my teaching, I'd felt that the whole educational system felt transactional. I would tell students to do something, they'd do it, and I'd give them a good grade. They were doing their work for their grades, not for their own education. From first sight it may have seemed like this was a place of education, but for most of the students, they were just playing the game they'd been taught to play. Now, even though the class seemed richer (no pun intended), the transactional part of the lesson had gone from being implied to being explicit. The student were literally doing what they were asked to do so they could earn, invest, and spend money however they wanted. Was I really making class better in any way? Or was I just enforcing a financial system on a group of seven year olds during the one time in their life they didn't need to worry about it?

Though I went back and forth on the morality of introducing an economy into class, it started to take on a life of its own, and it was working: the pervasive sense of exhaustion and going through the motions was lifting. Kids arrived excited for class to start and ready to learn in a way I'd never seen before. Students were proud of the work they did together and held each other accountable for getting their work done in a timely fashion. They were diligent, hard-working and knew that together they could accomplish far more than what they could alone. It was unlike any classroom I'd ever seen before. Unfortunately, the parents didn't see it that way. My first inkling of a problem was my Taiwanese co-teacher, who always made sure to scrub any evidence of a private economy before another teacher needed to use the room. At this school, foreign teachers had no interaction with parents, and feedback was given directly by the foreign head teacher of the school. About three weeks before the end of the year, my head teacher sat down with me, explained that introducing money into the classroom did not follow the values of the school, and though didn't explicitly fire me on the spot, told me that the company would not be hiring me at any of its locations going forward.

Looking back on my memories of my first teaching experience and the economy I'd created with my class, I know the system I'd setup was flawed in many ways. Students were still learning in transactional ways, only this time the transaction was for fake money instead of for validation from the teacher and good grades. I was so focused on the rules of the economy that I didn't give proper time and effort to making sure the students were learning what they were supposed to learn to be successful with their next teacher.



*Second graders pose in their classroom.*

I was trying to teach students about the consequences of their actions with spending and saving, and to prepare them for the world of financial decisions, but I didn't have the experience or the knowledge to fully unpack with the students the emotions they felt when they'd made a purchase they regretted or didn't have enough money to spend. There was also, to state the obvious, an equity issue: I'd literally divided my class into "haves" and "have-nots." Much like the capitalist system in which we all live, my classroom was not designed for everyone to thrive. Before I'd started teaching these second graders, they may not have been interested in the content they were learning, but they were kind to each other. I had created a system that rewarded savvy financial decisions over kindness and empathy. Students stopped being kind to each other out of the goodness of their hearts if there was no financial incentive. In one instance, a girl named Debbie refused to help her friend Arthur pick up glitter he'd spilled until he'd promised to pay her for the deed. Moments like these made me stop in my tracks and think about if this system I'd put into place was doing more harm than good. The class was so alive, but the values were fading. Through all the problems of the system itself, I'd created a class that was fully engaged and present in the classroom, hungry for any chance to learn, work together, and succeed. I guess you could say they had fully bought in. I wondered how I could improve a second iteration of the economy the next year, but for better or worse I never got that chance.

When I started the year, I just wanted a job that would allow me to live in Taiwan. At the end of the year I lost the job, but found a vocation: I knew I wanted to keep teaching, it was just going to be a challenge to find the right setting where I could put my imagination and zany ideas into practice. Some friends of mine put me in touch with Patrick McMahon, a long-time High Tech High teacher who had relocated to Taiwan with his family. He was designing curriculum for Very Interesting School (VIS), Taiwan's first Project Based Learning school. VIS was exactly what I'd been looking for. I loved PBL from the minute I started, and though I never brought fake money back into the classroom, I was able to put to practice a world of other ideas I'd cooked up over the years. After two years at VIS, I was hungry for more, and now am in the High Tech High Graduate School of Education, teaching ninth grade humanities with the awesome Juli Ruff. I've kept the fake money out of the classroom but sometimes, when a student asks to go to the bathroom, for a split second I see Sam, holding three candy bars without a cent to his name, making a deal with a student to get the obligatory 20 dollars for the all sacred bathroom pass.





*Students at Al Qamar School decide how to price muffins for a bake sale.*



# Lightning in a Bottle: The Story of Al Qamar School

*Aneesa Jamal  
Universiti Teknologi Malaysia*

**T**he crucible moment came for me when, 16 years ago, I pulled my seven year old son from school. Once again. Thrice in four years. Was something wrong with him? With me? Or was it just that the schooling system was rotten?

The Indian schooling edifice is a highly teacher-directed, chalk and board, exam oriented system. There is little space for individuality or creativity. And I was blessed with a brilliant boy—one who recognized the alphabet at one and a half years, and started reading fluently at three. And was utterly utterly bored being made to relearn reading, given baby sums and forced to write.

As I homeschooled him and two younger ones for the next three years, I realized the damage I was protecting my children from—physical and emotional abuse, stress and despair and an internalized notion of the self as a “grade-grabbing” machine. We had fun as our system devolved into unschooling. We were free. Lazed around and read. Baked. Kids pottered about in the yard digging for earthworms. Raced like little Mowglis down the narrow alley adjoining our very suburban house. And astonishingly enough, they taught themselves—reading, math, geography, history, ecology, biology, you name it. Voracious readers do that. My method for unschooling was pretty much that—surround them with books, and they’ll educate themselves. We went off on holidays when other kids were busy with exams.



*Students and teachers investigate a tide pool.*

However, over the years, the children craved the company of kids like themselves. Oddly enough, they wanted to be “normal”, not freaks who didn’t go to school. So back I went with my eldest into the same system. He was old enough by now to hold his own and not succumb to the mechanistic, soul-deadening system we call schooling.

But for my younger ones—NO! I didn’t want to risk their entire groundwork I had laid to be washed away. No school seemed to fit—most loaded kids with pointless homework, had tests regularly like clockwork, forced children to sit and listen at an age when kids need to be talking and moving. Then, all of a sudden, one February morning in 2009, I woke up with an insane idea: “Start a school! A school that fits your definition of a school.” I tried to evade the onslaught of thoughts, wriggle out of my own head, shut metaphorical doors in my brain. But that deep burning desire to just go and start a school would simply not go away. It kept me awake, made me daydream. Forced me to confront myself. “Yes, if I didn’t like the way schooling was done, what was I doing about it?”

I tentatively tested out the idea with Hauroon, my husband, who by now was thoroughly used to my mad schemes. Surprisingly, he concurred. And that started us off on the journey that was Al Qamar Academy. As Muslims, starting up a small primary school wasn’t all that hard in 2009, because the Constitution of India gave the right to religious and linguistic minorities to start schools without a plethora of initial government permissions (that all changed very rapidly over the next decade under the new right-wing government). Hauroon and I had all the right academic credentials—he had



*A classroom at Al Qamar School.*

graduated from the world class Indian Institute of Technology. And, while no one in India was very clear on what my alma maters, Smith College and the University of Washington were, the “American” stamp established my credibility. We had to create a non-profit, charitable educational trust, get building, fire safety and sanitation approvals and notify the government that we were up and running. At least that’s what we thought initially... A well-reputed local lawyer helped us with the documentation, generously donated our start-up capital and leased his house at a rock-bottom rent. A few families decided we were worth the risk. We got nine admissions that year, including my own two.

It was all very well to dream that we would be a totally unstructured school along the lines of the Sudbury model. But that would not have worked in a community with deeply rooted beliefs in traditional teaching. I had to meet them half-way with something they could identify as “schooling”. A few Montessori-like preschools had started coming up in Chennai, where we lived. I researched the methodology for early education and immediately fell in love with it. I identified with the notion that children construct their learning, that teachers are facilitators, children have voice and choice, learning is holistic and each child is celebrated as an individual. I was really blessed to find a recently trained Montessorian who was willing to try out a start-up school. That left the older group of three students whom I decided to work with myself using my homeschooling/ unschooling principles.

“*Paagalon ka school*” (“School for lunatics”), “The Motley Crew”, “The Rag-Tag Army” were the not-so-flattering epithets the community used to



*A student uses Montessori manipulatives to explore addition.*

describe our school—one would have thought we had started a rock band, not a tiny little school with nine children and grand ambitions. “No exams, no homework, no tests, no school bags” was our motto. Naively, we assumed everyone would concur. It was an eyeopener as we struggled to garner admissions with this slogan. Imagine: a school where children roamed free. Played all the time. A school with no desks or chairs. But instead with lots of bookshelves. And paints, crafts and board games. A lovely little sand pit and a tap which gushed water at high speed. “Toys” to learn math. Maps to draw. Loud conversation in every classroom.





*Students playing a board game.*

Early years were tough. We stuck to our philosophy of pressure free, child-centered education—never mind the financial pressure from low admissions, insistence from parents about homework or tests, complaints about mudstreaked kids. Our philosophy was that children are natural learners. Remove the curbs, pressure and the adult control and surround kids with learning opportunities, they'll learn. And they did. Our Montessori started churning out avid readers who penned short stories at the age of six. Who liked to add or subtract in millions. Who composed poetry or created artwork, alongside giving a lecture on the continents and oceans.

Montessori schools in India are always under the pressure to compromise their principles so their graduates can “fit” into regular schools. By the time they are five, children are forced to learn writing, spelling and math as per the admissions requirement for the next school. But at Al Qamar, the Montessori section was a law unto itself. Teachers had complete freedom to run their environments in adherence to Montessori principles. Children “chose” to work, if and when they wanted to. Teachers gave presentations to individual children or in small groups. Children collaborated on projects. The cohort had children across three year bands. It felt like a family. No pressure, no exams, no homework, just learning for the sake of learning. No, it didn't work for all children. Especially those with the few parents obsessed with exam success, who felt they had wandered into an alternate reality. Those families left soon.

With the older ones we went many steps further. We had an array of



*Reading stories in the playground.*

speakers constantly coming to give talks to the kids. Kids sprawled on the floor, listening intently, questioning, arguing and clarifying with a Supreme Court Judge, a nuclear scientist, a lawyer, a religious scholar. Anyone whom I could inveigle into popping in and interacting with the kids, came. And we went out—at the drop of a hat, we went out. Trips, excursions, treats. We partied—that too at the drop of a hat. Eid party, another Eid party, beginning of the year party, end of the year party, just a party—kids planning the whole shamboozle, managing and running the entire show. And for quiet times, we had books. Lots and lots of books. Board games. Art in every classroom. Kids could freely go off, curl up in a corner or a bean bag with a nice book and tune the world out. Often found them in the most bizarre postures deeply immersed in books. Classes defied description—sometimes held in a classroom, sometimes in a common room, sometimes outside under trees. It depended on the mood of the teacher and the mood of the kids. The teaching involved a lot of discussion where children happily put forward their points of view, questioned and argued. Science classes had us looking for bugs, examining pond water, smelling garbage and going off yet again on one of our jaunts. Kids don't learn as much within the four walls of the school as they do outside. That was our philosophy, anyway.

Kids painted the facade of the school. Took three weeks and a lot of hard





*A teacher teaches a class in the woods.*

work. They ran businesses every time we had a school event—grasping fellows they were! No one was immune to their charming sales pitch. We didn't have a playground, just a narrow strip in front of the school. That was sufficient. Don't ask me how they all knew who was playing cricket and who was playing tag. They just did. We had a "Me-Time"—the last hour of school where kids could do just what they wanted. "Me-Time in Al Qamar is a tautology" a parent commented sardonically. They baked, made cakes and pizza, played chess and checkers, inventing rules all along the way, fought—oh yes they fought! But Me-Time was their time. And we teachers respected it. Then, two years ago, they started their own system of governance—their legislature sat down and made laws which were duly transcribed into a "Law Book". Their judicial meetings were a treat to watch. Kids brought cases against other kids. As teachers, we wondered if something as trivial as "He put his books on my table!" was serious enough to warrant a court case, but then kids are kids. A judge and jury were elected. The plaintiff and defendant dragged friends in to be their lawyers. It was a Town Hall model—so everyone participated. Gaps in laws were rapidly remedied as new laws were passed, with a speed that would have given any constitutional expert a heart attack!

And they were good kids—they had a heart. Every year, in Ramadhan, they would earn money through chores, pool in the monies and donate to charity. Their businesses set aside profits for donation. They raised money for the migrant workers who were stranded in Chennai due to the COVID lockdown. They helped each other. Through an intense three-year outdoors ecology program, these kids learned to love nature. Their trips to beaches, wetlands, birdwatching, organic farms, meeting activists and participating in recycling programs, gave them a rare perspective on the importance of nature conservation. They drew, wrote and spoke for nature. I don't think anyone

can take that away from their hearts.

What about the academics? Surely, children having so much fun, no homework, and no exams—all the way up to eighth Grade, would surely wear dunce caps at regular schools. Aha! That's the nub! These kids outshone regular school kids. The school was routinely placed among the top 10 schools in a national benchmarking exam. They won writing awards. Cracked the Cambridge IGCSE and the Edexcel Achievements. Won laurels at online international math competitions. Someone or the other kept qualifying for gifted programs offered by top American universities. Last year, 75% of the upper graders were invited for the national Gifted exam. One girl created a divisibility rule for 7 from scratch. And to cap it all, one of our alumni was the only Asian selected for the prestigious International Mensa Scholarship last year.

"Impossible!" you exclaim?

No, a reality!

Revisit the vision I laid out at the beginning—"Kids are natural learners. Remove the curbs and not only will they learn, they will shine!"

To create this weird and out-of-the-world institution (institution—what a misnomer for Al Qamar) needed deep commitment. It was our passionate belief in the "rightness" of this system of education that drove us day in, day out. We knew that kids needed this kind of schooling to blossom and develop their inner potential.

Hauroon and I had to sell our dreams to teachers—to come work for us. Working in alternative schools is extremely difficult. Kids have you on your toes all the time! These teachers needed to drastically change their worldview about teaching and learning. We ensured they got opportunities for professional development and forums to air their views and discuss their misgivings. It helped to be open, to share, to discuss and persuade. Teachers could walk into my office anytime. We all sat on the floor and ate together. Teachers felt confident enough to challenge me if they felt I was straying from our principles. And I really appreciated that. Relational transparency based on mutuality and respect was crucial.

Changing parental attitudes and getting their buy-in was our biggest challenge. We constantly faced pressure to compromise our values.

"Be a little strict with her!" "Give some homework at least?" "Can't I teach at home?" It was tiresome hearing these barbs year on year, but we hung on. We stopped teaching a child at school, if we heard the parent was trying to teach at home. Or if a child went for out-of-school tutoring. Called the parents in

and steamrolled them. Iron fist in velvet glove approach. It worked most of the time. We had to walk the walk and talk the talk. Hauroon was the tough guy there. Me, I was guilty of slipping them some homework now and then. But Hauroon created procedures to track the amount of work teachers assigned. And came down heavily if he felt we were exceeding our limits. He constantly reminded us about brain-based teaching—kids need downtime for their brains to be fresh. Thinking is learning. No spoonfeeding. Let them work out problems themselves. It's about working smart, not working hard. So, no homework. None. Nada! No tests. No exams Except of course the Asset exam—a nationwide benchmarking exam administered by Educational Initiatives to measure learning outcomes in schools. Eventually, I started seeing the importance of his values, which were reflected in his behavior, and they became mine too.

And finally we needed a heart full of compassion. For a teacher who had to take leave to tend to a sick child. For a parent who couldn't pay fees, because his business had collapsed. For the children for whom a trivial spat with a friend could be heartbreaking. Sometimes I felt emotionally exhausted at the end of the day. All I could do was come home and curl up with a book.

So did this all work? Unfortunately no.

Regulations governing schools in India are written on shifting sands, especially in recent years. When we started up, minority schools required very few permissions to operate. Over time, the constitutional right to establish and run a minority school has eroded. Interpretations of rules and regulations by the authorities are highly subjective. And legal recourse is not a practical option. This opens the door to bribery. Schools that need permissions or need the government to look the other way simply pay bribes. Can't judge them for doing that—children's education is at stake. However, Hauroon and I couldn't bring ourselves to compromise our value system. It hurt us in the end. Despite waiting for 7 years, we never got governmental permission to run the school. In 2021, Al Qamar closed down because as leaders, we could not handle the external challenges of government regulations. We couldn't acquire the necessary land, or raise capital to build the infrastructure. We started seeing shrinking admissions as parents doubted the viability of a school, which after 11 years still doesn't have a place to call its own. Yes, it's heartbreaking. Heartbreaking when I hear children worry about being beaten in the next school they go to. Worry about not having freedom. Worry about how their next teacher will deal with them. Heartbreaking when I consider the loss of human potential due to the mind-numbing, soul-deadening school system which sucks the creativity, originality and confidence out of our young ones.

So was I successful? All I can say I tried. But at the end of the day, I pray my Lord judges me with mercy when it comes to Al Qamar. Ameen.



*Garrett Bucks' kindergarten photo*

# What I Learned in School

## A Partial Accounting

Garrett Bucks  
*The Barnraisers Project*

*This article was originally published in The White Pages, a Substack newsletter written by Garrett Bucks, founder of The Barnraisers Project, “a nationwide movement of white people learning together how to organize to end white supremacy and to become partners in building a better world.”*

Clancy School was a revelation. You weren't home alone anymore, in your brown house on the frontage road. You weren't the small brother lost in a huge crowd of much larger brothers. You were a member of something. You were a kindergarten Merry Mouse. All you Merry Mice took what seemed like a decade to unzip your snowsuits in the morning, but together you could accomplish remarkable things; you could learn about letters and scissors and Hawaii (there was an entire unit on Hawaii! The place least like Clancy, Montana any Merry Mouse could imagine!) and get scared together when the very loud bell rang in the very old gym. You all got chicken pox at once— an early, important lesson, likely to be ignored down the line. You learned from your mom to be disappointed that the Letter People—the cartoon character letters from whom you learned the alphabet—were all boys. You didn't process that you and the rest of the Merry Mice, the multiple Codys and the Brandys and the Tiffanys, were all White. You didn't process that some of your parents had jobs at desks and offices down the road in Helena and some of your parents had jobs outside and some of your parents worked on land owned by other people's parents

and some of your parents didn't work at all.

Some of those lessons would have been important to learn. You knew pieces of the lessons, but not all of them. You knew that some people in small towns in Montana were Crow and Blackfeet and Salish and that you and the people in your town were not, but you wouldn't learn yet that there was a difference between Clancy and Lodge Grass and Heart Butte and Arlee, that home and theft and discovery all have different meanings depending on who is doing the talking. You didn't learn that Clancy came to be because of a war. You didn't learn that the war never ended.

What you did learn, though, was that whatever school was, it was something you did together. You moved away from Clancy in second grade, which was strange. People didn't really move in or out of Clancy School. You moved in the middle of *The Phantom Tollbooth*. You had all been reading it together, you one-time Merry Mice. On your last day, your class gave you your own copy so that you could read along with them as your family drove to Maryland. They all signed it, all those Codys and Tiffanys and Brandy's, with their bubble letters and overly-large cursive loops.

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In Columbia, you caught the bus behind your cul-de-sac to Thunder Hill Elementary School. Your street was named after a line in an Oliver Wendell Holmes poem. All the streets around you were. That's how you learned that you now lived in a Planned Community— a place where everything is in its right place, where there isn't a public city government but where every neighborhood has a very nice swimming pool. It would take you a while to learn that the second word in the phrase *Planned Community* meant something different here than you had been taught.

The streets to school were winding and forested and the ride was long enough that if you had ever gotten lost, you would never be able to find your way home. By the time your bus got to Thunder Hill, all the streets were named for Andrew Wyeth paintings.

At Thunder Hill, you learned that diversity was a good thing. That's what people loved about this place, with its Great Man street names. It was intentionally diverse. It wasn't all Brandys and Codys and Tiffanys. Your classmates were Black and White and Korean and Pakistani and Chinese. Back in Clancy, there was only Christmas. There were more holidays now. That was a good thing to learn.

You also learned that the most important distinguisher of all was between the successful and the non-successful. You had classmates who were esteemed



violinists and prodigious lacrosse midfielders. You knew this because their parents took them to lessons and practices all the time. There was a music teacher at Thunder Hill who loved the sopranos. You got to be a soprano only if you were the best, only if yours was one of the most beautiful voices. Every once in a while, a kid would ask if that was fair of her, because not everybody could have a soprano singing voice. She said that even if you were an alto, you could work hard to be a better alto. You'd just never be a soprano.

You learned that of all the ways to be successful the most important one of all was to be smart. Being Gifted and Talented was the floor. The real aim was to be accepted into THE Center For Talented Youth at THE Johns Hopkins University. You didn't know what happened at the Center For Talented Youth, but you knew that you were supposed to want to be there, that you didn't want to be an untalented youth with a more open weekend schedule.

White kids went to CTY, at least a lot of them did. You learned that there was a right way of being White, and that being from Clancy, Montana wasn't the right way to be White, which meant that you had more time on your hands. These were the years of stomach aches. You wanted to be the right kind of White so badly because you wanted people to think you were smart too. You petitioned to take the gifted and talented test over and over again. Eventually, you wore them down.

Before you took the test, you were in a class with more of the Black kids. You learned that the goal was to get out of those classes. You also learned that you weren't supposed to say that. You learned that you nobody asked why the Black kids were in those classes, or why they couldn't petition to take those tests. Or at least most people didn't.

You learned that you loved Ms. Swerdlin's fifth grade class because she hated those tests. She was the only one who said they shouldn't exist. She was the only one who stole the Gifted and Talented curriculum and taught it to everybody. She was the only one that seemed to remember anything about all of you besides whether or not you were on the right track. You loved her so much. Your stomach aches ended sometime around then.

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The thing that you learned at Dunloggin Middle School was that middle school is awful for everybody, but in the moment it feels like it's only awful for you. You learned what it was like to get shoved into the creek behind the school and to get a strong right hook to the face on the school bus. You learned that it's really tough on your parents when you keep coming home with those stories— that even when, by the end of eighth grade a couple of the popular kids discovered punk rock and took a shine to you because you

could make them Fugazi and Hüsker Dü mixtapes, your parents wouldn't stop worrying. You wouldn't understand that until decades later when you'd spend an entire afternoon distractedly waiting for your own kids to come home from school and report that there were No Bullies Today.

The fact that you didn't know that those years stunk for everybody would eventually be much more of a curse than any snapped towels in the locker room. It would take decades before you would have a sense of what it meant not just to be White, but to be a White Boy and then eventually a White Man. It would take decades to learn that there was a unique danger in all of the moments where you believed yourself to be uniquely aggrieved. You didn't know about Chekov's Victimhood yet—that if you load a White Boy up with a sense that the world owes him a special debt in Act One, you'd better watch out because at some point, at many points, he's going to decide that he's the only human being who's ever been wronged. At some point, at many points, he'll forget that he doesn't actually know what it feels like to have his body under siege, to feel like he's been erased.

You didn't learn that you can have a few really bad years and that, like all of us, you're allowed sympathy and love, but there's still a bigger story at play and you aren't always in the middle of it.

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Anyway, middle school really did get better by the end, and in some ways it wasn't even that bad. You played a lot of flashlight tag with the kids on your cul-de-sac. And the first month at Wilde Lake High School was actually pretty terrific. But then you moved again, back to Montana, to Missoula, to a house under the mountain and near the campus and next to the park with the big bandshell and just a few blocks from a bookstore and coffee shop and the biggest record store you'd ever seen. Back then, your family could afford a house in that neighborhood. And since Missoula was a city, at least by Montana standards, that meant that there were choices to be made.

Your parents sent you to a Catholic School—the first and last time they sent any of their six kids to a private school. They didn't do it because they thought it was better or more rigorous or anything like that. They did it because it was smaller and that meant there would be fewer tough guys to take swings at you and fewer hidden corners for them to get away with it. Plus, it was cheap. Their deal with you was, if you liked it after the first year, you would get a job and pay for the biggest chunk of it.

You ended up liking that deal.

You liked the restaurant dish pits and prep kitchens that the deal ensured



*Garrett in high school.*

would play a large part in your high school experience. You had a few teachers there too— musicians and writers and parents working two other jobs and guys named Randy who were secretly the best cooks in the world and meth heads and alcoholics polishing off bottles of Gato Negro in the walk-in and born agains and liars and a whole lot of people who were patient with your clumsiness with a kitchen knife.

You would later learn that you would have been just fine in the bigger public school, but you didn't mind the smaller Catholic one. It's hard to say you learned much about Catholicism. One day, in Mass, you went up to take the Eucharist and then realized mid-way up the aisle that you weren't supposed to do that. You took the sacrament anyway and— in a manner that you thought was surreptitious but probably wasn't at all— you slid the Body of Christ into your pocket where it would turn into crumbs. Maybe you should have paid better attention in Theology class.

You didn't stick around that school because you believed it was better than any other school. In some ways, it was worse—a shabbier building, fewer classes, lower faculty salaries. There were some great teachers though. And some nice kids. And you loved the debate team. Mostly, though, you stuck around because, while you didn't have the words for it yet, you wanted the challenge and promise of sticking around a place, you wanted to commit to a group of people. You hadn't had that since Clancy School.

You were back in Montana, which meant that your high school was mostly White, though not totally White. There were a few Salish kids, and there

were some White guys who treated the Salish kids like crap. Those same White guys—guys with pick-up trucks and chew bottles who knew how to hunt and handle their liquor around a bonfire—would treat a lot of kids like crap: girls, Queer kids, kids they suspected of being Queer. Some of the cruelest guys would eventually come out of the closet themselves. Even more of them would grow up to be pretty nice eventually. At the time, all of them were figuring it out.

But that's not the lesson you took at the time. Those guys were jerks, you decided, which was how you decided that by crafting an identity that looked different-enough-from-their-whole-deal, you got to be a good guy. So that's what you did. They hunted, so you were a vegetarian. They drank, so you didn't. They wore Nikes, so you did a class project on how Phil Knight was a criminal because of sweatshop labor. They used words for women or for gay kids or for Salish kids that you didn't use. You went to Indigo Girls concerts and pow wows that they wouldn't come anywhere near.

You were learning a lot of kindness in those moves. The thing was, you didn't yet know that kindness and empathy could just be a thing you just did for its own sake. You didn't yet know that they didn't prove anything about who you were and who others weren't. You didn't yet know that kindness as a badge of exceptionalism isn't quite kindness after all.

But you also learned that there was more than one way to be a White Guy. And that's good. Some day, many years later, you'd learn that one way to be a different kind of White Guy is to imagine that all of you, together, could figure out a new path. You'd start learning that when you got letters from a couple of the guys with the trucks and the guns, now middle-aged, now Dads too, now full of some of the same hopes and questions and discoveries and regrets as you. The letters would say they were sorry, that they shouldn't have been so cruel to everybody. Your reply back would say that you were sorry too, that you shouldn't have been so full of yourself. You all thought you had something to prove.

Once you started noticing the lessons, you couldn't stop. You discovered more and more of them, or you remembered more and more of them.

One year, in high school, there was an award ceremony. You won a lot of awards. It was important for you to win a lot of awards. You can take the converted-striver out of suburban Maryland but...well, you know how it goes.

Your mom was in the audience. A couple of times, when you got your award, you made a little show of it—an exaggerated walk or silly dance on the way up to shake the principal's hand. You had learned the benefits of preemptive

goofiness by that point. Make 'em laugh first before they can decide what the joke's gonna be. It's an old trick.

It wasn't your mom's trick though. You sat back down next to her and she told you, politely but clearly, to knock it off, to stop trying to take up more and more space. This was the same mom that noticed those All-Male Letter People back at Clancy School. This was also the same mom who, back in Maryland, must have seen the lessons that school was teaching you about Blackness and so started taking you to an AME church with her boss, one of Howard County's most legendary civil rights leaders. She had you sing in the choir. She asked her boss to tell you about her memories of Thurgood Marshall. She had you listen to stories that weren't yours, but were yours to learn from all the same.

You learned a lot in school. Not all the lessons were the right ones, but the useful ones were always there, waiting for you. You would find them on your own time. You would have some help along the way.

# Contributors

**Stephanie Antin** is the Community Engagement Specialist at High Tech High. She is an LA native who spent 15 years in television news and won multiple Emmy awards. She founded her first company in 2004 and then started her own marketing company in 2016. Stephanie specializes in brand awareness and engagement through social media for schools and nonprofits. In her spare time, she loves to travel, practice yoga and paddleboard.

**Carol Battle** is a 20 year veteran of public education. Her experiences as “the one” African-American student and teacher in most of her academic settings have shaped and driven her pursuits in equity and diversity issues. She has taught in both Texas and California and in charter and traditional school settings. Carol’s current research interests and pursuits include BIPOC educator retention from pre-service to veteran. Prior to joining the High Tech High Graduate School of Education, Carol served as CSUSM’s 2018-2020 Distinguished Teacher in Residence and Elementary and Middle School Humanities teacher in San Diego. Her emphasis on all campuses was infusing analysis of texts and historical events with a multifaceted lens. Carol has also been a Teacher Consultant for the San Marcos Writing Project, a Board Member of the California Teachers of English where she spearheaded the addition of a Diversity and Equity committee, and has written a column for their quarterly publication, *California English*.

**Garrett Bucks** is the founder of The Barnraisers Project, which has trained nearly 1000 participants to organize majority-White communities for racial and social justice. He is also the author the popular newsletter, *The White Pages* on Substack. Originally from Montana, he lives in Milwaukee, WI with his wife and two children. His debut book, *The Right Kind of White*, will be published by Simon and Schuster in the spring of 2024

**Mike Cho** is a Korean American Humanities teacher who has dedicated the past five years to nurturing young minds at High Tech High International. With a deep appreciation for creativity, Mike inspires his students to think critically, embrace diverse perspectives, and explore the world of arts and culture. His inclusive teaching approach fosters a vibrant, engaging classroom where every student feels valued and empowered.

**Geneva Clark** is the Environmental Science teacher at High Tech High International. She received a Bachelor of Science in Environmental Science from SDSU, which gave her a planetary perspective on how everything is connected to a greater whole, as well as elevating her awareness of how human activities are changing the Earth. She recently acquired her Master’s in Teaching with an emphasis in Conservation Education through the San



Diego Zoo accredited by Miami University, which cultivated her vision of creating a community of learners driven by science and service to the planet. Her passion for scientific knowledge, higher truth, and human connection aligned her path into becoming a teacher and lifelong learner.

**Chet Flaum** is a student teacher at High Tech High, teaching ninth Grade Humanities with Juli Ruff, and earning his Masters of Teaching at the High Tech High Graduate School of Education. Prior to moving to San Diego in the fall of 2022, he lived abroad in Taiwan for eight years, working in education and studying Mandarin Chinese. During the last two years in Taiwan, he taught Music, Media, and Art at VIS (Very Interesting School), Taiwan's first Project Based Learning high school.

**Sean Gilley** has been an educator for over 15 years. He started as a para at San Francisco Unified School District then found his way to San Diego and was an eighth-grade Science teacher for the last seven years. He has never been satisfied with what a traditional classroom looks like and when you enter his room that is evident. He looks to continue to try new things in the classroom and have students be given the chance to learn in a variety of ways.

**Curtis Taylor** is an improvement coach at the High Tech High Graduate School of Education's Center for Research on Equity & Innovation. Curtis has made equity in math his priority. After working for over a decade as a math teacher, he has served as the co-project director for the Lesson Study Fellowship at all High Tech High Schools, a collaborative effort to promote more equitable practices in math classrooms, and currently serves on the High Tech High Graduate School of Education faculty.

**Michelle Jaconette** teaches fourth grade at High Tech Elementary Point Loma. She grew up in Santa Barbara, California and came to San Diego to attend UCSD. As an undergraduate, Michelle worked as a photographer for the UCSD Guardian, and a writing mentor at the UCSD Writing Center. After graduating with a BA in Literature/Writing, Michelle became an Academic Coach at High Tech Middle Media Arts. In 2015, she was became a founding teacher at High Tech Elementary Point Loma. When she is not at school, Michelle enjoys traveling, reading, swimming in the ocean, camping, doing word puzzles, hiking and watching Jeopardy!

**Aneesa Jamal** was the Head of Al Qamar Academy, a progressive micro-school in Chennai, India for over a decade before the school shut down. As a constructivist educator, Aneesa believes firmly in enabling children to nurture their innate passion for learning, creating, discovering and innovating. An alumna of Smith College, USA & an MBA from the University of Washington, Aneesa is currently pursuing her doctoral degree at Universiti Teknologi Malaysia.

**Drew Nelles** is a graduating senior at High Tech High Mesa and will be pursuing a degree in Biological Sciences from Vanderbilt University in the fall. During his time at High Tech High, he has served on several leadership councils in an effort to make project-based learning more widely known. Through work with teachers, students, and administrators from schools across the globe, he has had the opportunity to share High Tech High's unique approach to teaching and learning.



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