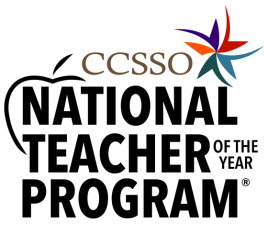


## 2022 National Teacher of the Year FINALIST



**Autumn Rivera**  
Colorado

School: Glenwood Springs Middle School  
Subject: Science  
Grade: 6

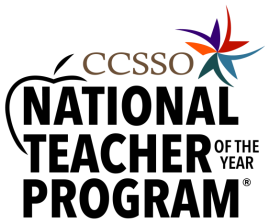


**Autumn Rivera** is a sixth-grade science teacher at Glenwood Springs Middle School in Colorado, as well as an adjunct professor at Colorado Mountain College. From assisting in a preschool while a high school student, to tutoring fifth graders while in college, to volunteering at an orphanage in Kenya one summer, Rivera has enjoyed working with children most of her life. During her 17 years as a professional educator, she has worked with elementary to postgraduate students. Rivera holds a Bachelor of Arts in biology and a Master of Arts in Teaching in secondary science from Colorado College, and a Master of Arts in educational leadership from the University of Colorado, Colorado Springs. She is on the Colorado Science Conference planning committee and the Colorado Science Education Network steering committee. Rivera is the Region 3 Elementary Board representative for the Colorado Association of Science Teachers; volunteers with the American Association of Chemistry Teachers; and has presented a variety of professional development courses at the Roaring Fork EdTech Summit and the Colorado Science Conference. In addition to being the science lead and a track coach at her middle school, Rivera holds other district leadership roles. She serves on the Roaring Fork School District's interest-based bargaining committee and is building advisor for the mentor and advisor program. As design facilitator, she plans, organizes and runs schoolwide events such as student-led conferences and Better World Day. Rivera is also a track coach at her middle school. In addition, she enjoys hiking, traveling, reading, and spending quality time with people she loves. Parra-Quinlan is the coach of her school's Lego League Robotics team and the sponsor of its STEM Club (known as SIMI: the STEM Institute for Manufacturing and Innovation). She also is director of the Mesa Public Schools' summer Aerospace Academy. Parra-Quinlan holds the rank of captain in the Civil Air Patrol, where she volunteers as the statewide Assistant Director of Aerospace Education. As a volunteer, she also serves as the Aerospace Education Officer with the 305th Squadron at Falcon Field in Mesa.

### **Application Questions**

- 1. Describe a content lesson or unit that defines you as a teacher. How did you engage students of all backgrounds and abilities in the learning? How did that learning influence your students? How are your beliefs about teaching demonstrated in this lesson or unit?**

I can see my 6th grade students roll their eyes as they watch me place two sealed cans of soda, a Mountain Dew and a Diet Coke, into an aquarium filled with water. I can hear them whisper to each other, "of course they are both going to sink; we aren't in the first grade!" But then, one doesn't sink; the Diet Coke floats to the top! I've caught their



attention, as their eyes widen and their excitement is audible. Thus begins the lesson, which is solely based on student questions and curiosity. This simple science lesson, an introduction to density, defines me as a teacher.

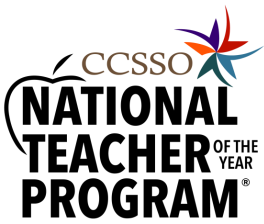
In front of a classroom of 24 students grouped four to a table, I stand beside the aquarium. The students enthusiastically call out possible reasons and try to figure out what is causing this phenomenon. I ask them to talk in their table groups and brainstorm ideas. I hear excited chatter, some in Spanish, some in English, as they come up with ideas to explore, such as “reverse the order of placing them” or “put the cans in upside down.” Amid their amusement, confusion, and moments of insight, I physically test each idea as they present it. Then I ask probing questions that will make them think further, but I do not blatantly give them any answers.

Even after they have teased out the concept that is density (the Diet Coke has less sweetener dissolved in the liquid; therefore, it is less dense than the water and floats), the students aren’t finished. Next, they need to apply it further to a new phenomenon as I build for them a density column. This is where different liquids in a container self-stack with the densest on the bottom. The lesson is a constant cycle of showing students something new and having them work in groups to explain what is happening, using science modeling and discussions as their modes of explanation.

Students come from a vast diversity of backgrounds and abilities in learning in my classroom. I have students who have parents with advanced degrees and students who have never before been in a public school with formal education. Therefore, I always find it very important to give my students common background knowledge via an anchoring phenomenon.

At the beginning of the school year, there are always a few timid students. However, by encouraging students to engage together, both in small groups and as a class, in forming and testing questions, we can celebrate each person's unique viewpoint. Something they might not have thought about is brought up by someone else, and, as a team, they work together to investigate the problem. Of course, there are no unacceptable or stupid questions. When we celebrate each person’s specific background, it allows us to collaborate to better our learning and ourselves.

I teach minimally through note taking and lecture, (although Tik Tok played a role during COVID-19 online education!) and instead strive to instill a passion of curiosity in my students’ learning. Yes, they can memorize a collection of facts, but how can it help them in the future? Learning how to learn, how to ask questions, how to investigate on



their own, and how to follow the questions that arise from what they learn is the environment I try to create in my own classroom.

This basic introductory lesson demonstrates my philosophy about teaching because I am mainly the facilitator in their learning. If they want me to shake up the soda cans and put them back into the water, I do. Place them in at a different angle, done. I am a guide in their learning as they discover the answers themselves. I am not telling them what density is, but instead showing a phenomenon where they can discover the content on their own, demonstrating mastery.

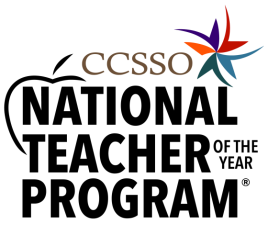
**2. Describe a project or initiative you helped create which contributed to the improvement of overall school culture. What was your role, and what is the status of this project today? Please include evidence of student impact.**

Following an EL Education training, four coworkers and I brought “Crews” to Glenwood Springs Middle School (GSMS). Crews are teams of one teacher and 15 same-grade students who meet daily to share emotional, social, and academic needs. We first introduced our staff to this idea by facilitating a Crew experience for them. Following their enthusiastic buy-in, we changed our school’s schedule and structure to accommodate Crews.

Crews circle-up daily to reinforce academic achievement and focus on character development. We discovered that both parts support students and improve school culture. Over time, we changed the same-grade aspect, so the crews contain mixed sixth, seventh, and eighth graders. Relationships last longer as the students stay with the same leader and crewmates over all three years. Crews become families.

I expanded the Crew model to align with EL Education’s Better World Day, where students spend an entire day giving back to our community in the way that they choose. Opportunities I’ve coordinated for Crews have included volunteering at senior centers, making dog toys for local shelters, creating bookmarks for our library, sewing bags for children with severe medical diagnoses, reading books in Spanish at a preschool, and making placemats to send with Meals on Wheels. Even during COVID-19, we decorated our town with yard signs of encouragement and gratitude.

After compiling the opportunity choices, I let the Crews decide which to do. I include leaders with contact info and links for enrichment. I design lessons which the teachers appreciate. I also schedule the day, contact the press, and provide optional activities if tasks are completed early.



Every year Better World Day is a favorite among students. At the end, students are asked to share about their participation. Here are a few of their written responses:

“Doing stuff for others is fun!”

“Walking is not hard when it’s with people you know.”

“Making toys for dogs is fun and messy!”

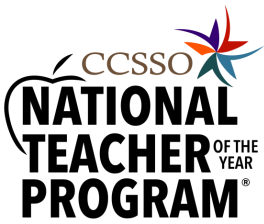
“If we work together we can finish things much faster.”

I’ve continued adding to our Crew model with our annual PAW Games. I conceptualized this with a former co-worker in my initial year of teaching and developed it at my previous school. PAW Games is a school-wide winter Olympic event which divides the school into four teams to compete in fun and silly contests. At my current school, our four teams are called Houses and are made up of about seven Crews each. Leading up to the Games, Houses pick a mascot, decorate their doors/hallway, write a team cheer, and select a subset of students to compete in the actual competition. Each House is assigned a theme that demonstrates a habit of power and wellness, such as healthy eating, compassion, or teamwork.

On the day of PAW Games, Crews come to school dressed in their House’s color. Wigs, capes, and face paint all help build anticipation for the Games. The day is filled with comradery between grade levels, enthusiasm among the Houses, and perseverance in the students who compete. During the games, the controlled chaos called middle school is celebrated! Students and teachers compete side by side, screaming for their team to pull harder at the tug-o-war, run faster in the scooter relay, and jump higher during the balloon pop. At the end, the winners are awarded the PAW Prize which is permanently displayed for all to see.

Today, instead of teams just for PAW Games, we have House Colors which last the entire year. Each Crew is part of that Crew House for their time at GSMS. This expansion of the Games has made a huge impact in students feeling a part of something bigger. Sixth and Eighth Graders high-five in the hall when they see someone wearing their same color on House Color Day.

It’s fulfilling to see how these three structures which I helped create - Crew, Better World Day, and PAW Games - have joined together to produce a stronger school. We have continuously upgraded these initiatives to meet our unique needs, not only improving our school culture, but also increasing our students’ sense of belonging in school and in the community.



Crew continues to be a highlight of GSMS. When I received my Colorado Teacher of the Year Award, it was my Crew, sitting in the audience, that most warmed my heart. They cheered the loudest, rushed to hug me, presented me with flowers, and stayed for photos with me afterwards!

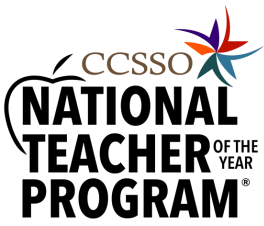
- 3. How do you ensure that education transcends the classroom? Describe specific ways in which you deliberately connect your students with the community. How did you collaborate with others (e.g. colleagues, students, families) in this work? Please include evidence of student impact.**

Teaching children that learning happens only in a classroom is a fault of our educational system that I try to disprove as often as possible. For five years, my students have spent their first semester on a Colorado River Expedition learning about the river and its watershed while in the classroom, in the community, and in the water!

They learn that the Colorado River is the most important river in the southwestern U.S. It drains a huge watershed covering parts of seven states, including the whole western half of Colorado. Beginning in the mountains of north-central Colorado, it flows southwest through Glenwood Springs, across the Colorado Plateau into the Southwest, and towards the Pacific Ocean. It is the vital source of water for not only our town but for millions of people downstream. The students learn that our community depends upon the river both for economic security and recreational opportunities while out in the field. They observe how activities in Glenwood Springs directly affect the river and its tributaries.

Students start this expedition with a kick-off week to build their background knowledge. To begin, they explore the Colorado River firsthand. We partner with local raft guide companies to take our students onto the river. Teachers and students interact in this new environment, while hanging on through rapids or gliding peacefully through a scenic canyon. This team building develops new relationships that carry over into classrooms. Excitement gleams in everyone's eyes after a successful float!

The next experience is for students to hike to a small tributary of the river to look for macroinvertebrates to measure watershed sustainability. Ankle deep in the cold water, students flip over rocks looking for small creatures. Once found, students use dichotomous keys to identify each bug. Back in the classroom, the students use their knowledge to determine if the stream is healthy. The students then create scientific renderings of the macroinvertebrates they found. Using these renderings, students host a fundraiser, taking the detailed final products and turning them into notecards, mouse



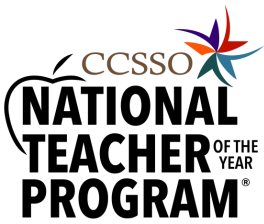
pads, and mugs to sell. They select a local river charity to support with the money raised, which has included river conservancies, watershed councils, and restoration alliances. Students are able to give back to their community while learning the importance of our local watershed health and how it impacts not just us, but those down river.

On the final day of kick-off week, students model how watersheds work by digging in the sandy banks of the Colorado River, just a half mile from our school. We also tour our local Colorado Parks and Wildlife fish hatchery where students interact with community members who breed and raise native trout and salmon to populate streams and lakes. Each year, at least one student asks how they can get a job working with fish all day! Having students see community members working in jobs they love, and then imagining themselves in those same positions, makes the learning authentic.

As students build knowledge, local experts (water rights lawyers, water chemists, anglers, water activists, river guides, etc.) are invited to speak. During this Colorado River Summit, each student chooses two expert speakers to hear from and question. Students observe that science doesn't just happen in the classroom but that it occurs in our daily lives. It is powerful for the community to see the students' passion for their work and often builds friendships that continue outside of school. Because of these relationships, I have multiple students going to college interested in river biology and even one who is currently kayak-racing around the world.

Toward the end of the unit, my students educate the community about what they learned. We partner with our local radio station to have students create public service announcements that air over a few months. Students pick one important aspect to teach the community and work in groups to write the PSA. Knowing their voices will be heard around our community produces amazing final products along with powerful authentic learning.

The culminating event of our Colorado River Expedition is a celebration of learning where the entire community is invited to the school. Students share their learning through presentations, original displays, interviews, and artwork. While always popular with parents, over the years, various community members have also participated, including a local National Geographic photographer. When students connect with their community, they make a difference and see that learning and growing can happen outside the four walls of a classroom.



**4. What do you consider to be a major public education issue today? Describe how you demonstrate being a lifelong learner, teacher, and innovator about this issue, both in and outside of the classroom walls.**

Several areas of growth are needed in public education. Providing adequate funding, increasing social and emotional support of students, and advocating for teachers are all big issues to solve before we can fully move forward. However, the major issue for me is equity in education.

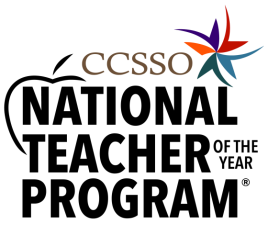
During the past two years, my school's Instructional Leadership Team, of which I am a member, tasked our staff to reflect on how we, as teachers, address unconscious bias in our school. As a school leader, I directed our staff in several trainings focusing on allowing ourselves to stay engaged; to speak our truth; to experience discomfort; and to expect and accept non-closure as we evaluated different structures in our classrooms and throughout our building. We began with developing a working definition of equity and belonging. From there we asked our staff to reflect on different questions: How are we supporting all our students and learners? Who is represented on the walls of our classrooms? Are we providing opportunities for all students to share out?

It was a very difficult time to begin these conversations as we were in the middle of a pandemic, but we felt it was crucial to push forward. Some initial results include a change in our dress code, observing each others' classrooms for areas to improve, and making plans following a student survey.

As a leadership team, we decided to continue with this goal for the current school year. In order to help guide this work in my school, the team continues to be learners. We are reading the book *Unconscious Bias in Schools: A Developmental Approach to Exploring Race and Racism* by Sarah E. Fiarman and Tracey A. Benson. Already, I feel urgency for all public education to address these crucial divisions within our system.

Not only am I learning and leading this shift in my building, but I am also doing innovative work both within my classroom and with teachers throughout Colorado to bring awareness to this issue. In my classroom I provide forums for students to express thoughts and questions. In Crew teams, students are encouraged to share ideas around how they are treated in school. In one situation, I spoke to my class about standing for the Pledge of Allegiance. I informed them that I don't care if they stand or not, but I'm not okay with 'I'm too lazy to stand' as their only reason. I asked students to email me privately if they wanted to talk more. That night I received one of the best emails I have





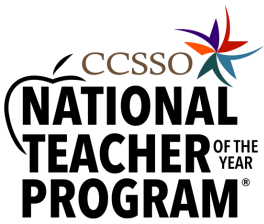
ever read from a sixth grader! She explained very articulately how she felt she could not stand in support of a country that does not really provide liberty and justice for all. I was blown away and so honored to have her share her words with me. With her permission, I showed her email to my leadership team, and we all used her words as a strong reminder that many times our students are more open minded than the systems and adults in our schools. Using student feedback, I try to seek to change systems in my classroom and in my building to move closer to our goal of equity.

At the state level, I work with the Colorado Department of Education and Colorado Science Education Network to provide equity tools for teachers and leaders. In May, I co-facilitated a state-wide training for district science leads. The focus was to examine our new 2020 Colorado Academic Standards under the microscope of equity and to reflect on how we can support equity in our science classrooms. We brought in a keynote speaker who concentrated on how we could rebuild science education more equitably after the pandemic. We gave district leads time to process in breakout rooms and come back for a question and answer session with our keynote. Finally, we formed groups based on school locations to allow for time to share implementation tools they found helpful. Building common background knowledge, providing Student Voice, and creating a shared online platform for ideas were just some of these. All aspects of the training came back to the question 'How does science education need to change in order to support all students?' The training had over 40 leaders attend and we hope to continue this work in the future. Although we still have a long way to go, each step towards improving equity is crucial.

**5. As the 2022 National Teacher of the Year, you serve as a spokesperson and representative for all teachers and students. What is your message? What will you communicate to your profession and to the public?**

"You have value and power now. You can make a difference now." This is the message I offer to students through their teachers. Many times, we, as teachers, prepare students for "the future." Whether that is the next grade level, the next school, college, or the workforce, we have them look forward. Yes, being prepared for the future is important. However, are we doing them a disservice to make the future more important than the present? Will they only have worth when they get to that uncertain point? What message do we give them about their value as a young person?

Students do not need to wait until an unforeseen future before they can start making improvements and decisions. They have power now. Teachers can begin by introducing students to small projects, such as starting a recycling program, and work toward larger



endeavors, like advocating for positive changes in their communities. All of these are impactful for their community and their education. Students begin to understand why and how transformation occurs and teachers can support them and give them the tools needed to make a difference.

For example, two years ago, as we were studying the Colorado River watershed, a lake within that watershed called Sweetwater Lake, the seventh largest natural lake in Colorado, was slated to be closed to the public and put into private ownership. A student brought this to my attention and encouraged the class to try and do something about it. I asked my students, “What do you want to do?”

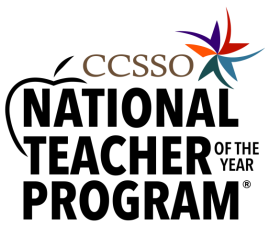
To start, I made sure they researched all sides of the issue, from taxes to land policy to public use. We discovered that a local conservation organization wanted to purchase the land around the lake, then sell it to the U.S. Forest Service for permanent public use. After much discussion, my students chose to support this side.

Then began a period of putting their efforts where their ideals lay. This included fundraising, news articles, public meetings and more. Students sold their macroinvertebrate artwork, hosted a bake sale, and designed and sold t-shirts in order to raise \$600 to donate to the campaign. That might not seem like a lot, especially when the property price was over \$7 million, but when money is raised by a group of eleven- and twelve-year-olds, people pay attention. The community listened and encouraged them. The students were surprised that their opinions mattered. In the end, the conservation organization prevailed, and that land was conserved for public access.

In October, this progress continued. Standing on top of a cliff overlooking Sweetwater Lake, Governor Jared Polis unveiled plans to make Sweetwater Lake the 43rd state park in Colorado. It is also the first state park in the nation to be owned by a national agency while managed at a state level. In a newspaper article written about the new state park, my students were noted:

“...no donation summed up the grassroots effort more than the one from Glenwood Springs Middle School, where students rallied around the cause and chipped in — even with quarters, dimes, nickels and pennies. All those small pieces led to the big purchase by the Conservation Fund to prevent potential development of the privately held inholdings.” (Vail Daily, October 20, 2021)

The message the students received? You have worth. You have a voice. You can stand up for your values and opinions. They were so proud! They felt good about their achievements. Every student deserves a chance to feel this way now, not just at some future date. Not all projects will have such positive results, but it is the process that is



important. They promoted this change for their community as middle school students, here and now.

Education as a profession can guide students into discovering their self-worth. A teacher is instrumental in facilitating this process. Students need to have a good overview and understanding before taking action. But once understood, once it invokes passion, let them be heard! Let them have the experience of contributing to a real-life decision!

If we want a generation who will make positive changes, we need to let them experience empowerment now, not later. Teachers can encourage students to take a stand, make a difference, and experience their own value. This is my message to teachers and students: "You matter now! You can make a difference now!"

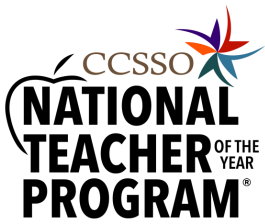
## **Resume**

### **Education**

| School Name            | Degree                                       | Major                       | Years Attended |
|------------------------|--|-----------------------------|----------------|
| Colorado College       | Bachelor of Arts in Biology                  | Biology                     | 2000-2004      |
| Colorado College       | Master of Arts in Teaching Secondary Science | Secondary Science Education | 2004-2005      |
| University of Colorado | Masters in Educational Leadership            | Educational Leadership      | 2014-2015      |

### **Certifications**

| Certification                | Year Obtained |
|------------------------------|---------------|
| Secondary Science Education  | 2005          |
| Elementary Science Education | 2012          |
| Principal License            | 2015          |



### Work Experience

| Title                             | Organization   | Years in position |
|-----------------------------------|--|-------------------|
| 7th and 8th Grade Science Teacher | Widefield School District                                    | 2005-2012         |
| 6th Grade Science Teacher         | Roaring Fork School District, Glenwood Springs Middle School | 2012-present      |
| Adjunct Professor                 | Colorado Mountain College                                    | 2018-present      |

### Leadership Experience

| Position   | Organization                             | Years in position |
|--|--|-------------------|
| Middle School Science District Content Lead                  | Roaring Fork School District             | 2016-present      |
| Board Member   | Colorado Association of Science Teachers | 2018-present      |
| Instructional Leadership Team                                | Glenwood Springs Middle School           | 2017-present      |
| Interest Based Bargaining Committee Member                   | Roaring Fork School District             | 2013-present      |
| Colorado Science Education Network Steering Committee Member | Colorado Science Education Network       | 2020-present      |

### Award or other recognition

| Award/recognition                        | Year received |
|--|---------------|
| Jason Wilkes Outstanding Biology Student | 2003          |
| Walmart Teacher, Student Nominee         | 2005          |
| Teacher of the Year, Students' Choice    | 2010-2011     |