

COORSTEK.

DMRSEF DENVER
METRO
REGIONAL
SCIENCE AND
ENGINEERING
FAIR 

**DENVER SCIENCE FAIR
2021-2022
SEASON KICKOFF**

-
- 9:00** Check-in Opens
- 9:30** Welcome & Overview of 2022 Fair
- 10:00** Breakout Workshops
- Students- Project Mindstorming
 - Parents & Teachers - How to Support Your Science Fair Student
- 11:00** Project Bridge Gong Show
- 11:30** Q&A Tables & Help Getting Started
-

**PLEASE REMEMBER TO WEAR
YOUR MASK AT ALL TIMES!**

Welcome to the 59th annual CoorsTek DMRSEF season!



This is what a Scientist looks like

Welcome and Introductions

- Dr. Erin Golden – Director
- Kayla Ahr – Associate Director
- Samantha Sands – Director of Outreach and Engagement
- Muhammad Hussain and Mikayla Barr – STEAM Team
- Project Bridge
- Student Advisory Council
- David Hook- CoorsTek

This is what a Scientist looks like

COORSTEK

This is what a Scientist looks like

Highlights of 2021 Fair

QUICK STATS

113

students participated in the 2021 DMRSEF

41

middle school students

72

high school students



\$10,000

in cash & prizes

37

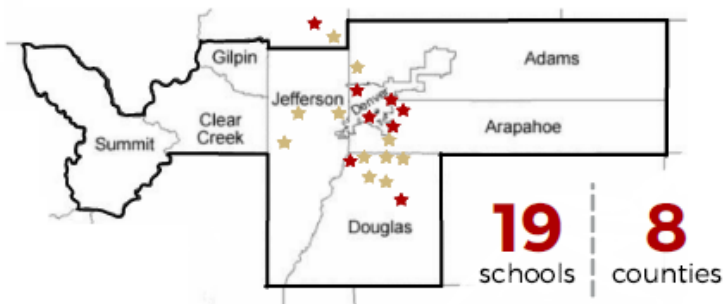
category awards

9

best in fair awards

56

special awards



DMRSEF staff accumulated over 500 student contact hours during the 2020-2021 fair season.

500



22

DMRSEF staff hosted pre-season events

COMMUNITY

countless

teachers, mentors, families, and supporters

125

science fair judges

50

program volunteers

The success of the 2021 fair belongs to the entire DMRSEF community. Thank you!

This is what a Scientist looks like

2021 Best in Fair Winners

Senior **Tyler Burt** celebrating his 2nd Place Best In Fair win while watching the awards ceremony livestream from home.



BEST IN FAIR

SENIORS

1st Place: Reese Titensor, Rock Canyon High School

"Effects of CBD on Cortisol Levels in Stressed *Danio rerio* Embryos"

2nd Place: Tyler Burt, Wheat Ridge High School

"A Novel Mask Insert to Reduce Habitual Particle Transmission"

3rd Place: Aditi Avinash, Rock Canyon High School

"Breakdown of Gluten Proteins using a Newly Identified Combination of Fruit Derived Enzymes to Alleviate Symptoms of Gluten Intolerance"

JUNIORS

1st Place: Elizabeth Vossler, Skinner Middle School

"Blink-183: The Effect of Projected versus Reflected Light on Blinking Rate"

2nd Place: Kanshita Dam, Challenge School

"How do Vibrations from Sound Waves Affect Plant Growth?"

3rd Place: Chloe Pennington, Friends School

"Would You Drink That? The Relationship Between Batch Test and Amount of PFAS Per Trillion"

This is what a Scientist looks like

Colorado Science & Engineering Fair



DMRSEF was thrilled to nominate 52 projects to compete at the Colorado Science and Engineering Fair (CSEF). **Our students rocked the event, winning 30 category awards, 41 special awards, and 3 Best of CSEF awards.** In total, 38 DMRSEF projects were recognized at CSEF and our students took home \$7,875 in cash and prizes!

BEST OF CSEF WINNERS

2nd Place: Emily Zhang, Cherry Creek High School

"Fusing LiDAR and Camera Data for Advanced Context Recognition in Autonomous Navigation Sensory Systems Through Multidimensional Deep Neural Network Architectures"

4th Place: Matthew Anderson, Cherry Creek High School

"Early Diagnosis of Parkinsonism Via a Smartphone Application"

5th Place: Reese Titensor, Rock Canyon High School

"Effects of CBD on Cortisol Levels in Stressed *Danio rerio* Embryos"

This is what a Scientist looks like

Regeneron International Science & Engineering Fair

MEET THE STUDENTS



Reese Titensor

12th grade, Rock Canyon High School

"Effects of cannabidiol exposure on cortisol levels in *Danio rerio* embryos with heat induced stress"



Tyler Burt

12th grade, Wheat Ridge High School

"A Novel Mask Insert to Reduce Habitual Particle Transmission"



Aditi Avinash

9th grade, Rock Canyon High School

"Breakdown of Gluten Proteins using a Newly Identified Combination of Fruit Derived Enzymes to Alleviate Symptoms of Gluten Intolerance"



Rachel Christensen

12th grade, Evergreen High School

The Environmental Effect on Aquatic Ecosystems of Run-Off From Wildfires Where Fire Retardant Slurry Was Used



Matthew Anderson

11th grade, Cherry Creek High School

Early Diagnosis of Parkinsonism via a Smartphone Application



Emily Zhang

11th grade, Cherry Creek High School

Fusing LiDAR and Camera Data for Advanced Context Recognition in Autonomous Navigation Sensory Systems through Multi-Dimensional Neural Network Architectures

This is what a Scientist looks like

DMRSEF: 2021-22 Season and Beyond

Focus

Grow and Diversify the Fair Community

Theme

This is What a Scientist Looks Like

Vision

Foster and empower the next generation of science literate students and STEM leaders.

Strategic Intent

1. To increase accessibility and feasibility of student participation in research opportunities
2. To form authentic relationships with community partners
3. To elevate informal science education and experiential learning
4. To be practitioners, educators, and researchers

This is what a Scientist looks like

59th Annual Denver Metro Regional Science & Engineering Fair

This is what a scientist looks like.

DMRSEF

FEBRUARY 25-26, 2022



This is what a Scientist looks like

Two-day fair and celebration of science!

- **Friday, February 25th**
 - Main academic competition with category judging (and some special awards)
- **Saturday, February 26th**
 - Best-in-fair judging and special award interviews
 - Community “Open House”
 - Activities Fair
 - Evening Awards Ceremony and Science Celebration!
- Hybrid fair format with student projects on Symposium
 - Judges will have 1 week to preview student projects online

This is what a Scientist looks like

Fair Timeline

- Late September: Fair Participant Registration Opens
- November 1st: Project Registration Opens
- January 7th: Project Registration Closes!
- February 1st: Online student project material submission opens
- February 11th: Online student project material submission closes!
- February 21st: Symposium project portal open to judges for preview
- February 25th: Symposium projects go live!

This is what a Scientist looks like

2021-2022 DMRSEF Season

Due Dates and Deadlines

- Monday, November 1st - Project Registration Opens
- Friday, January 7th - Project Registration Due
- Tuesday, February 1st - Online Project Materials Submission Opens
- Friday, February 11th - Paperwork Corrections Due
- Friday, February 11th - Online Project Materials Due
- Monday, February 21st - Display Corrections Due

SciComm Workshops

Get yourself and your project fair-ready with specialized workshops for every step of the way!

- Wednesday, November 17th 6-8p: Toastmasters Workshop
- Saturday, January 15th (or 29th): PB SciComm workshop
- Wednesday, January 19th 6-7p: Poster Preparation
- Wednesday, January 26th 6-7p: Video Preparation
- Wednesday, February 2nd 6-7p: Informational Writing
- Wednesday, February 9th 6-7p: Interview Preparation
- Wednesday, February 16th 6-8p: Interview Practices

Speak with a Scientist

Meet STEM professionals from all different fields! Learn about what they do, how they got there, and the advice they have for those just starting out.

6-7pm, via Zoom

- Wednesday, October 6th
- Tuesday, November 9th
- Thursday, December 2nd

Science Fair Q&A

Bring your questions and get support directly from the DMRSEF Team and other Science Fair pros!

6-7pm, via Zoom

- Saturday, October 9th
- Monday, October 25th
- Wednesday, November 3rd
- Monday, November 22nd
- Wednesday, December 18th
- Monday, December 20th
- Tuesday, January 4th
- Saturday, January 29th
- Tuesday, February 1st
- Sunday, February 6th
- Thursday, March 3rd



September

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

November

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

January

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

To sign up and find the most up-to-date information on due dates and pre-season events, visit our website: www.clas.ucdenver.edu/denversciencefair

This is what a Scientist looks like

COORSTeK

DMRSEF DENVER METRO REGIONAL SCIENCE AND ENGINEERING FAIR

FROM START TO SCIENCE FAIR

LEARN MORE AT:

CLAS.UCDENVER.EDU/DENVERSCIENCEFAIR

**START NOW!
IT'S NEVER
TOO EARLY!**

Plan & Prepare

- Identify your research question
- Find out what is already known
- Talk to subject matter experts

SEPTEMBER

Get Involved

- Attend a kickoff event
- Register to participate
- Learn about fair rules and paperwork

Design Your Project

- Finalize your research question
- Plan your experimental procedures
- Obtain necessary pre-approvals

Start Experimenting

- Gather your materials
- Conduct your experiment
- Take thorough notes as you go

JANUARY

Complete Your Project

- Analyze your findings
- Double-check and submit your paperwork
- Reach out to DMRSEF staff with questions

FEBRUARY

Get Fair-Ready

- Revise forms, if required
- Create and submit presentation materials
- Attend *Competition Ready Series* events

**CELEBRATE YOUR SCIENCE AT THE
DENVER REGIONAL SCIENCE AND ENGINEERING FAIR!**

This is what a Scientist looks like

This is what a Scientist looks like

2022 Fair Event Plan Questions?



This is what a Scientist looks like

NEW! Student
Mini-Grants
please share!

Want to participate in the DMRSEF?
Need funds for your science fair project?

Grants Available!

Funding is available for student mini-grants for the 2022 Denver Science Fair. Apply by October 8th for grants of up to \$100 to complete your research project for this year's fair!

We want to fund your science!



Apply by:
5 PM on Friday
October 8th



Awards:
Up to \$100
per project



Participate:
Learn more and
apply at
<https://bit.ly/3juFK9I>

This is what a Scientist looks like

Competition Ready Series

- **STEAM Team Videos**
- **Speak With A Scientist** - Oct 6th, Nov 9th, Dec 2nd
- **Science Fair Q&A** - twice a month, October – March
- **SciComm Series Workshops** – January – March
 - **Speaking Science: Stories, Metaphors, and Analogies** – Hosted by Cherry Creek Toastmasters Club - Nov 17th (virtual)
 - **Perfecting Your Pitch: Eliminating Jargon and Communicating Clearly** – Hosted by Project Bridge – Jan 29th
 - **Informational Writing** – Feb 2nd and Mar 5th

This is what a Scientist looks like

2021-2022 DMRSEF Season

Due Dates and Deadlines

- Monday, November 1st - Project Registration Opens
- Friday, January 7th - Project Registration Due
- Tuesday, February 1st - Online Project Materials Submission Opens
- Friday, February 11th - Paperwork Corrections Due
- Friday, February 11th - Online Project Materials Due
- Monday, February 21st - Display Corrections Due

SciComm Workshops

Get yourself and your project fair-ready with specialized workshops for every step of the way!

- Wednesday, November 17th 6-8p: Toastmasters Workshop
- Saturday, January 15th (or 29th): PB SciComm workshop
- Wednesday, January 19th 6-7p: Poster Preparation
- Wednesday, January 26th 6-7p: Video Preparation
- Wednesday, February 2nd 6-7p: Informational Writing
- Wednesday, February 9th 6-7p: Interview Preparation
- Wednesday, February 16th 6-8p: Interview Practices

Speak with a Scientist

Meet STEM professionals from all different fields! Learn about what they do, how they got there, and the advice they have for those just starting out.

6-7pm, via Zoom

- Wednesday, October 6th
- Tuesday, November 9th
- Thursday, December 2nd

Science Fair Q&A

Bring your questions and get support directly from the DMRSEF Team and other Science Fair pros!

6-7pm, via Zoom

- Saturday, October 9th
- Monday, October 25th
- Wednesday, November 3rd
- Monday, November 22nd
- Wednesday, December 18th
- Monday, December 20th
- Tuesday, January 4th
- Saturday, January 29th
- Tuesday, February 1st
- Sunday, February 6th
- Thursday, March 3rd



September

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

November

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

January

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

To sign up and find the most up-to-date information on due dates and pre-season events, visit our website: www.clas.ucdenver.edu/denversciencefair

This is what a Scientist looks like

Preseason Event Q&A



This is what a Scientist looks like

COORSTEK.

DMRSEF DENVER
METRO
REGIONAL
SCIENCE AND
ENGINEERING
FAIR 

**DENVER SCIENCE FAIR
2021-2022
SEASON KICKOFF**

-
- 9:00** Check-in Opens
- 9:30** Welcome & Overview of 2022 Fair
- 10:00** Breakout Workshops
- Students- Project Mindstorming
 - Parents & Teachers - How to Support Your Science Fair Student
- 11:00** Project Bridge Gong Show
- 11:30** Q&A Tables & Help Getting Started
-

**PLEASE REMEMBER TO WEAR
YOUR MASK AT ALL TIMES!**

This is what a Scientist looks like