

39TH ANNUAL  
**SCIENCE &  
ENGINEERING FAIR  
AWARDS 2023**



*Where your future takes flight.*



CORONA-NORCO UNIFIED SCHOOL DISTRICT

# SCIENCE & ENGINEERING FAIR AWARDS 2023

## WELCOME

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THE ANNUAL DISTRICT SCIENCE AND ENGINEERING FAIR IS AN EVENT WE ALWAYS LOOK FORWARD TO. THE PROJECTS SHOWCASE THE SKILLS, INTELLIGENCE, AND HARD-WORKING EFFORTS OF OUR STUDENTS. EVERY YEAR PARTICIPATION INCREASES, WITH HUNDREDS OF STUDENTS CREATING SCIENCE PROJECTS AT THEIR SCHOOL SITES. THIS EVENT PROVIDES A UNIQUE OPPORTUNITY FOR STUDENTS TO EXPLORE THE WONDERS OF SCIENCE WITH THEIR TEACHERS, FAMILY, AND PEERS. THE MOST OUTSTANDING PROJECTS WERE SELECTED FROM LOCAL SCHOOLS TO PARTICIPATE AND COMPETE IN THE 39TH ANNUAL DISTRICT SCIENCE AND ENGINEERING FAIR. THROUGHOUT THE YEARS, THE CORONA-NORCO UNIFIED SCHOOL DISTRICT (CNUSD) HAS EXPANDED CAREER TECHNICAL EDUCATION (CTE) AND STEM PROGRAMS. AS PART OF OUR LOCAL CONTROL AND ACCOUNTABILITY PLAN (LCAP), WE CONTINUE TO INCREASE THE RATE OF STUDENTS PARTICIPATING IN CTE/STEM PATHWAYS MAPPED TO HIGH GROWTH AND STRONG EMPLOYMENT OPPORTUNITIES. TODAY'S CUTTING-EDGE, RIGOROUS, AND RELEVANT CTE AND STEM CURRICULA PREPARES YOUTH AND ADULTS FOR A WIDE RANGE OF HIGH-WAGE, HIGH-SKILL, HIGH-DEMAND CAREERS; AND HERE AT CNUSD, WE ARE COMMITTED TO OUR ONGOING EFFORTS IN PREPARING OUR STUDENTS FOR THE FUTURE, TODAY.

THE DISTRICT RECOGNIZES EDUCATION IS A PARTNERSHIP, AND WE KNOW THIS WOULD NOT BE POSSIBLE WITHOUT THE SUPPORT OF OUR COMMUNITY. LAST YEAR WE WERE EXCITED TO HAVE SO MANY OF OUR STUDENTS REPRESENT CNUSD AT THE COUNTY, STATE, AND NATIONAL LEVEL. ON BEHALF OF THE CORONA-NORCO UNIFIED SCHOOL DISTRICT BOARD OF EDUCATION AND ADMINISTRATION, I WOULD LIKE TO EXTEND MY SINCERE THANKS TO ALL THE PARENTS AND TEACHERS WHO VOLUNTEERED THEIR TIME AND EFFORTS TO MAKE THIS HAPPEN. CONGRATULATIONS TO EACH PARTICIPANT FOR ACHIEVING EXCELLENCE IN THE FIELD OF SCIENCE; WE APPRECIATE YOUR HARD WORK AND DEDICATION TO YOUR PROJECT.

**DR. SAM BUENROSTRO**  
**SUPERINTENDENT**



# SCIENCE & ENGINEERING FAIR AWARDS 2023

## ELEMENTARY DIVISION (4-5)

|                       |  |              |
|-----------------------|--|--------------|
| AARON RODRIGUEZ       | 4 TOOTH DECAY  | RONDO        |
| ADELINA VENTURA       | 5 WHAT LIQUID MAKES SHARPIE COME OFF THE BEST?   | JEFFERSON    |
| AIDEN ROMERO          | 5 WHAT LIQUID MAKES EGGS FLOAT THE BEST?   | JEFFERSON    |
| AKSHITA SARAYANA      | 5 LET'S SOLVE THE DROUGHT  | LINCOLN      |
| ALICE REICH           | 5 THE BEST WATER   | TODD         |
| ALLISON LUERA         | 4 HOW CAN YOU MAKE A LIGHT BRIGHTER?   | STALLINGS    |
| AMINA QAZI            | 5 WILL MORINGA OLEIFERA SEED POWDER OR ALUMINUM (ALUM) WORK MORE EFFICIENTLY TO PURIFY GROUND WATER? | ANTHONY      |
| ANGELA                | 5 HOW DOES THE DEPTH OF A SEED AFFECT GERMINATION?   | LINCOLN      |
| ANANTHANANTHAN        | 5 WHAT ARE ALL THE DIFFERENT AFFECTS (INTERNAL AND EXTERNAL) OF A SOCCER BALL?                       | FRANKLIN     |
| ANITHA ZACHARIAH      | 5 HOW DC MOTORS WORK IN VARYING ELECTRIC VOLTAGE   | LINCOLN      |
| ANOJAN SATHEES        | 5 FLOWER POWER   | WILSON       |
| AREYA KOCHAR          | 5 SURFACE CONDITION OF THE SLOPE AND LANDSLIDES  | CORONA RANCH |
| ATPUTHAN SIVATHASAN   | 5 FLOATING EGG   | MCKINLEY     |
| BELLA ZAIDA           | 4 SOLAR VS. BATTERY  | ORANGE       |
| CALEB MEZA            | 4 BEST LOTION  | RONDO        |
| CHANITA HANVOTHINANON | 4 POPCORN PARTY  | RONDO        |
| CHARLOTTE LANE        | 5 ZAPPING HERE AND THERE   | GARRETSON    |
| CHLOE ZHANG           | 5 HURRICANES   | MCKINLEY     |
| DANIEL WRIGHT         | 5 BATTERY WARS   | LINCOLN      |
| DESMOND SABSOOK       | 5 WHAT SHOULD BE THE HEIGHT OF THE ROLLERCOASTER IN ORDER FOR IT TO MAKE THE FULL LOOP?              | ANTHONY      |
| DIKSHA UPPAL          | 5 WHICH MASK DOES THE TASK?  | GARRETSON    |
| DINA BAKIR            | 5 TO GROW OR NOT TO GROW   | WILSON       |
| DOMINIC PEREZ         | 5 WHAT LIQUID MAKES SHARPIE COME OFF THE BEST?   | JEFFERSON    |
| DYLAN FELIX           | 4 TO DEGRADE OR NOT DEGRADE  | TODD         |
| DYLAN SONE            | 5 SLIME EXPERIMENT   | WILSON       |
| ELEANOR TRUONG        | 5 BURTSTING YOUR BUBBLES   | GARRETSON    |
| ELIZABETH LY          | 5 GARDENING  | MCKINLEY     |
| EMMA TORRES           |  |              |

## ELEMENTARY DIVISION (4-6)

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|                       |   |  |           |
|-----------------------|---|--|-----------|
| ENAAYA HUMAYUN        | 4 | WHICH MODEL, A, B OR C, WILL CREATE THE FASTEST FLOWING HERON'S FOUNTAIN?  | ANTHONY   |
| ETHAN RIOS            | 5 | READY, SET, GROW!  | GARRETSON |
| HUNTER TAUTFEST       | 5 | EFFECTS OF MUSIC AND FOOD ON CHICKEN EGG PRODUCTION  | RIVERVIEW |
| HYRUM WARNER          | 4 | IN WHICH LIQUID WILL A SEED GROW THE BEST?   | TODD      |
| IDHANT PAUL           | 5 | MAGNETS RULE   | WILSON    |
| INBAA BARATHI         | 4 | SAVE OUR SOIL  | RONDO     |
| ISHAN VIRADIA         | 5 | OBESITY IN MY LOCAL COMMUNITY: IS IT A PERSONAL OR COMMUNITY FAILURE ACCORDING TO SCIENCE?   | BARTON    |
| JAMES CULHANE         | 5 | SOLAR WINDMILL   | RIVERVIEW |
| JAYDEN GALLOWAY       | 5 | THAT WAS A TAPE MEASURE SHOT   | GARRETSON |
| JOESPH MICHAEL        | 5 | CAR CATASTROPHY  | GARRETSON |
| KATELYN CHENG         | 4 | WHAT WILL BE THE DIFFERENCE BETWEEN THE RESULT OF THICK STEM FLOWERS AND THE RESULT OF THIN STEM FLOWERS WHEN USING THEM TO DO COLOR CHANGING EXPERIMENTS? | ANTHONY   |
| KAYLA ANDERSON        | 4 | SKITTLES-DISSOLVE THE RAINBOW  | RIVERVIEW |
| LESLIE NGUYEN         | 5 | HOW DO DIFFERENT TYPES OF FLOUR AFFECT SOURDOUGH STARTER ACTIVITY?   | ANTHONY   |
| LUKE MAHER            | 5 | IT'S CALLED SOCCER   | TODD      |
| MACKENZIE YI          | 5 | STRENGTH OF TOILET PAPER   | WILSON    |
| MADLINE GULLEDGE      | 5 | GET YOUR SPLITS FAST: IMPROVE YOUR RANGE OF MOTION   | RONDO     |
| MENHA QAZI            | 5 | WILL MORINGA OLEIFERA SEED POWDER OR ALUMINUM (ALUM) WORK MORE EFFICIENTLY TO PURIFY GROUND WATER?   | ANTHONY   |
| MERIAH CABILDO        | 5 | MUSIC TO MY EARS   | GARRETSON |
| RAGHAV UPPAL          | 4 | HOW MANY 2 X 1/4 X 1/4 INCH MAGNETS WILL IT TAKE TO STOP A TOY TRAIN MOVING DOWNHILL ON A TOY TRACK?   | ANTHONY   |
| REINA LEE             | 5 | WHICH MASK WORKS BEST?   | GARRETSON |
| ROBERT GERARD ALCOCER | 4 | RE-CHOOSE YOUR TEETH OR LOOSE YOUR TEETH   | ORANGE    |
| RUTH NELSON           | 5 | EROSION  | MCKINLEY  |
| RYAN STEET            | 4 | TOOTH DECAY  | RONDO     |
| SAGE HARRIS           | 4 | POPCORN PARTY  | RONDO     |
| SONALI VIRADIA        | 5 | HOW BACTERIA FOUND IN YELLOWSTONE GEYSERS HELP FIGHT GLOBAL WARMING  | BARTON    |
| SOPHIA ARAMBULA       | 5 | WHAT LIQUID MAKES SHARPIE COME OFF THE BEST?   | JEFFERSON |
| SOPHIA IBRAHIM        | 5 | FRICTION ON COMMON SURFACES  | WILSON    |
| TAYLOR HERRON         | 5 | WATER  | MCKINLEY  |
| THOMAS MAHER          | 4 | WILL COFFEE HELP PLANTS GROW?  | RONDO     |
| VICTORIA DURAN        | 5 | NO HOLDING BACK THE BACK   | GARRETSON |
| VIENNA ZHOU           | 5 | CAN YOU HEAR THE TEMPERATURE?  | GARRETSON |

## ELEMENTARY DIVISION (4-6)

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VIRAAT KADAKIA

WALID HAQUANI

WASAY QAZI

WYATT BECK

5 CALIFORNIA DROUGHT AND SOLUTION

4 HOW DOES THE SOUND OF AN OBJECT VARY,  
DEPENDING ON THE MASS AND MATERIAL?

5 WILL MORINGA OLEIFERA SEED POWDER OR  
ALUMINUM (ALUM) WORK MORE EFFICIENTLY TO  
PURIFY GROUND WATER?

4 SOLAR VS. BATTERY

WILSON

STALLINGS

ANTHONY

ORANGE



# SCIENCE & ENGINEERING FAIR AWARDS 2023

## JUNIOR DIVISION (6-8)

|                     |   |   |              |
|---------------------|---|---|--------------|
| ABIGAIL PHAN        | 8 | WHICH FORMS OF SUNBLOCK HAS THE LONGEST DURATION?   | RANEY        |
| ADDILYN FOUND       | 7 | DESALINATION AT HOME  | CITRUS HILLS |
| ADISON HOLTZ        | 6 | SUNSCREEN VS. UV RAYS   | CORONA RANCH |
| ADRIÁN BETANCOURT   | 8 | DOES CHANGING THE LOCATION OF A DRINKING FOUNTAIN AFFECT HOW CLEAN IT IS?   | AUBURNDALE   |
| AKSHAYA SAYYAPARAJU | 6 | WHAT'S BLOCKING MY WI-FI?   | NORCO EL     |
| ALEX GOMEZ          | 7 | HOW DOES THE WEIGHT OF A HOT WHEEL AFFECT THE DISTANCE TRAVELED?  | HOME GARDENS |
| ALVARO HERMIDA      | 7 | HOW DOES THE WEIGHT OF A HOT WHEEL AFFECT THE DISTANCE TRAVELED?  | HOME GARDENS |
| ALYSSA CARRILLO     | 6 | CAN SCREEN & TEXT COLOR AFFECT RETENTION?   | HARADA       |
| AMARYLLIS BARAJAS   | 8 | WILL MODIFYING THE CONFIGURATIONS THAT WORDS ARE FORMATTED INFLUENCE THE STROOP INTERFERENCE TASK REGARDING AN INDIVIDUAL'S RESPONSE TIME & COGNITIVE PERCEPTION? | HOME GARDENS |
| ANDRUE BURNELL      | 7 | DOES BOUNCING A BALL AFFECT THE AMOUNT OF ENERGY CREATED?   | HOME GARDENS |
| ANGELINA OUK        | 6 | DO TYPES OF WATER AFFECT THE GROWTH OF PINTO BEANS?   | HARADA       |
| ANKITHA GARUADAPURI | 6 | BPA AND THE ENDOCRINE SYSTEM: A CASE STUDY WITH DROSOPHILA PHASE 1  | BARTON       |
| ANNEKE MANKOFF      | 6 | LET'S DANCE!  | ORANGE       |
| ANNIE TRINH         | 6 | REMEMBER THAT!  | CORONA RANCH |
| ARIANA GARCIA       | 7 | CHEMICAL EFFECTS ON AQUATIC PLANTS  | RANEY        |
| ASHA ZACHARIAH      | 8 | WHICH MATERIAL BEST ABSORBS RADIO WAVES & WHICH SHAPE BEST DEFLECTS THEM AWAY FROM THE SOURCE?  | CFIS         |
| ASHLYN LUM          | 8 | HOW DO LIGHTS WITH DIFFERENT WAVELENGTHS AFFECT THE MOVEMENT OF PLANARIA?   | HOME GARDENS |
| AUDREY WANG         | 8 | POTATOES: GROWING IN DIFFERENT CONDITIONS   | RAMIREZ      |
| AVA GEORGE          | 8 | CAN HOMEMADE WATER FILTRATION SYSTEMS BE EFFECTIVE IN THE EVENT OF A SEVERE WATER CRISIS?   | CFIS         |
| AVA LOPEZ           | 6 | PAPER TOWEL TEST  | HARADA       |

## JUNIOR DIVISION (6-8)

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|                     |   |   |              |
|---------------------|---|---|--------------|
| AYLIN SANDOVAL      | 6 | WHICH FILTRATION MATERIAL LEADS TO THE BEST DRINKING WATER?                                   | HARADA       |
| BELLA HE            | 8 | IF I CHANGE THE POWER SOURCE I CHARGE MY PHONE, WILL IT AFFECT HOW FAST IT CHARGES MY PHONE?  | AUBURNDALE   |
| BRANDON CASTRO      | 8 | WHAT TERRAIN IS BEST FOR A POPULATION OF ROLY POLYS?  | CFIS         |
| BRAYDEN GOYTIA      | 7 | HOW DO DIFFERENT ACIDS AFFECT THE RUST ON METAL?  | RANEY        |
| CAITLIN BUENSUCESO  | 7 | FERMENTATION, PH, & YOU   | RANEY        |
| CHARLES TYARS       | 6 | TERRIFIC TUNNELS  | RONDO        |
| CHASE DIPAOLO       | 8 | THEORY OF COLOR-TIVITY  | ORANGE       |
| CHRISTIAN JOHNSON   | 6 | GEAR RATIO EXPERIMENT   | NORCO EL     |
| CLAIRE RITCHEY      | 7 | H <sub>2</sub> -U <sub>H</sub> -O   | NORCO INT    |
| CODY GRINDE         | 6 | HOW CAN DIFFERENT LEVEL OF AIR PRESSURE CHANGE THE DISTANCE A BALLOON POWERED CAR CAN TRAVEL? | NORCO EL     |
| CORAL WILLIAMS      | 8 | SOFTBALLS: SPEED VS SIZE  | NORCO INT    |
| CRISTOFER HERNANDEZ | 7 | HOW DOES THE WEIGHT OF A HOT WHEEL AFFECT THE DISTANCE TRAVELED?                              | HOME GARDENS |
| CRYSTAL RESENDEZ    | 8 | HOW DOES THE AMOUNT OF SALT OR SUGAR AFFECT THE FREEZING POINT OF WATER?                      | HOME GARDENS |
| DANNI BRASHER       | 8 | CHATGPCHEAT   | RAMIREZ      |
| DAVID DUMFEH        | 7 | THE MOVEMENT OF FERROFLUID IN DIFFERENT LIQUIDS   | CFIS         |
| DIEGO GILES         | 8 | DOES THE AMOUNT OF TIME YOU SLEEP AFFECT YOUR REACTION TIME?                                  | HOME GARDENS |
| ELIJAH MADERA       | 8 | TASTE THE RAINBOW   | AUBURNDALE   |
| ELSIE SOTO          | 6 | HOW DOES SPINNING A COIN ON ITS SIDE AFFECT WHETHER IT LANDS ON HEADS OR TAILS?               | STALLINGS    |
| ELYA HUSSEIN        | 8 | HOW DOES THE ANGLE OF A SOLAR PIZZA BOX OVEN AFFECT THE TEMPERATURE OF THE FOOD?              | RAMIREZ      |
| EMILY FISHER        | 6 | INSOLATION  | NORCO EL     |
| ETHAN BHAKTA        | 8 | CAN GEOTHERMAL ENERGY REDUCE RELIANCE ON THE POWER GRID?                                      | EL CERRITO   |
| ETHAN XIAO          | 8 | SUN'S ANGLE EFFECTS ON ENERGY FLOW  | RANEY        |
| EVAN WIDDISON       | 6 | DIRTY WATER NO MORE!  | HARADA       |
| FILZA JAMAL         | 7 | WHICH AIRFOIL HAS THE MOST EFFECTIVE CAMBER IN ORDER TO PRODUCE THE MOST LIFT?                | CFIS         |
| GILMARA PERALTA     | 6 | ¿CÓMO AFECTAN LA FORMA DE IMÁN AL NÚMERO DE SUJETAPAPELES RECOGIDOS?                          | STALLINGS    |
| PERALTA             |   |   |              |
| GRAYSON MARVIN      | 6 | ELECTROLYTES:WHICH DRINK IS BEST?   | ORANGE       |

## JUNIOR DIVISION (6-8)

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|                    |   |  |              |
|--------------------|---|--|--------------|
| HANIA RANA         | 7 | WHICH AIRFOIL HAS THE MOST EFFECTIVE CAMBER IN ORDER TO PRODUCE THE MOST LIFT?         | CFIS         |
| HARLEEN VIRK       | 8 | ALTERNATIVES TO AIR CONDITIONING   | RAMIREZ      |
| HAYDEN HERRON      | 7 | LET YOUR ELECTROLYTES SHINE  | NORCO INT    |
| HUDSON BUCKWALTER  | 6 | SODA THE RUST REMOVER  | RONDO        |
| ISABEL BOLADIAN    | 7 | AVIATION POLLUTION   | NORCO INT    |
| ISABELLA BULAON    | 6 | HOW DOES A PERSON'S ACTIVITY LEVEL AFFECT MEMORY?                                      | STALLINGS    |
| ISABELLA GUTIERREZ | 8 | HOW DO PARENTS' ATTITUDES ON UNDERAGE DRINKING AFFECT THEIR CHILDREN?                  | HOME GARDENS |
| ISSAC ESPINOZA     | 8 | TAP WATER VS. BOTTLED WATER  | AUBURNDALE   |
| JOAQUIN ZOLL       | 8 | STOP THE BITES WITHOUT A FIGHT   | RANEY        |
| JORDYN CASTRO      | 6 | THIRSTY PLANTS!  | RONDO        |
| JULIANNE LIM       | 6 | CHRYSTAL CLASSIFICATION & CRYSTALLIZATION  | RANEY        |
| JULIETA OCHOA      | 8 | IF I CHANGE THE TYPE OF CROCHET STITCH, WILL IT AFFECT THE TIME I FINISH A SQUARE?     | AUBURNDALE   |
| KALIYAH FRITH      | 6 | HOW DO DIFFERENT WHITENING TOOTHPASTES AFFECT THE WHITENESS OF TEETH?                  | STALLINGS    |
| KALLI DE STEUBEN   | 6 | WILL THE WEIGHT OF A PAPER AIRPLANE AFFECT THE DISTANCE IT WILL FLY?                   | NORCO EL     |
| KATHLEEN SANDOVAL  | 8 | HOW TO MAKE A RIFLE OUT OF MAGNETS   | NORCO INT    |
| KATIA GARCIA       | 8 | IF I CHANGE THE CANDLE BRAND, WILL IT AFFECT HOW FAST THE CANDLE BURNS?                | AUBURNDALE   |
| KERRAM HADDAD      | 6 | LIGHTBULB GLOW TEST  | ORANGE       |
| KHLOE JAUREGUI     | 8 | NAME BRAND VS STORE BRAND  | NORCO INT    |
| KIMBERLY OROZCO    | 6 | LIQUID VISCOSITY   | NORCO EL     |
| LEO WEN            | 8 | HOW DOES ELECTRICITY AFFECT THE GROWTH OF PLANTS?                                      | HOME GARDENS |
| LEVI RAMIREZ       | 7 | HOW EFFECTIVE ARE SUNGLASSES AT ABSORBING UV RAYS?                                     | CFIS         |
| LIAM PARTIDA       | 6 | TERRIFIC TUNNELS   | RONDO        |
| LILIANA ALARCON    | 6 | DOES THE BRAND OF POPCORN AFFECT HOW MANY UNPOPPED KERNELS THERE ARE?                  | HOME GARDENS |
| LOGAN IBARRA       | 6 | SODA THE RUST REMOVER  | RONDO        |
| LUCY CROMWELL      | 6 | HOW DOES POLLUTED WATER AFFECT OUR AGRICULTURE?  | CHAVEZ       |
| LYLA GONZALEZ      | 6 | DOES THE BRAND OF MARSHMALLOW AFFECT HOW FAR IT WILL LAUNCH IN A MARSHMALLOW CATAPULT? | STALLINGS    |
| MARISCAL           |   |  |              |
| MADISON NEE        | 8 | THE EFFECT THAT STRESS HAS ON YOUR BODY TEMPERATURE                                    | RAMIREZ      |
| MAIYA SURIO        | 8 | POTATOES:GROWING IN DIFFERENT CONDITIONS   | RAMIREZ      |
| MAKENNA URENA      | 6 | COMPARING THERMAL INSULATION   | ORANGE       |
| MARLEN LOPEZ       | 8 | IF I CHANGE MY MASCARA, WILL IT AFFECT THE LENGTH OF MY LASHES?                        | AUBURNDALE   |



## JUNIOR DIVISION (6-8)

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|                           |   |  |               |
|---------------------------|---|--|---------------|
| MASON HARDICK             | 6 | PUT SOME ICE ON IT.  | FRANKLIN      |
| MATTEO LOPEZ              | 8 | GROUNDED OR GROUNDDEAD   | AUBURNDALE    |
| MATTHEW CIESLIK           | 6 | TESTING DOMINOES GRAVITY   | NORCO EL      |
| MCKYNNA MURPHY            | 8 | MOISTURIZER FIGHTS ECZEMA  | RANEY         |
| MIABELLA PEREZ            | 7 | DOES THE AIR PRESSURE OF A SOCCER BALL AFFECT HOW FAR IT TRAVELS?                          | HOME GARDENS  |
| MICHAEL "SCARLETT" JAQUES | 8 | IF I CHANGE THE AMOUNT OF BAKING SODA IN A BATCH OF COOKIES, WILL IT AFFECT THE TASTE?     | AUBURNDALE    |
| MICK CHEN                 | 8 | BACTERIOPHAGES VS. HERBS   | RANEY         |
| MILEY REDARD              | 6 | DO TYPES OF WATER AFFECT THE GROWTH OF PINTO BEANS?  | HARADA        |
| NATALI TENORIO            | 8 | IF I USE CASTOR OIL ON THE NAILS FOR TWO WEEKS, HOW LONG WILL THEY GROW?                   | AUBURNDALE    |
| NICOLAS ROMO              | 8 | HOW DO DIFFERENT PH SOIL LEVELS AFFECT A PLANT'S HEIGHT?                                   | HOME GARDENS  |
| NILAY PATEL               | 8 | HOW DOES HEIGHT AFFECT THE AMOUNT OF SOLAR ENERGY BEING GENERATED?                         | RAMIREZ       |
| NOLAN NAJAR               | 6 | DOES THE TYPE OF SOIL AFFECT THE GROWTH OF A BEAN PLANT?                                   | HOME GARDENS  |
| OLIVIA CHIANG             | 7 | COMPARISON OF INORGANIC AND ORGANIC FERTILIZERS  | RANEY         |
| OLIVIA HERRERA            | 6 | ANTACID TEST   | HARADA        |
| OSCAR IRIBE               | 6 | OVER WHICH SURFACE WILL A REMOTE CONTROL CAR TRAVEL THE FASTEST?                           | STALLINGS     |
| PARKER WITTIG             | 6 | COLOR TEMPTURENO   | NORCO EL      |
| PATRICK LEWIS             | 6 | HOW DIFFERENT LIQUIDS AFFECT PLANT GROWTH  | RONDO         |
| PEYTON HUMPHRIS           | 8 | EMERGENCY WATER FILTER   | NORCO INT     |
| PRANAY PRADHAN            | 6 | EXPIRED SEEDS FROM THE DEAD  | RANEY         |
| RONNIE FAKHOURY           | 6 | HEAT ABSORPTION FOR COLORS   | NORCO EL      |
| RYLAND DALGLISH           | 6 | CAN MUSIC CHANGE YOU?  | ORANGE        |
| SANDY PAXTOR              | 8 | HOW DO PARENTS' ATTITUDES ON UNDERAGE DRINKING AFFECT THEIR CHILDREN?                      | HOME GARDENS  |
| SAANVI CHANDLA            | 7 | MICROBIAL PLANTS   | RANEY         |
| SAHANA SHARMA             | 7 | EFFECT OF ACID RAIN ON PLANT GROWTH  | RANEY         |
| SAI SRINIKAI BOMMINENI    | 7 | HEAT THROUGH COLORS  | RIVER HEIGHTS |
| SARA CARRILLO             | 7 | THE RISE OF THE PH: DOES THE PH LEVEL OF A FRUIT AFFECT THE BAKING PROCESS OF BAKED GOODS? | HOME GARDENS  |
| SARAH LANGLOIS            | 8 | TO BAG OR NOT TO BAG   | NORCO INT     |
| SCARLETT PARZE            | 8 | IF I CHANGE THE AMOUNT OF SALT IN WATER, WILL IT AFFECT AN EGG & HOW HIGH IT FLOATS?       | AUBURNDALE    |
| SEBASTIAN BACA            | 7 | HOW DO DIFFERENT FILTERS AFFECT THE CLEANLINESS OF WATER?                                  | HOME GARDENS  |
| SENNAN PATEL              | 6 | HOW DIFFERENT LIQUIDS AFFECT PLANT GROWTH  | RONDO         |

## JUNIOR DIVISION (6-8)

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|                     |   |   |               |
|---------------------|---|---|---------------|
| SERGIO ZAVALA       | 6 | DO THE DIFFERENT KINDS OF SALTS AFFECT HOW ICE MELTS?                                     | HOME GARDENS  |
| SI-JING YAN         | 8 | ROOTING HORMONE:WHAT IS IT'S EFFECT ON SCALLION STEM CUTTINGS?                            | RANEY         |
| SOPHEA R. HERNANDEZ | 8 | HOW DOES THE AMOUNT OF SALT OR SUGAR AFFECT THE FREEZING POINT OF WATER?                  | HOME GARDENS  |
| SOPHIA DÍAZ         | 6 | ELECTROLYTE CHALLENGE   | HARADA        |
| TAIYO ADAMS         | 6 | SCOOP ON DOG POOP   | ORANGE        |
| TARINI SIRAM        | 7 | ELECTROLYTES COMPARISON USING RENEWABLE ENERGY  | RIVER HEIGHTS |
| TREVON NGUYEN       | 8 | TESTING THE CONSISTENCY OF BACTERIA ON FRUITS & VEGETABLES ACROSS MULTIPLE GROCERY STORES | RANEY         |
| TYLER QUINTOS       | 6 | WHAT IS THE BEST ANGLE FOR A SOLAR PANEL?   | FRANKLIN      |
| WAQAS HAQUANI       | 6 | WHICH LIQUID WILL DECAY THE FASTEST?  | STALLINGS     |
| YASIRU JAYATHILAKE  | 7 | CYCLING BLOOD SUGAR   | NORCO INT     |
| YUEN DING           | 8 | WHICH FORMS OF SUNBLOCK HAS THE LONGEST DURATION?   | RANEY         |
| ZACHARY HUMPHRIS    | 6 | WILL THE DENSITY OF A MENTO AFFECT THE GEYSER OF COKE?                                    | NORCO EL      |
| ZADIE PEREZ         | 8 | DOES THE AMOUNT OF TIME YOU SLEEP AFFECT YOUR REACTION TIME?                              | HOME GARDENS  |

**SENIOR DIVISION (9-12)**

|                     |    |  |            |
|---------------------|----|--|------------|
| AARANIE SRIKANTHAN  | 11 | HYDROPONICS! THE BETTER WAY TO WATER YOUR PLANTS   | CORONA     |
| AAYAH KISSANI       | 9  | SUN EXPOSURE   | CORONA     |
| ABDULKARIM LABANIEH | 11 | BODY REFLECTION & CONVERSION   | CENTENNIAL |
| ABHINAV SIRAM       | 10 | AN IN VITRO ANALYSIS OF ORGANIC SUGARY FOODS ON THE GROWTH OF PROBIOTICS   | ESTEM/ERHS |
| AIDAN BOZE          | 11 | CURING NAILS OR SKIN   | CENTENNIAL |
| ANGELINA YANG       | 11 | POLYMER DEGRADABILITY ENABLED BY CYCLIC KETENE ACETAL INCORPORATION  | ESTEM/ERHS |
| ANISHA PRASAD       | 12 | INCORPORATING PLASMID DNA INTO ESCHERICHIA COLI  | CENTENNIAL |
| ANTHONY EDWARDS     | 11 | AFFORDABLE RECHARGEABLE THERMAL BATTERIES  | CENTENNIAL |
| ARJUN SHAH          | 10 | DETERMINING ANTIMICROBIAL EFFECTS IN REGARD TO FRUIT EXTRACTS  | CENTENNIAL |
| AUBREY TAPIA        | 11 | ARROW WEIGHT PENETRATION   | CENTENNIAL |
| BARRIN CARIAGA      | 11 | MICROPLASTICS & SOIL   | CENTENNIAL |
| BRANDON HUYNH       | 11 | PH & LIGHT VS. HYDROPONICS   | CENTENNIAL |
| BRIANA OROZCO       | 11 | CYCLE OF METAMORPHOSIS   | CENTENNIAL |
| BRYANT KELLY        | 12 | ELECTROSTATIC IONIC THRUSTER   | CENTENNIAL |
| CALEB DYAL          | 10 | SOIL MOISTURE RETENTION IN DIFFERENT TURFGRASSES   | CENTENNIAL |
| CARSON RUHNKE       | 11 | WHICH TURBINE PRODUCES THE MOST ENERGY   | SANTIAGO   |
| CHALDRIN CASTRO     | 11 | UV VS YEAST  | CENTENNIAL |
| CHASE TRASK         | 11 | AUGMENTED WATER DISTILLER  | SANTIAGO   |
| DANIEL PARK         | 12 | BRAKE SYSTEMS  | CENTENNIAL |
| DANIELLA DOLLOSO    | 12 | METHANE PRODUCTION   | CENTENNIAL |
| DENNIS ZHAO         | 11 | STUDY OF ENERGY THROUGHPUT OF SUN TRACKING SOLAR ARRAY   | ESTEM/ERHS |
| DEREK ZHANG         | 9  | CALCIUM HYPOCHLORITE AS AN ALTERNATIVE TO THIRD GENERATION OIL DISPERSANTS   | ESTEM/ERHS |
| EILEEN LIN          | 11 | EXOPLOERER: COMBINING USER INTERFACE DEVELOPMENT AND MACHINE LEARNING TO CREATE AN ACCESSIBLE LEARNING ENVIRONMENT | ESTEM/ERHS |
| ELIZABETH MATTAR    | 10 | DIFFERENT FERTILIZATION SOLUTIONS FOR A HYDROPONIC HOUSEPLANTS   | CORONA     |

## SENIOR DIVISION (9-12)

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|                    |    |  |            |
|--------------------|----|--|------------|
| EMILY LI           | 10 | TRACK IT DOWN: A MOBILE APPLICATION FOR VOLUNTEER HOURS TRACKING   | ESTEM/ERHS |
| ETHAN MIR          | 11 | THE EFFECT OF ACE-INHIBITORS ON ACE-2 EXPRESSION   | CENTENNIAL |
| GAVIN TAN-TORRES   | 12 | CANTILEVER CARNIVAL  | CENTENNIAL |
| GAVIN WALSH        | 9  | CROSSBOW VS AIR CANNON   | SANTIAGO   |
| HANA MOHAMMAD      | 10 | HOMEMADE MENSTRUAL PADS  | CENTENNIAL |
| HUNTER TRINH       | 9  | ONE IN FORTY-THREE QUINTILLION   | SANTIAGO   |
| ISAAC RAMIREZ      | 10 | PESTICIDES VS. WORMS   | CENTENNIAL |
| ISHAAN GUPTA       | 10 | DETERMINING ANTIMICROBIAL EFFECTS IN REGARD TO FRUIT EXTRACTS  | CENTENNIAL |
| JACKSON HOLSTER    | 11 | LACROSSE POCKET VS SPEED   | CENTENNIAL |
| JACQUELINE BELTRAN | 10 | IS IT POSSIBLE TO REUSE POLYPROPYLENE, HDPE AT HOME?   | SANTIAGO   |
| JASLEEN GREWAL     | 10 | ACTIVATED CHARCOAL FOR WATER FILTRATION  | ESTEM/ERHS |
| JAYDEN DAYA        | 10 | MORE STRENGTH, MORE SPEED  | CORONA     |
| JESSE TIGNO        | 12 | BRAKE SYSTEMS  | CENTENNIAL |
| JORDYN BLAIR       | 12 | THE WORDING EFFECT   | SANTIAGO   |
| JOSHUA CARVAJAL    | 11 | MAKING ECO-FRIENDLY PLASTIC  | CENTENNIAL |
| JUBILEE YU         | 10 | TRACK IT DOWN: A MOBILE APPLICATION FOR VOLUNTEER HOURS TRACKING   | ESTEM/ERHS |
| JUSTIN CHOI        | 9  | FILTERING GREYWATER USING PLANT ROOTS  | CENTENNIAL |
| KATELYN DULCO      | 9  | DOES A PERSONS POSTURE AFFECT HOW ITS HORSE SLIDES?  | CORONA     |
| KAVYA KADAKIA      | 10 | CORRELATION OF STRESS AND PERIODONTAL DISEASE  | CENTENNIAL |
| KHAI PHAM          | 11 | FABRICS AND HEAT   | CORONA     |
| KIM PHAM           | 11 | STOP POLLUTION QUICK! DON'T MAKE THE WATER SICK!   | CORONA     |
| KION LEE           | 12 | WE KNOW DUST MATTERS, BUT BY HOW MUCH  | CENTENNIAL |
| KRISH RAVAL        | 11 | NOVEL PARTIAL DIFFERENTIAL ANALYSIS FOR TURMERIC REACTION AGAINST EPITHELIAL CELLS IN VITRO  | SANTIAGO   |
| KRRISHIKA SAXENA   | 11 | INCORPORATING A HIGHLY SENSITIVE GRAPHENE NANOMATERIAL AND UTILIZING AN IOT BASED ECG MONITORING IN WEARABLE SENSORS TO DETECT THE ONSET OF CARDIAC ARREST | ESTEM/ERHS |
| LARA RANDHAWA      | 9  | HALT APP: HEALTH AND LIFESTYLE TOGETHER FOR PREVENTION OF BMI ESCALATION IN CHILDREN   | CORONA     |
| LOUIS NGUYEN       | 11 | AFFORDABLE RECHARGEABLE THERMAL BATTERIES  | CENTENNIAL |
| MADISON ZEHNTNER   | 10 | DETERMINING ANTIMICROBIAL EFFECTS IN REGARD TO FRUIT EXTRACTS  | CENTENNIAL |
| MAHIMA MANGAMURI   | 9  | GENE EDITING WITH CRISPR CAS9  | ESTEM/ERHS |
| MARK HUO           | 12 | CANTILEVER CARNIVAL  | CENTENNIAL |
| MELISSA ARANA      | 12 | SALINITY VS. OIL SPILL   | CENTENNIAL |

## SENIOR DIVISION (9-12)

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|                       |    |  |            |
|-----------------------|----|--|------------|
| MELISSA LINARES       | 12 | STRAW DECOMPOSITION  | CENTENNIAL |
| MELISSA LINARES       | 12 | HOW EFFECTIVE IS HUMULIN COMPARED TO HUMAN INSULIN ON TYPE 1 DIABETICS                 | CENTENNIAL |
| MIGUEL HERNANDEZ      | 12 | SALINITY VS. OIL SPILL   | CENTENNIAL |
| NIKHIL REDDY          | 9  | MULTITASKING: EFFICIENT OR NOT?  | SANTIAGO   |
| PAREESA FAWAD         | 12 | HOW DOES CAFFEINE IMPACT PROTEIN DENATURATION?   | CENTENNIAL |
| PAREESA FAWAD         | 12 | DUCKWEED VS. POLLUTION   | CENTENNIAL |
| PENGYUE (MIKE) TIAN   | 11 | TESTING VARYING MICROPLASTICS' EFFECTS ON DROSOPHILA MELANOGASTER                      | ESTEM/ERHS |
| PENGXIANG (MARK) TIAN | 11 | MAKING FOREST SURVEY DRONES A VIABLE SOLUTION TO PREVENT WILDFIRES                     | ESTEM/ERHS |
| PERCY TRUYENQUE       | 11 | FERROFLUIDS AND THEIR EFFECTS UNDER MAGNETIC FIELDS BASED ON THE SUFACTANT COMPOSITION | CORONA     |
| PETER YOON            | 12 | RECYCLING IMAGE DETECTION  | CENTENNIAL |
| PIPER HESS            | 9  | CONTAMINATED PRODUCE   | CORONA     |
| POGCHETTRA IM         | 11 | LACROSSE POCKET VS SPEED   | CENTENNIAL |
| PRANAVI BETHAPUDI     | 9  | WHAT KINDS OF NATURAL PRODUCTS ARE EFFECTIVE FOR HYPOTHYROIDISM?                       | ESTEM/ERHS |
| PRINCESS CHANDROO     | 11 | WATER COST VS PLANTS   | CENTENNIAL |
| RANIA GAUHAR          | 11 | PLASTIC DECOMPOSITION WITH WORMS   | CENTENNIAL |
| RUILIN (JONATHAN) LI  | 9  | CALCIUM HYPOCHLORITE AS AN ALTERNATIVE TO THIRD GENERATION OIL DISPERSANTS             | ESTEM/ERHS |
| RUIQI (RICKY) ZHANG   | 9  | CALCIUM HYPOCHLORITE AS AN ALTERNATIVE TO THIRD GENERATION OIL DISPERSANTS             | ESTEM/ERHS |
| RYLEE COOMBER         | 12 | THE WORDING EFFECT   | SANTIAGO   |
| RYLEE LINGWALL        | 10 | MORE STRENGTH, MORE SPEED  | CORONA     |
| SAMANTHA FLOYD        | 10 | DIFFERENT FERTILIZATION SOLUTIONS FOR A HYDROPONIC HOUSEPLANTS                         | CORONA     |
| SARAH BATONGBACAL     | 10 | CHILDHOOD TOYS & CAREER CHOICE   | SANTIAGO   |
| SEAN KIM              | 12 | EPOXY CURING   | CENTENNIAL |
| SEAN NGUYEN           | 9  | ONE IN FORTY-THREE QUINTILLION   | SANTIAGO   |
| SOFIA NGUYEN          | 11 | CURING NAILS OR SKIN   | CENTENNIAL |
| SURAJ JAYARAMAN       | 12 | RECYCLING IMAGE DETECTION  | CENTENNIAL |
| SYED ALI              | 11 | CRISPR MANIPULATION  | CENTENNIAL |
| TALUNA TAKE-SEAGAL    | 10 | IS IT POSSIBLE TO REUSE POLYPROPYLENE, HDPE AT HOME?                                   | SANTIAGO   |
| TANISHA VATANDAR      | 12 | EFFICACY OF O. TENUIFLORUM AS AN ANTIMICROBIAL AGENT                                   | CENTENNIAL |
| TESSA KING            | 11 | SEW STRONG   | CENTENNIAL |
| THOMAS SHERMAN        | 11 | ROCKETS  | CENTENNIAL |
| TRICSZHA MACAM        | 11 | CYCLE OF METAMORPHOSIS   | CENTENNIAL |

## SENIOR DIVISION (9-12)

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|                       |    |  |            |
|-----------------------|----|--|------------|
| TRINITY PINEDO        | 12 | STRAW DECOMPOSITION  | CENTENNIAL |
| TRINITY SHAKER        | 12 | GENETIC SIMILARITY   | CENTENNIAL |
| TROY LA GRASS         | 11 | AFFORDABLE RECHARGEABLE THERMAL BATTERIES  | CENTENNIAL |
| VERENIZE YEPEZ        | 11 | MAKING ECO-FRIENDLY PLASTIC  | CENTENNIAL |
| VICTOR XIAO           | 12 | WHAT IS THE RELATIONSHIP BETWEEN THE CONTACTED SURFACE AREA OF AN OBJECT AND THE FLUID DRAG OPPOSED UPON THAT OBJECT WHEN TRAVELING THROUGH A FLUID? | CENTENNIAL |
| WENDY ALEJO           | 11 | BODY REFLECTION & CONVERSION   | CENTENNIAL |
| XINING WANG           | 12 | ROTATIONAL VELOCITY  | CENTENNIAL |
| YUHAN (JESSICA) ZHANG | 10 | ACTIVATED CHARCOAL FOR WATER FILTRATION  | ESTEM/ERHS |
| ZAMAAN MUZAFFER       | 11 | AFFORDABLE RECHARGEABLE THERMAL BATTERIES  | CENTENNIAL |
| ZEBA BALOUCH          | 12 | WIND ENERGY  | CENTENNIAL |
| ZOEYA MANSOOR         | 10 | WHICH PAIN RELIEVER WORKS THE FASTEST?   | CORONA     |



CORONA-NORCO UNIFIED SCHOOL DISTRICT  
**SCIENCE & ENGINEERING FAIR**  
**AWARDS 2023**

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