

THE NEST



WELCOME FEBRUARY!!

Wow! Can you believe we are in February? We are almost halfway through 3rd quarter already. Time is flying by. Keep up all the great work. You got this!!!

We have included hyperlinks in our newsletter. Any links that have a shaded background such as our articles and videos, Saturday school forms and Zooms have been hyperlinked for your use.

We welcome any student, staff, or faculty input or articles. Please send any newsletter ideas or information to Mrs. Holguin:
lisa.holguin@cvusd.us.

Enjoy!!!

Upcoming Events:

See last page for calendar.

**2/1 Spirit Week Theme:
Super Bowl Week**

**2/3 Lunch Time Activity:
Hangman**

2/6 Saturday School

**Listening Party Fridays
from 3:00-3:40**

**2/12, 2/15 President's Day
Weekend No school**

GET TO KNOW CDA TEACHERS

How long have you been at CDA?

Ms. Moffitt - 10 years

Mr. Saenz - 6 years

Mrs. Holguin - 20 years

Mr. Castaneda - 8 years

Mr. Kline - 1 year



What college or university did you attend?

Ms. Moffitt - CSU San Marcos

Mr. Saenz - UC Davis

Mrs. Holguin - Loyola Marymount Uni.

Mr. Castaneda - CSU San Bernardino

Mr. Kline - UC San Diego



If you were not a teacher, what would your career be?

Ms. Moffitt - Veterinarian

Mr. Saenz - Park Service Ranger

Mrs. Holguin - Book Editor

Mr. Castaneda - Counselor

Mr. Kline - Pro Surfer



What animal best describes your personality? Why?

Ms. Moffitt - South African

Boerbel, protective and loyal

Mr. Saenz - Snowy Owl, quiet

Mrs. Holguin - Bear, protective, independent

Mr. Castaneda - Bear, powerful

Mr. Kline - Dolphin, playful and protective



HAWK HAPPENINGS

Congratulations CDA Science Fair Winners

Irene Diaz

Irene Diaz BAT DUEL

Purpose

The purpose of this experiment is to determine which bat is better to use in games. The game of softball has been growing in the last few years and a common question is what type of bat are you swinging? There are many brands to choose from but the construction of a bat can make a difference. There are 2 types of bats to choose from a one-piece or two-piece. "A one-piece bat is a solid, continuous piece of metal. On the other hand, a two-piece bat has two parts- a barrel and a handle which are then bonded together"

Hypothesis

If you hit a softball with a two-piece bat instead of a one-piece, then the softball will travel farther.

Materials

- 32" two-piece bat
- 32" one-piece bat
- Softball tee
- 10- 14u game
- Softball balls
- Compact measuring wheel
- 1 assistant
- Open softball field

Question

Which bat will hit a softball farther?
one-piece vs. two-piece

Procedure

1. Start by going to an open softball field
2. Place a tee over the home plate
3. Grab the one piece bat
4. Place a softball on the tee
5. Get in an athletic stance (knees slightly bent and loose) line up your knuckles while holding the bat
6. Swing the bat making contact in the center of the ball, extending and following through
7. Repeat steps 4-6 until you have hit 10 softballs until 3 trials have been completed
8. Grab the two piece bat
9. Repeat steps 4-6 until you have hit 10 softballs until 3 trials have been completed

Results

Average Distance Ball Traveled With Different Types Of Bats

Trial	Bat Type	Distance Ball Traveled (ft)	Average (ft)	Difference (%)
1	One Piece	130.2, 215.6, 198.2, 195.3, 201.4, 205.5, 217.1, 192.7, 196.2, 230.2	198.2	-12.2
	Two Piece	16.9, 189.1, 207.8, 207.2, 218.4, 219.5, 219.4, 221.1, 220.4, 232.3	210.4	12.2
2	One Piece	209.1, 173.9, 209.9, 208.4, 207.4, 214.3, 214.8, 184.7, 216.7, 219.3	205.5	-16.6
	Two Piece	226.6, 223.7, 210.1, 225, 217.9, 227.2, 222, 227.5, 220.3, 220.4	222.1	16.6
3	One Piece	131, 175.8, 195, 194.6, 153, 210, 213.7, 213.8, 203.4, 203.5	189.6	-21.0
	Two Piece	21.7, 214.6, 207.6, 213, 189.9, 214, 215.8, 208.2, 214.1, 214.2	210.8	21.0

Conclusion

My hypothesis was supported. I said, if you hit a softball with a two-piece bat, then the softball will travel farther. The results showed that the average for the two-piece bat was farther than the average for the one piece bat by 16.6 Ft. That may not seem like a big difference but if you ask me it could be the difference from winning or losing a game.

Caleb Galle

CALEB GALLE SALT-POWERED CAR DIGITAL DISPLAY BOARD JUNIOR DIVISION

PROBLEM:

The problem in the world is that there are too many fossil fuel cars and so a result these emissions have caused harm to our climate. In California, by 2035 all new cars must be zero-emission vehicles. This increase of carbon dioxide in the atmosphere is a major cause of climate change. These fossil fuels are harmful for both the environment and public health. Sulfur dioxide emissions are the result of primarily burning coal that contributes to acid rain and harmful or poisonous weather that can destroy the planet and human lives.

SOLUTION:

I am an entrepreneur and I look up to Elon Musk and Warren Buffett. I also was inspired by Stanley Meyer and Steve Jobs. I want to take innovation, technology, and combine these worlds while helping the planet and being the best. Gordon Parsony of the business and technology world combined. There are such cars as the electric cars like the Tesla. This year, I was inspired by a project from my high school science mentors that created hydrogen-powered cars. I researched if there were more sources and I learned that the Salt Gradient Power Car is a great solution using river water. I wanted to engineer and build a car that captures a clean source of renewable energy. Currently due to the COVID-19 pandemic, I needed to make sure that I could get supplies that I have while on a restricted state stay at home order by Governor Newsom. The same man, who ordered the executive change of no fossil fuels cars. I decided to find out if my idea is viable ways to make a prototype and create another option for our future in automobiles and

DESIGN REQUIREMENTS:

1. Gathered materials: Cardboard, Copper Sheet, Zinc plated screws, Small Container, Small Gears, Wheel, Metal Bracket, DC Motor, Wheel, Black Wire Covers, Hot Glue Gun, Resistor Tape, Copper Nails, water, salt, and a cup
2. I got the cardboard that I cut B inches long by inches wide and then I cut 1 inch of the back which I cover so the wheels will be able to spin.
3. After I was done cutting everything I took the metal brackets, the wheels, gears, and black wire covers. Then I put two gears in the middle with glue on the ends of each of them then I put two wires across the metal brackets after all that you put the wheels on and then glue the metal brackets to the front of the car.
4. After I did the front wheels I did the same thing I did to the front wheels I did to the back wheels and the same I did to the back wheels where they didn't add the gears to it.
5. I then connected the wires to the motor and then I put a small gear on the front of the motor and I glued the motor onto the cardboard and made it so when the gears on the motor were touching the gears on the metal bracket so that when you turn the motor it moves the gear which moves the wheels.
6. After all that I then I glued the container on the cardboard then I drilled a small hole in the copper sheet then after that I attached one of the wires to the copper and then I put the copper in the container and surrounded it with the copper. Then I got zinc and attached the zinc wire to it and put it in the container as well.
7. Then after all that I poured some water into a cup and then I poured some salt into it and stirred. I then poured the water in the container and when the zinc is in the container it makes the car move but when it is in the container it doesn't move.

MATERIALS:

- Box of assorted wheels, axles, levers and miscellaneous parts
- Zinc
- Copper
- 9V DC motor
- For Board
- Wires
- Nuts
- Hot Glue gun and Glue Sticks
- Small Container

PROTOTYPES:

GRAPHICS:

RESEARCH:

The salt water provides the electrolyte used in a chemical reaction inside a fuel cell. This chemical reaction creates electricity, similar to how a battery creates electricity. This electrolyte is a small motor which powers the car. It is called a fuel cell car because it uses a simple fuel cell to operate. Water is fully oxidized hydrogen. Zinc is the negative electrode. Copper is the positive electrode. Together they act like a battery. The salt water is the electrolyte. Fuel cells use the chemical energy of hydrogen or another fuel to generate and efficiently produce electricity. Fuel cells, or a natural fuel such as coal or gas, formed in the geological past from the remains of living organisms. Renewable energies are the future because it is an alternative to the traditional energy that relies on fossil fuels, and it tends to be much less harmful to the environment. Governor Newsom announced that California will phase out gas-powered cars and drastically reduce demand for fossil fuel in California by 2035. California will require that by 2035 all new cars and passenger trucks sold in California be zero-emission vehicles. Lithography is a technique that uses direct electron current (DC) to drive an electroless copper electroplating reaction. Electroplating is commercially important as a stage in the preparation of elements from naturally occurring, sources such as zinc using an electrolytic cell.

NEXT STEPS:

The model prototype on my engineering project did not run. I am not discouraged and found solutions and things I need to fix and engineer and need more supplies. I need to get more zinc and then I also need to find the right ratio of salt and water. I also need to get a full copper sheet to surround the whole container. So I will also need bigger wheels and bigger gears to hold the weight of the salt water solution and the copper, zinc, and the motor. Once I get running the prototype, I want to make another model so I can test one with salt water versus one without salt or maybe with a solar panel to compare and gather data. I would like to email or contact Elon Musk and see what his thoughts are on the future of salt-powered cars. I also would like to go to talk with the Governor of California to find out what other solutions or type of cars he was thinking for consumers to use by 2035. Will there be funding or money given for this? One of my concerns is that many people can't afford a Tesla and some electric cars I fear don't operate or charging stations may be limited. Also, I would like to design a salt-gradient boat and test against my car. I would like to contact manufacturers or Zoom and interview companies to find out the solutions they have for renewable energy transportation on. Fossil fuels continue to harm our environment and emit pollutants and public health is the number one concern. We are living in a pandemic from the Covid-19 virus and those toxins can weaken people's immune systems and be deadly. I hope I can be a part of making change to see in the world for my future.

HAWK HAPPENINGS

Congratulations CDA Science Fair Winners

Naiyeeshah Garcia & Sonia Monroy

Naiyeeshah Garcia & Sonia Monroy

The Challenger

Digital Display Board Junior Division

QUESTIONS:

Does temperature affect athletes and astronauts? Did the Challenger explosion happen due to a change in temperature? Does football and soccer balls pressure affect on athlete performance?

PROBLEMS:

The problem is that change in temperature affects pressure, which can cause a wide array of problems. One such problem that was caused by changing pressure and temperature was the explosion of the Challenger in 1986 that lost the lives of seven astronauts. Changes in temperature and pressure can also affect athlete performance. For instance, the infamous Patriots Football Deflategate, occurred due to temperature changes within the football.

HYPOTHESIS:

If we dribble a soccer ball and throw a football with different temperatures during the day, the number of dribbles and the length of the football throwing distance will increase when the temperature is warmer and decrease when the temperature is cooler.

MATERIALS:

- Soccer Ball size 5
- App called DribbleUp Soccer
- NFL Football
- 5 Tapes Measure
- Food Weight scale
- Meat Thermometer
- Ipod
- NFL
- Cell phone

PROCEDURES:

SOCCER:

- Gather materials.
- Leave the ball outside for 30 minutes to acclimate.
- Take the outside temperature.
- Weigh the ball on scale.
- Take the temperature of the ball by using a meat thermometer before using the soccer ball.
- Put the tip of the thermometer on the ball.
- Put data in my notes.
- Conduct the experiment in the morning at 7:30 and in the afternoon at 3:30.
- Click on soccer ball app.
- Close the application 2-minute dribble trial.
- Start screen recording.
- Take a screenshot of my results.
- Write down number of dribbles in journal.
- Repeat steps in afternoon.

FOOTBALL:

- Gather materials.
- Leave the ball outside for 30 minutes to acclimate.
- Take the outside temperature.
- Weigh the ball on scale.
- Take the temperature of the ball by using a meat thermometer before using the football.
- Put the tip of the thermometer on the ball.
- Put data in my notes.
- Conduct the experiment in the morning at 7:30 and in the afternoon at 3:30.
- Write down distance throw with left hand of football in journal.
- Repeat steps in afternoon.

RESULTS:

During the Challenger experiment we used two independent variables, a soccer and football. Along with the temperature of the ball twice a day, we tested both the soccer ball and the football for 5 days in the morning or midday, and in the evening. We ran the experiment for 5 days and did 5 trials with each ball for a total of 80 trials in the experiment. After analyzing the data and creating a graph, we used the morning trials and the afternoon trials since the temperature of the balls was greater. We had a total of 5 days and 10 trials for the soccer ball and compared that the average temperature in the morning of the ball was 41.3 (F) and the trials were 7.8. At 3:30 PM, the average ball temperature was 74.04 (F). After the football 5 days and ten trials, the average temperature of the football was 41.8 (F) and 0.8 feet. In the afternoon the average distance of the ball thrown was 12.65 feet. After analyzing both the average of the 5 trials for each ball, we saw a pattern that the temperature was lower and then performance outcome was lower than the temperature in the afternoon and the performance outcome. The increase in temperature had on overall increase on the distance. The football did not dribble with the increase with temperature. The soccer outcome was higher in the morning and decreased in the afternoon when the temperature increases. The soccer ball had deflation in the afternoon. Both balls had a constant mass throughout the ten trials analyzed.

RESEARCH:

This is chemistry, physics, and astronomy is project. Physics is the study of energy and motion in space and how they are related to each other. Chemistry involves the three main states of matter are solid, liquid, gas. As the temperature increases, the pressure in ball should increase because gas molecules have more kinetic energy, and as the football should go further or the soccer ball should have better performance. As pressure rise more mass (atmosphere) come in and causes soccer or football to deflate under the ideal gas law. For every 10 degrees of temperature change, a ball will increase its pressure by one point. As the temperature decreases, gas molecules cannot move as fast and lose less energy. The lower pressure leads to lower bounce of the ball. The higher pressure would do the opposite.

CONCLUSION:

The problem is that change in temperature affects pressure, which can cause a wide array of problems. One such problem that was caused by changing pressure and temperature was the explosion of the Challenger in 1986 that lost the lives of seven astronauts. Changes in temperature and pressure can also affect athlete performance. For instance, the infamous Patriots Football Deflategate, occurred due to temperature changes within the football.

Jamilah Lee & Peter Arias-Chavez

Jamilah Lee & Peter Arias Chavez

Water Imposter

Digital Display Board Junior Division

PURPOSE:

The purpose of this project was to determine if water is a healthy beverage for all ages and ethnicities. We tested the water in Thermal, CA with various pH levels to see if it was safe to drink. We also tested the water in Thermal, CA with various pH levels to see if it was safe to drink. We also tested the water in Thermal, CA with various pH levels to see if it was safe to drink.

PROBLEMS:

The problem is that the water in Thermal, CA is not safe to drink. We tested the water in Thermal, CA with various pH levels to see if it was safe to drink. We also tested the water in Thermal, CA with various pH levels to see if it was safe to drink.

HYPOTHESIS:

If we test four different cities for total hardness, total dissolved solids, pH, total alkalinity, and conductivity for Thermal, CA, then the city with the highest total hardness would be the city of Thermal.

MATERIALS:

- 4 pH Testing Strips (pH 1-14)
- 4 Conductivity Meters
- 4 Total Dissolved Solids Meters
- 4 Total Hardness Meters
- 4 pH Meters
- 4 Conductivity Meters
- 4 Total Dissolved Solids Meters
- 4 Total Hardness Meters
- 4 pH Meters
- 4 Conductivity Meters
- 4 Total Dissolved Solids Meters
- 4 Total Hardness Meters

PROCEDURES:

1. Get the water from the city of Thermal, CA.
2. Get the water from the city of Thermal, CA.
3. Get the water from the city of Thermal, CA.
4. Get the water from the city of Thermal, CA.
5. Get the water from the city of Thermal, CA.
6. Get the water from the city of Thermal, CA.
7. Get the water from the city of Thermal, CA.
8. Get the water from the city of Thermal, CA.
9. Get the water from the city of Thermal, CA.
10. Get the water from the city of Thermal, CA.

RESULTS:

We conducted an scientific project by testing 4 bottles of water in the Coachella Valley (Northridge, Ind, Coachella, Thermal) with 20 trials. We tested for pH, Total Dissolved Solids (TDS), Total Hardness (TH), Conductivity (C), and Total Alkalinity (TA). We tested for pH, Total Dissolved Solids (TDS), Total Hardness (TH), Conductivity (C), and Total Alkalinity (TA). We tested for pH, Total Dissolved Solids (TDS), Total Hardness (TH), Conductivity (C), and Total Alkalinity (TA).

CONCLUSION/ NEXT STEPS:

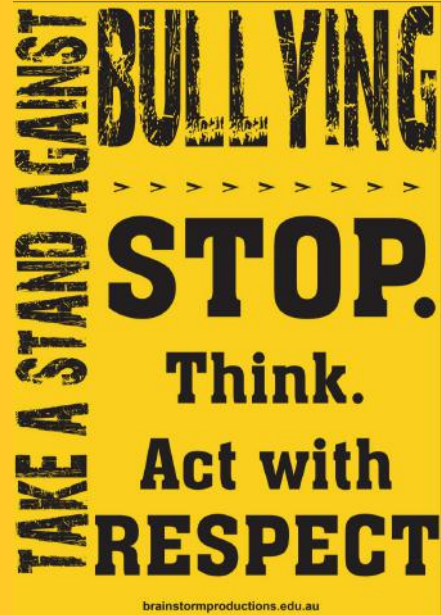
The problem is that the water in Thermal, CA is not safe to drink. We tested the water in Thermal, CA with various pH levels to see if it was safe to drink. We also tested the water in Thermal, CA with various pH levels to see if it was safe to drink.

Bullying Prevention - Elizabeth Gastelum

Did you know 1 in 5 students ranging from the ages of 12 to 18 get bullied during their school lives? Even though it's sad, it's true. Effects of bullying are students averaging below standards because they are so busy worrying about someone telling them hurtful comments (even physically hurting them sometimes) to pay any attention in class. People get bullied so much they skip school just so they won't have to face the cruel taunting of their peers. Bullying is never okay no matter the situation or reasoning behind the bullies actions.

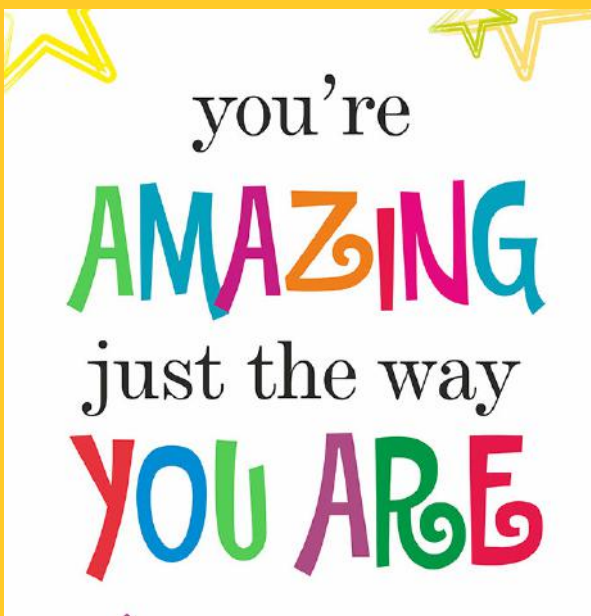
Some ways to prevent bullying is finding a way to better understand bullying so you can stand up to it safely. Moreover, teachers, counselors, ect. can help by checking up with their students. People can also report acts if they ever come across one. Parents can also inform the school board if they notice a change in their child's usual way of being.

To learning more ways to help prevent bullying visit Top 10 Ways to Prevent Bullying at School - Verywell Family: www.verywellfamily.com



GAMING BY MIRANDA CASTILLO

Gaming is a big part of quarantine right now since most of us can't go outside and play. So we play games on X boxes or Playstation's. But if you have the chance to, I'd say that you should go outside for a bit and be active for a while. Play Soccer or Volleyball, or you can ride your bike/skateboard. (Don't forget a helmet and a mask) It's okay if you don't know how to play any sports or ride anything, you can go for a walk or make up a game of your own.



CALENDAR OF EVENTS



Saturday School:

February 6th and 20th from 8:00am-12:00pm. Come for academic support. Students can also make up an absence by attending Saturday school. Although we highly encourage students to register, it is not needed and students may log in Saturday morning.

Registration Link:

onlinesaturdayacademy.com

Saturday School Zoom Link:

Meeting ID: 835 4317 7106

Passcode: 325775

<https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fcvusd-us.zoom.us%2Fj%2F83543177106%3Fpwd%3DelpWditwOGNJM2IONGU3UVF5c1lvQT09&data=04%7C01%7Cjeffrey.kruger%40cvusd.us%7Cc732584a250343c3e17108d87456b19b%7C357c0dd62267483894e8afecfef6a19%7C0%7C0%7C637387263009576504%7CUnknown%7CTWFpbGZsb3d8eyJWlloiMC4wLjAwMDAiLCJQljoilV2luMzliLjBtIi6k1haWwiLCJXVCi6Mn0%3D%7C1000&sdata=3eq4gXLpg4GkWEB0z10gpWrQ0wPg8t5c%2BiSf5uzR22U%3D&reserved=0>

Cahuilla Desert Academy ASB PRESENTS

SUPER BOWL WEEK



- 01 FEB** WEAR YOUR TEAM JERSEY!
FOOTBALL BINGO | 9:00 AM
- 02 FEB** WEAR YOUR TEAM COLORS!
FAMILY GAME NIGHT! | 9:00 AM
- 03 FEB** WEAR YOUR TEAM HAT!
GUESS THE SCORE? | 9:00 AM
- 04 FEB** WEAR YOUR TEAM BEANIE!
GUESS THE SUPER BOWL WINNER? | 9:00 AM
- 05 FEB** GAME READY FACE PAINT!
BRING YOUR FOOTBALL TO CLASS! | 9:00 AM

JOIN THE HAWK DEBATERS WITH MS. MAHONEY!!
CLICK HERE TO FOR MORE INFORMATION.

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