

**Brownsville ISD ECHS 2019-2020  
Science & Engineering Fair Results**

<b>School</b>	<b>Category</b>	<b>Teacher</b>	<b>Student's Name</b>	<b>Project Title</b>	<b>Rank</b>
BECHS	Animal Sciences	L. Guillen	Theresia Rookstool	Animal Population Sampling	1
Hanna	Animal Sciences	N. Rogers	Denisse Lopez	Don't Bite Me!	2
Pace	Animal Sciences	D. Lopez	Natalisha Torres, Annette Lira	Under the Sea: Noting effects of water temperature on sea urchin gametes	3
BECHS	Animal Sciences	S. Ortiz	Abryana Hernandez and Estrella Lozano	Towards Cheaper Sustainable Seafood: Biofloculant Increases Brine Shrimp Size and, in Some Conditions, Hatching Survival	4
Pace	Animal Sciences	D. Lopez	Ashley Nunez, Dyllan Lozano-Lomeli	The Hungry Caterpillar: Using invertebrate crop pest...	5

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Pace	Behavioral/Social	D. Lopez	Nissi Gutierrez, Mia Gonzalez	Don't Drink and Fly:A look on how isopropyl alcohol can be used to determine alcohol-seeking behaviors in Drosophila melanogaster	1
Hanna	Behavioral/Social	V. Trejo	Litzy Gonzalez, Esthela Estrada	The Effects of Romantic Relationships on Personal Characteristics	2
Hanna	Behavioral/Social	N. Rogers	Jonathan De Los Reyes, Frida Hernandez, Michelle Davila	Academic Dishonesty Comparisons: Freshman versus Seniors	3
Porter	Behavioral/Social	J. Martinez	Jillian Garza	Left Handed but always right Materials	4
Rivera	Behavioral/Social	W. Brown	Ruben Maldonado	Gaming Rate	5

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Pace	Biochemistry	K. Gomez	Paola Vergara, Roberto Alvarado	Cracking Down the Ingredients	1
Pace	Biochemistry	D. Lopez	Izzet Escoto	Too much can be pHatal: The pH Level of Water affecting the Digestive System	2
Pace	Biochemistry	D. Lopez	Tashareny Baez, Alejandra Medina	Six Feet Under: An investigation regarding the influence of soil properties on decomposition	3
Porter	Biochemistry	J. Martinez	Joanna Contreras	Orange You Glad We Didn't Use Plastic??	4
Hanna	Biochemistry	P. Fuentes	Cornelius Aguirre-Pineda	The Effect of Temperature on Alcohol Absorption Through the Cell Membrane	5

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Pace	Biomedical & Health Sciences	D. Lopez	Britney Torres, Luzeleste Flores	Breast Cancer Mystery: A statistical analysis on breast cancer	1
Rivera	Biomedical & Health Sciences	E. Cervantes	Kevin Cenicerros	Turn On 4 Watt	2
Pace	Biomedical & Health Sciences	D. Lopez	Valerie Lopez, Azeneth Arvizu	Out of sight : Exposing Drosophila melanogaster to hued led lights for investigation on circadian clock	3
Pace	Biomedical & Health Sciences	D. Lopez	Kevin Segura, Emily Arizpe	Moving to the beat: An investigation on possible effects on body vitals while exercising and listening to music	4
Rivera	Biomedical & Health Sciences	O. Lopez	Madison Shea, Gabriela Alvarez	Crawling Zombies	5

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Pace	Biomedical Engineering	D. Lopez	Joe Reyna, Katherine Beltran	Algae Alternative: Comparing the Wound Healing of Chlorophyta vs Phaeophyceae on Porcine Skin	1

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Pace	Cellular/Molecular Biology	D. Lopez	Daniella De La Cruz	Beady Bellies: An experiment on how microbeads affect <i>Litopenaeus setiferus</i> overall health	1
Veterans	Cellular/Molecular Biology	D. McCleary	Kevin Borsani, Christian Ruiz, Matthew de Lucio	Stayin' Alive 2.0	2
Hanna	Cellular/Molecular Biology	N. Rogers	Miguel Noyola, Noah Langs	E. Coli Transformation	3
Porter	Cellular/Molecular Biology	J. Trevino	Arlette Guevara	A Salty Egg	4
Porter	Cellular/Molecular Biology	J. Martinez	Roman Rodriguez	H2O In Temperature Diffusion	5

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Pace	Chemistry	D. Lopez	Michelle Arguello, Laisha Zavala	Sweet Drinks: Determining glucose values in GMO vs non GMO fruits as a potential for ethanol production	1
Porter	Chemistry	J. Martinez	Jocelyn De La Fuente	Acetone Vs Enviornment	2
Veterans	Chemistry	M. Oddo	Darian Burks	Fat "ME"? More.....	3
Pace	Chemistry	D. Lopez	Eduardo Dorado	The use of caffeine as an alternative pesticide	4
Veterans	Chemistry	M. Oddo	Leticia Alicea/Lauren Capistran	Hot Snacks? How Marshmallows and Cheese Puffs Keep the Body Warm	5

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Hanna	Computational Biology and Bioinformatics	S. Chong	Yadira Villagomez, Juan Angel Montemayor	Did Somebody Say Chocolate? Solving the World's Cacao Problem, One Sequence at a Time.	1
Hanna	Computational Biology and Bioinformatics	S. Chong	Rebekah Modesto, Elizabeth Guajardo	Cell to Cell: Exploring Direct Reprogramming	2
Pace	Computational Biology and Bioinformatics	D. Lopez	Oscar Arevalo, Samantha Rodriguez	Mapping the Zika Virus Outbreak Density and the Aedes aegypti Proliferation to Predict Future Outbreaks	3
Hanna	Computational Biology and Bioinformatics	N. Rogers	Gabriel Guajardo, Juan Soto	Do warmer sea temperatures make stronger hurricanes?	4



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Pace	Earth & Environmental Sci.	G. Bochas	Alejandra Mijangos, Keyla Villarreal	Mimicking acid rain to observe the effects it contains on freshwater organisms	1
Veterans	Earth & Environmental Sci.	M. Oddo/ A. Abete	Mario Ramirez/Leslie Brown	Too Much of A Good Thing: Fertilizers and Their Effect on the Rate of Growth of Cyanobacteria	2
Rivera	Earth & Environmental Sci.	E. Barrientos	Evanni Torres	Saving The World With Hydroponics	3
Hanna	Earth & Environmental Sci.	N Rogers	Victoria Martinez	FreshFuel	4
Lopez	Earth & Environmental Sci.	J. Cain	Isabel Solis	Bananalastic	5

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Pace	Embedded Systems	K. Gomez	Marco Obregon, Paul Luna	The Sixth Sense	1
Pace	Embedded Systems	D. Lopez	Bella Sanchez, Ashli Martinez	Lighten My Step: An embedded systems project designed to convert kinetic energy to electrical energy from human stride	2
Porter	Embedded Systems	E. Rutledge	Eric Balboa	Random Number Generator	3
Porter	Embedded Systems	J. Martinez	Andrea Duarte, Marcos Gomez	How much do online ads cost you?	4

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Pace	Energy: Chemical	D. Lopez	Ivan De La Rosa, Jesse Gonzalez	Lipid Component in Macroalgae from the Lower Laguna Madre	1
Hanna	Energy: Chemical	N. Rogers	Sylvia Cardenas, Jesus Gutierrez, Fernando Montanaro	Exploring Biofuels: Is Waste the Answer?	2
Pace	Energy: Chemical	D. Lopez	Marla Cahuiche, Gloria Santoscoy	Biomass to Biofuel: Grasses for Ethanol Production	3
Veterans	Energy: Chemical	A. Abete	Carla Alvarado	Algae Energy	4
Pace	Energy: Chemical	G. Bochas	Sergio Vazquez, Christian Richards	Calorifoodmetry	5

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Porter	Energy: Physics	T. Capistran	Jesus Pruneda	Multi-Water Conductivity	1
BECHS	Energy: Physics	S. Ortiz	Alejandra Garza and Pamela Herrera	Raise Up Lights	2
Veterans	Energy: Physics	C. Garcia	Alexia Serrate/Ariam Gaona	Eggs Against Weight	3
Lopez	Energy: Physics	H. Moreno	Anthony Franco & Marco Eqiua	Strengthening an Electromagnet	4
Veterans	Energy: Physics	D. McCleary	Cesar Suarez	Dynamos Repositioned	5

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Hanna	Engineering: Mechanics	V. Trejo	Laurel Tijerina	#6EP^5	1
Hanna	Engineering: Mechanics	S. Chong	George Zamfir, Adrian Jasso, Xavier Gonzalez	The Fully Solar Panel Powered Car	2
Pace	Engineering: Mechanics	D. Lopez	Esequiel Hernandez, Jeremy Briones, Jay Gomez	JEL Chair: The application of tracks on a power chair to enhance mobility	3
Veterans	Engineering: Mechanics	C. Garcia	Chelsea Osae-Asante/Sydney Osae-Asante	The Impact of Height on the Efficiency of a Structure	4
BECHS	Engineering: Mechanics	J. Sada	Livan Lira	Icee Bridges	5

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Pace	Environmental Engineering	D. Lopez	Gilbert Trevino, Alexia Garza, Sandra Arroyo	Stop the Drop-Using weirs to conserve and transport water	1
Pace	Environmental Engineering	D. Lopez	Alexa Morales, Jazmin Vasquez	H2 Oh No! The Sequel: Utilizing Coriandrum sp. in bioremeditaion of lead contaminated water	2
Hanna	Environmental Engineering	S. Chong	Jesus Talamantes	No more fire	3
Lopez	Environmental Engineering	H. Moreno	Eduardo Cisneros Jr & Jareth Rios	Bird Box	4
Veterans	Environmental Engineering	A. Hendrick	Jaime Galindo/Raul Hernandez	Converting Refuse Into Energy	5

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Porter	Materials Science	J. Martinez	Rolando Carlos	Rasing the Dissolved Oxygen in Brownsvilles Reseca	1
Pace	Materials Science	K. Gomez	Korina Alcantara, Carolyn Lira	Here Comes the Sun	2
Porter	Materials Science	J. Martinez	Marianna Salazar	Water Drag!	3
Lopez	Materials Science	H. Moreno	Lizbeth Torres & Elizabeth De La Cruz	Does it Tune	4
Porter	Materials Science	J. Martinez	Azalia Hernandez	Keeping it cool	5

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Pace	Mathematics	D. Lopez	Jayme Flores, Margarita Medina	Crime Up Ahead : An investigative study on using a semantic map to predict crime	1
Veterans	Mathematics	M. Oddo	Sofia Trevino/Lessly Garza	The Rise fo Mass Shootings: A Study on the Negative Relationship Between Mass Shootings and Societal Stress	2
Hanna	Mathematics	N. Rogers	Adrian Torres, Nathan Suarez, Joseph Sanchez	Life Expectancy of U.S. Presidents	3
Pace	Mathematics	C. Gonzalez	Annali Gracia	Using a Laser Pointer to Measure the Data Track Spacing on DVD's and CD's	4
Rivera	Mathematics	W. Brown	Sydnie Sanchez	Beauty with the Golden Ratio	5



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Porter	Microbiology	J. Martinez	Clarissa Puentes	How does Aeration Affect Dry and Active yeast metabolism?	1
Hanna	Microbiology	N. Rogers	Cristian Torres, Elizabeth Martinez, Anna Ramos	Bacteria Also Thaws	2
Pace	Microbiology	D. Lopez	Chase Morales	Microcosm: Do turf surfaces influence microbial growth on dermis?	3
Hanna	Microbiology	S. Chong	Alejandro Hernandez, Tristan Hernandez	ATMs, to withdraw money...or withdraw bacteria??	4

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Veterans	Physics & Astronomy	D. McCleary	Robert Stone	The Use of Audio to Identify Glitches in LIGO	1
Hanna	Physics & Astronomy	P. Fuentes	Adiella Chapa	Out of the Park	2
Veterans	Physics & Astronomy	S. Sanchez	Lillyvet Trevino/Celeste Villarreal	Treble Maker	3
Porter	Physics & Astronomy	J. Martinez	Eugene Segura	Comparing Skateboard Wheels	4
Pace	Physics & Astronomy	D. Lopez	Ramiro Munoz, Gael Polanco	Different roof designs vs. high speed winds	5

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Hanna	Plant Sciences	P. Fuentes	Andrew Lopes	How Crops Survive in a Space-Like Environment	1
Porter	Plant Sciences	J. Martinez	Samantha Casarez	The effects of EICHHORNIA CRASSIPIES on Aquatic ecosystem.	2
Pace	Plant Sciences	D. Lopez	Valentina Mora, Emily Velez	Full Bellies: The effects of oxygen production on macro algae due to excessive carbon dioxide	3
BECHS	Plant Sciences	S. Ortiz	Christina Cardenas-Moreno and Juan Cano	Comparing the Growth of Plants with Fertilizer and Bacteria	4
Rivera	Plant Sciences	C. Rangel	Vianca Flores, Lesly Ibarra	The Light and the Leaves	5

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Pace	Robotics & Intelligent Machines	D. Lopez	Benjamin Gracia, Dylan Barron	Float My Boat- Designing an ROV to Investigate Aquatic Environments	1
Hanna	Robotics & Intelligent Machines	S. Chong	Jan Davila, Simei Reyes, Jesus Guillen Jr	ARES ( Automated Receptacle Excrement System)	2
Pace	Robotics & Intelligent Machines	D. Lopez	Karen Mar	Rollo Rover	3

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Pace	Systems Software	D. Lopez	Luis Quiroz-Perez, Jose Fuentes	ByteSize 2.0: designing a software phone app to make healthier fast food choices	1
Pace	Systems Software	A. Saenz	Jasmin Gonzalez, Lizeth Sanchez, Arely Alvarez	MyChemicalLab	2
Hanna	Systems Software	N. Rogers	Alyssa Perez, Anakin Martinez	The Technological Way to Monitor People with Diabetes	3
Lopez	Systems Software	H. Moreno	Kyra Martinez	Google, Bing, or Ask: Which Engine is Better for You?	4

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Hanna	Translational Medical Sciences	J. Ramirez	Gaddiel Garcia Fuentes, Rianna Trevino	Determining the Cumulative Effects of Artificial Sweeteners and Ethanol in the Developing Embryo of <i>Danio rerio</i>	1
Hanna	Translational Medical Sciences	N. Rogers	Cruz Fernandez, Maria Gil	The Effects of Stimulants and Depressants on <u><i>Lumbriculus variegatus</i></u>	2
Pace	Translational Medical Sciences	D. Lopez	Mariana Mijangos, Kasia Molina	Promoting the Effects of Anti-inflammatory Properties of Macroalgae	3

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**Grand Champion Results**

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Hanna	Translational Medical Sciences	J. Ramirez	Gaddiel Garcia Fuentes, Rianna Trevino	Determining the Cumulative Effects of Artificial Sweeteners and Ethanol in the Developing Embryo of <i>Danio rerio</i>	Grand Champiom
Pace	Environmental Engineering	D. Lopez	Gilbert Trevino, Alexia Garza, Sandra Arroyo	Stop the Drop-Using weirs to conserve and transport water	1st Runner Up
Pace	Energy: Chemical	D. Lopez	Ivan De La Rosa, Jesse Gonzalez	Lipid Component in Macroalgae from the Lower Laguna Madre	2nd Runner Up
Pace	Robotics & Intelligent Machines	D. Lopez	Benjamin Gracia, Dylan Barron	Float My Boat- Designing an ROV to Investigate Aquatic Environments	3rd Runner Up