



THE LION'S ROAR
MILLENNIUM CHARTER ACADEMY EVENTS WORTH ROARING ABOUT

6th Grade Teachers Secure Bright Ideas Grants

Mrs. Bethany Shepherd, 6th grade science teacher, and Ms. Kelly Cummings, 6th grade math teacher, were recently awarded Bright Ideas grants from Surry-Yadkin Electric Membership Corporation. Ms. Cummings received \$370.50, which she will use to purchase plants for in the school's greenhouse and her spring exploratory "green thumb" class. This elective class helps educate 6th-8th graders about growing plants and vegetables, and she has the ultimate goal of having an MCA Farmer's Market near the end of the school year. Mrs. Shepherd received \$796.24 for a maker space project which will allow her students to utilize Making Tinkers, an engineering system, to actualize ideas as they learn the engineering design process. Congratulations to Mrs. Shepherd and Ms. Cummings, and thanks for having such bright ideas to engage our students!



Science Fair Winners

MCA's annual school science fair was held on Thursday, November 25. Students in grades four through eight presented many interesting and thoughtful projects, prompting at least one of the judges to comment on the high quality of the projects overall.

Lower School Winners



Left to right: **Paisley Chilton** (5th) 2nd place; **Benjamin Sorrell** (5th) 1st place; **Lanie Robertson** (5th) Lower School Director's Choice Award; **Luke Rogers** (4th) Headmaster's Choice Award; **Cooper Mitchell** (4th) 2nd place; **Jack Tucker** (4th) 1st place. First and second place winners will advance to the regional competition at Appalachian State University on December 17.

High School Winners

Alayna Smith (12th), left, and **Madison Lawson** (11th), right, placed first in the high school science fair. Their project researched if they could develop an environmentally safe and non-toxic alternative to common plastics. Both students are dually enrolled at MCA and Surry Community College through our partnership with SCC, and worked in the chemistry lab there to learn that they could develop flexible and hard plastics that are heat resistant using potato starch. Madison and Alayna will continue to the regional fair at Appalachian State University on December 17.



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6th – 8th Grade Winners

Students in grades six through eight participated in the NC Science and Engineering Fair, and some additionally wrote a research paper about their project which will be entered into the NC Student Academy of Science research paper competition.

MCA Upper School Science Fair Competition Winners 2019-2020

Biological Science A		
1st	Dallas Ashburn	You've got some Nerve (effect of age on nerves)
2nd	Ben Branch	How does music affect a runner's pace?
all	McKinley Gwyn	Which method of washing fruit removes the most wax?
Biological Science B		
1st	Lexi Edsall	How does age affect balance?
2nd	Nate Parrish	Plants....Listen up! (How does music affect plant growth?)
all	Clara Marion	Do you smell that? How does what we smell affect what we taste?
Earth and Environmental Science		
1st	Ava Thomason	Acid Rain
2nd	Kalana Bryant	Water on plant growth
all	Autumn Gilbert	Natural Fertilizers on Succulent Growth
Physics and Mathematics		
1st	Ben Black	My theory is gaining momentum (wheel size vs momentum on lego car)
2nd	Finley Baird	What is the most powerful karate kick?
all	Philip Byrd	Houston we have a problem (aerodynamics)
Technology/Engineering		
1st	Ayden Turner	Hot Spot (Variant temperatures of a moving object detected by PIR sensor)
2nd	Cheyenne Rogers	Your future sun face (sun protection)
all	Kayden Sosaita	Water filtration (water quality)
Chemistry		
1st	Natalie Cockerham	A "Dye"lemma (What is the effect of natural vs commercial dyes on cotton?)
2nd	Anna Edwards	Pearly White (teeth whitening toothpaste on coffee stains)
all	Aryan Hira	Chill out (Salt affects melting rate of ice)
Upper School Director's Choice		
	Garrett Routh	stain cleaners
Headmaster's Choice		
	McKinley Gwyn	Removing wax from fruit

MCA Upper School Research Paper Competition Winners 2019-2020

Behavioral Sciences		
1st	Brooks Harold	How does personality type affect short term memory?
2nd	Morgan Marteny	Catching the Feels (music's effect on emotion)
Earth and Environmental Science		
1st	Autumn Gilbert	Testing natural fertilizers on succulents
2nd	Ava Thomason	How does the addition of balancing substances affect the pH of highly acidic soil?

NCSAS Research Paper Winners

Left to right: **Morgan Marteny, Brooks Harold, Ava Thomason, Ben Branch, Autumn Gilbert, and Daniel Shinault.** All are invited to attend the regional competition on December 17. **Cheyenne Rogers** is the NCSAS Middle School president for this school year.



Project Winners

Left to right: **Ava Thomason, Anna Edwards, Garrett Routh, Ben Black, Finley Baird, Kalana Bryant, Nate Parrish, Aiden Turner, McKinley Gwyn, Cheyenne Rogers, Dallas Ashburn, Natalie Cockerham, and Lexi Edsall.** All first place project winners will continue to the regional competition at Appalachian State University on

