



## Kansas Corn's Teacher-Led STEM-Based Education Program

*Offering curriculum, materials  
and training opportunities  
for K-12 Kansas Educators*

*Welcome to our quarterly newsletter! See  
what we have to offer to Kansas educators!*

This is a newsletter written **by** teachers **for** teachers to keep up on what's happening with Kansas Corn's STEM-based education program! We've got curriculum, materials and training for K-12 teachers interested in incorporating inquiry techniques, and using corn to help students see how technology fits into their lives and their future!

**Visit [kscorn.com](http://kscorn.com) for CORNTASTIC education resources!**

### **Seed to STEM Summer Workshop**

***Free Seed to STEM Workshop for High School and Middle School Science Teachers, Plus \$500 in Lab Resources!***

Attention middle school and high school science and agriculture teachers. It is time to sign up for the Seed to STEM summer workshop. This year there is an application process to be selected. New this summer, teachers have the option to choose between a middle school and high school track. Each teacher will practice fourteen labs and/or activities that they can use in the classroom to help students learn the role agriculture plays in science. The workshop includes a farm and field visit, an industry dinner and a field trip to an ethanol plant. In addition, every teacher will receive \$500 worth of free lab resources, plus all on-site expenses paid. Graduate credit will also be available at a cost to the participant. To learn more and to apply visit <https://kscorn.com/6-12-training/>. Applications will be accepted until April 27th.



## **NEW! Second Grade Unit**



We are excited to announce that the 2nd grade unit, "Kansas Corn: How does it grow?" is now available. In this unit students will work like scientists to test their ideas about what plants need to grow by using corn plants as the model organism. Students will test growing conditions, such as amounts of water and sunlight needed for a plant to survive. The unit has three lessons, all of which meets NGSS. To learn more and to request your free materials kit visit [www.kscorn.com/education](http://www.kscorn.com/education).



## Seed to STEM Lead Teachers Attend Commodity Classic in Anaheim, CA

By Seed to STEM Lead Teacher, Jed Heath, Maize South High School

Eight Seed to STEM Lead Teachers recently attended the 2018 Commodity Classic in Anaheim, California. This is the national convention of corn, soybean, wheat and sorghum growers and features an enormous trade show. Four of the teachers attended Commodity Classic last year in San Antonio and four were new to the program. This was an excellent experience where we met with Kansas Corn to discuss and plan the summer Seed to STEM workshops and other seminars. We met with leaders in the agriculture community, and learned about the future of agriculture the role science and technology plays. One of the things I noticed from last year to this year, was the change in focus. Last year much of the focus was on electronic technology whereas this year, there were new innovations that were highlighted, proof that the industry is continuing to make advancements. I felt like going back a second time, I was seasoned at knowing who I needed to meet and focused on areas I missed the year before. We were all excited to be able to make contacts for seed and equipment to give to area teachers for their labs.



### Our Seed to STEM Lead Teachers

[Adam Williams](#) - Newton High School  
[Lacie Fair](#) - Newton High School  
[Jed Heath](#) - Maize South High School  
[Blake Smith](#) - Maize South High School

[Brent Conner](#) - Salina South Middle School  
[Brian Nelson](#) - Hadley Middle School  
[James Burk](#) - Trego High School  
[Anna Lukert](#) - St. Mary's High School

## Guest Speaker Opportunity

By Bill Johnston, Education Outreach Coordinator

Many of us feel that we understand farming and ranching. We understand the science. We understand the work. We understand the marketing. We understand the issues. If you don't, you are not alone! It is estimated that 72% of consumers feel that they know little or nothing about farming. [And, that number is growing.](#)

The Kansas Corn Commission recognizes the need for consumers to understand and trust where their food comes from. We feel that the logical place to begin this understanding and trust is with the youth. We want to talk to students and teachers about agriculture and the role science and technology plays.

Three years ago, Kansas Corn Commission began a K-12 STEM education to provide training and materials to help teachers incorporate lessons about corn and agriculture in their classrooms. Since its initiation, over 500 teachers have received training and/or teaching supplies resulting in thousands of students across Kansas learning the science behind agriculture through the Kansas Corn's hands-on lessons. Due to high demand, the Kansas Corn Commission is expanding its offerings.

This is where I come in. I'm Bill Johnston. I was an Ag Education teacher for 33 years. These years included 6 years at Riley County (Riley), 2 years at Marmaton Valley (Moran) and 25 years at Jayhawk Linn (Mound City). My entire professional life has been about teaching the value and opportunities in agriculture. My position as Outreach Coordinator for the Kansas Corn Commission will allow me to take this message to a new audience. I will be visiting schools and making presentations about the impact of agriculture on their daily lives. My goal is to customize the presentation to the needs of each classroom. Topics will vary from the basics of agriculture to the science, controversial issues, marketing and careers involved in agriculture.

If you are a teacher looking to add some agricultural awareness to your curriculum, go to: <https://kscorn.com/request-materials/>. There, you will find a list of resources. One of which is "Guest Speaker". That's me and I look forward to talking with you. If you're a parent who wants your child to gain some understanding of agriculture or, like me, a person who loves agriculture and wants others to gain an appreciation for it, spread the word to your local school. Ask them to take a look at the [education tab at](#)



## Blog: Ag Careers

*By Seed to STEM Lead Teacher Anna Lukert, St. Mary's High School*

*Lukert is pictured left with the drone she won from Monsanto at the Commodity Classic in Anaheim. This drone will help her students learn more about precision agriculture, a growing career sector.*

“What do you want to be when you grow up?” is probably the number one question we ask of students through their years on our campuses, but is it the right question to ask? We start in kindergarten with their adorable little pictures next to their favorite color, how tall they think they are and what they want to be when they grow up. I am guilty of it, too, because let's face it, it is precious, and we enjoy seeing them evolve and change over the years as they hone in on their interests and abilities and begin to learn what careers they are best suited for. So what does this have to do with Seed to STEM? Perhaps we should be taking a more scientific approach to asking students about their careers and transform the way we are asking the question to better assess the motivations and interests of students by asking “What problems do you plan to solve?” A problem-based approach will help students truly focus their attentions on the impact they hope to make in their schools, communities and their world.

There are 23 million jobs that support agriculture in the United States with 54,400 new jobs each year. Currently we are only producing 29,400 graduates each year to fill those positions that help feed and clothe our world and help protect our natural resources. This leaves 25,000 jobs each year going unfilled, or filled with less qualified applicants. So what can we do as teachers? Let's start by helping students explore careers in agriculture that fit their interests! New to our curriculum this year will be a career focus for each of the laboratory activities that highlights a different career in agriculture related to the activity. With the new emphasis in education to focus on Individual Plan of Study (IPS) with students, it is more important than ever to help students find what it is that gets them excited to go to school and learn more about a subject area they are passionate about! Help students explore these careers through [www.agexplorer.com](http://www.agexplorer.com) and the resources they have with profiles on hundreds of agricultural careers in nine different focus areas. They can use the career finder tool to take a quiz and help match them to a career that suits their personalities and interests, or you can take your classroom on a Virtual Field Trip of Zoetis Animal Health, Cargill, Syngenta or Ford Motor Company where they will see interviews with a dozen or more different career interviews with people who work for that company in many different roles. Get out there and get your students exploring the problems they can solve in Agriculture, like how exactly will we feed 9 billion people by the year 2050?

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## Ag Ed EPIC Experience Visits Garden City



*By Angela Dailey, Kansas Corn Intern*

Kansas Corn sponsored the Ag Ed EPIC Experience Tour held in Garden City. The Ag Ed EPIC experience tour allowed seniors in agricultural education who attend Kansas State University, to tour and talk with various agricultural production businesses around Garden City. The students toured Royal Farms Dairy, Reeve Cattle Company, Bonanza Ethanol Plant, and the Kansas State Research Extension office. This tour helped Ag Ed students to see a more diverse aspect of the agricultural industry so that they are then able to relay that information back into their future classrooms to better their students for the opportunity to expand their knowledge within the agricultural community.

At the Royal Farms Dairy, the students talked with Kyle Averhoff, where he explained what his everyday activities looked like on the dairy. The students toured the milking room and learned how the milk was filtered to then be sent to the trucks that were stationed in that barn. Royal Farms Dairy sends out about 10 truckloads of milk a day.

Students toured the Bonanza Ethanol Plant, looking into the tactics and processes in running an ethanol plant. They learned more about the byproducts that come from the ethanol plant. For example, the distiller grains (DDGS), which is the livestock feed coproduct, is sold directly to local feed lots.

At Reeve Cattle Company the students learned about the cattle and ethanol industries from owner, Lee Reeve. The presentation went into detail about Reeve Cattle Company and how the company became a successful and sustainable company. Reeve's Cattle Company has tackled the task of sustainability by growing their own crops, producing their own feed on the farm with their small feed mill, feeding their cattle feed lot with what they grow and producing ethanol and DDGS through their ethanol plant. This cuts out the middle men throughout the business and keeps their costs low and keeps their products on the ranch.

At the Kansas State Research Extension office in Garden City, students learned about the water challenges that producers face in Western Kansas. The students toured a center pivot and learned more about how those center pivots work and the different irrigation system technologies. They learned about new technology being researched on Water Technology Farms that will help to conserve water.

The next day the students toured Cimarron High School and Sublette High school's Ag Ed program. They got to talk with those Ag Ed teachers and learn about their struggles and successes throughout growing their programs. This allowed students to get insight on what to do and how to achieve their goals as teachers.

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