

AFBFA

Virtual Livestream Events, e-Learning Support and Professional Learning Network: On July 21 and 23 two livestream events explored how anchoring phenomena can be used in a unit of instruction and how investigative phenomena can be used in *figuring out* scientific concepts. Participants engaged with the anchoring phenomena of each storyline produced by American Farm Bureau Foundation for Agriculture (AFBFA), a contractor to the Beef Checkoff, then walked through elements of the anchoring phenomena routine to learn how this technique can be used to kick-off a unit of study and drive student motivation throughout the unit as well as gain familiarity with the instructional arc of the storyline. While we attempt to make sense and identify related phenomena, participants received firsthand accounts of how the disciplinary core ideas, crosscutting concepts, and science and engineering practices within these units get applied in the real world through connections with our guest speakers. These events were facilitated by educators and enriched by our guests. Facilitator and speaker bios and intro videos are available here: <https://www.onthefarmstem.com/bios>

The events are both archived on the On The Farm STEM website:

- Genetics & Heredity: <https://www.onthefarmstem.com/events/genetics-livestream-archive>
- Ecosystem Dynamics & Interactions: <https://www.onthefarmstem.com/events/ecosystems-livestream-archive>

By The Numbers:

- Educators from the top 10 largest school districts in the U.S. engaged with the livestream events. This includes New York City, Chicago Public and Los Angeles. Along with representation from over 800 other school districts across the nation.
- 16,842 engagements on the On The Farm STEM website in June and July 2020
- 1,033 non-duplicated registrations for the Livestream events
- 98.5 percent of attendees indicated on a post-survey they would attend an event like this again

Feedback Shared by participants:

On the Ecosystems webinar:

216 The entire experience was excellent! The emphasis on having students using scientific principles to answer questions and solve problems in an active, empowered way. The modeling for equity, and the ability to approach this wearing the hat of a teacher, a student and an adult learner. The quality of the information, materials, guest presenters. The wonderful modeling of online instruction and tools that really helped me start to concretely visualize how my online classroom could be a vibrant, interactive, humane community! I am so excited to get going where before I felt like I was adrift. Thank you all! This was just what I needed in this moment.

2 Useful lesson ideas ready to go that are engaging and relevant. Formats that can be personalized for individual classrooms. The anchor phenomena/storyline technique is a valuable tool that can be used with many concepts. I am looking forward to using it with my students.

On the Genetics webinar:

5 The instructional storyline model is very engaging for students (and teachers as well.) This anchoring phenomena will be used in my standard biology class for genetics, DNA technology, and artificial vs. natural selection. It will also be used in my IB Environmental Systems and Societies class in relation to sustainability. Professional development with practical applications!

I really enjoyed the knowledge and expertise of each of the presenters. The use of the videos and ability to have questions answered after. I appreciate the way each presenter created a real-world experience that students can use and make application. It is important that students make connections across disciplines and grade levels so that meaningful conversations can take place from class to class.

To support a community of learners pursuing the implementation of storylines in the classroom, we will have two asynchronous courses titled *“Introduction to Storylines”* and *“Creating Culture that Makes it Work”* available. These resources are great support materials for teachers that are just getting started with this approach to science education or for storyline veterans in need of a refresher or materials to use when coaching others. Both modules can be accessed here: <https://www.onthefarmstem.com/curriculum/storylines>

We are exploring the best way to provide educators with a professional learning network to support the efforts of those who adopt this approach and who adopt using phenomena found in agriculture to enhance student learning; a space for reflection, inquiry, support, research, guidance, etc. This network will include storyline experts to answer questions and provide insight and informal coaching as well as field experts to address content. To address the need for this network, we recently launched the portal at <http://network.onthefarmstem.com/portal.php>

Beef-based Unit Badging

NextGen Science, the entity that reviews, scores and provides feedback for NGSS units of instruction, has begun the final review of a high school and middle school unit of instruction. Scores will be returned mid-September

The [high school](#) and [middle school](#) curriculum are available on the On The Farm STEM Website under the “Curriculum” tab on the top of the home page.

NextGen Science scores will be posted with the curriculum when received. Also, once we have the scores, the units of instruction will be added to OER (Open Educational Resource) portals across the nation for teachers to easily access.

On the Farm STEM Immersive Event

The On the Farm STEM event has been changed to a virtual experience for 2020. We are working with the original education key opinion leaders to execute an experience the still brings the participant on the farm for an inside look at beef production and the science the is involved on the ranch and farm. The event will be held mid-September. Details are currently being finalized to execute this event.

Our mission at AFBFA is to build awareness and understanding of agriculture through education - to promote and support agricultural literacy. We believe that we will need an agriculturally literate society to ensure a sustainable future. This is why agriculture provides the perfect context for science education. Agriculture weaves into all aspects of our daily lives. Exploring science through the lens of agriculture is both aspirational in that it engages students in figuring out how to solve global challenges that face our society and practical in that the science, engineering and technology used in the production of our food, fiber, and fuel provide opportunities for students to deepen their understanding of science content by applying their knowledge in a practical and relatable context. What better way to empower students to use their scientific knowledge in their everyday lives.