

The Ag21 Project: Connecting High School Science Teachers and Students to 21st Century Innovations in the Food, Agriculture, Natural Resources, and Human Sciences (FANH)

The goal of this project is to increase the number of high school biology teachers who allocate instructional time for exploring biology-based innovations in the agricultural sciences. With a primary focus on large, diverse, urban schools but open access to the project deliverables by science teachers in all schools, significantly more biology students will, in turn, become aware of the fascinating applications of science in agriculture and choose to focus their college studies and careers in the FANH sciences. The sustainability of the U.S. food and agricultural system will be dependent upon continued scientific discovery, technology development and transfer, and leadership in sustainable food systems, requiring a highly capable and diverse workforce in all sectors of the industry.

The primary objectives of the project are to (1) increase high school biology teachers' awareness of biology-based innovations and career pathways in the FANH sciences, (2) increase explicit instruction on FANH sciences and careers in high school biology courses, and (3) develop teachers' awareness of the leadership knowledge and skills needed by 21st century agricultural scientists and professionals. These objectives will be accomplished through a series of 17 online teacher professional development modules with accompanying lesson plans and supporting teaching materials for use in high school biology courses. The modules and teaching resources will be based on the following AFRI priority areas: plant systems; animal systems; food systems and health; bioenergy, natural resources, and the environment; and agriculture systems and technology.