

Want to start using CASE in your agricultural education program?

## Attend a CASE Institute!



- CASE Institutes are intense professional development led by practicing CASE teachers.
- The CASE curriculum is free to those who successfully complete a CASE Institute.
- Institutes are hosted by affiliated universities and colleges across the United States each summer.
- CASE teachers receive complimentary updates to the curriculum and many other services throughout their careers.
- For a complete listing of upcoming CASE Institutes and certification information, please visit [www.case4learning.org](http://www.case4learning.org) and click on "Professional Development."

# CASE

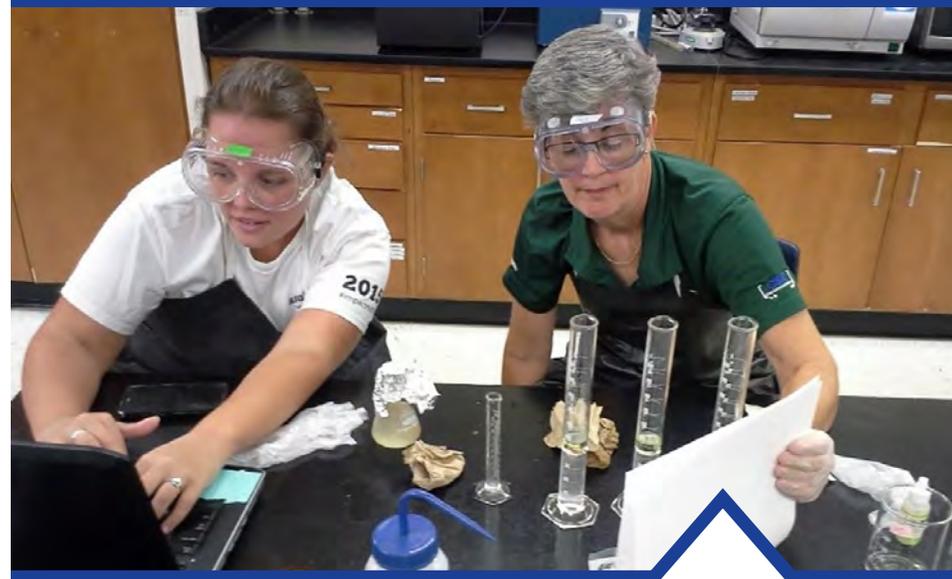


**STEM**  
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Science Technology Engineering Mathematics  
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## ANIMAL AND PLANT BIOTECHNOLOGY



# CASE

*Curriculum for Agricultural  
Science Education*

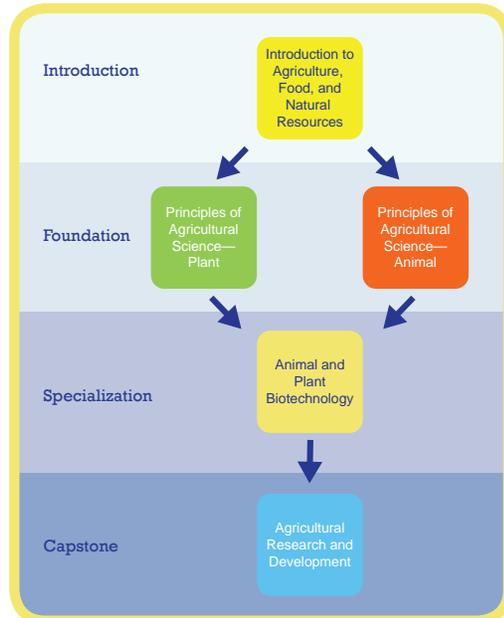
# CASE PROGRAM OF STUDY

“Career and Technical Education students should follow a program of study made up of a **purposeful sequence** of **rigorous courses** to build student knowledge and skills.”

– recommendation in Perkins reauthorization



We have carefully designed a program of study pathway for *Animal and Plant Biotechnology* that scaffolds student learning within courses and throughout the pathway.



## Animal and Plant Biotechnology



All CASE pathways begin with the *Introduction to Agriculture, Food, and Natural Resources* course, then branch into four areas which focus on animals, plants, agricultural engineering, and natural resources.

Schools have the option of offering either the animal or plant foundation course leading to the specialization course, *Animal and Plant Biotechnology*. All CASE pathways culminate with the capstone course *Agricultural Research and Development*.

## Animal and Plant Biotechnology

During *Animal and Plant Biotechnology*, a specialization-level course in the CASE program of study, students become proficient at projects involving micropipetting, bacterial cultures and transformations, electrophoresis, and polymerase chain reaction. Research and experimental design are highlighted as students develop and conduct industry appropriate investigations.

### Animal and Plant Biotechnology

Areas of study include:

- Laboratory Protocols & Safety
- Cells
- DNA & Protein
- Genetically Modified Organisms
- Micropropagation
- Polymerase Chain Reaction
- Research in Biotechnology

**CASE provides teachers hands-on professional development to facilitate instruction.**

We are grateful to **MetLife, Inc.** and the **United Soybean Board** for sponsoring the CASE *Animal and Plant Biotechnology* course as a special project through the **National FFA Foundation**.

**MetLife Foundation**

