

What students will be learning at the Fairmont Farm!

Innovative approach:

Fairmont's AG-STEM Learning Lab for K-8 students will be the first of its kind in California. Inquiry based practices and innovative opportunities will be the fabric of our program. Student management of the farm will be based on investigations aligned with the authentic practices of science and engineering, not traditional labs with pre-determined outcomes. Our innovative approach will allow students to learn in formal and informal settings, integrating the outside farm with the Ag-STEM Learning Lab classroom.

Objective:

Fairmont will provide a comprehensive AG-STEM education through the integration of the National Agriculture Food and Natural Resources (AFNR) content standards, Next Generation Science Standards, and ties directly into our current PLTW Engineering through an activity, project, and problem-based approach.

The following is a specific outline of our AG-STEM curriculum:

Principles of Agriculture Science: Animal and plant:

Plant (Grades: K-3)

- Soils
- Anatomy and Physiology
- Taxonomy
- Growing environment
- Reproduction
- Pest and Disease Management
- Crop Production and Marketing

Animal

- History and use of animals
- Animal handling and safety
- Cells and tissues
- Animal Nutrition
- Animal reproduction
- Genetics
- Animal Health
- Animal products, selection, and marketing

Agriculture Power and Technology: (Grade 4-8)

- Shop Safety
- Tool Operation
- Materials selection & Use
- Fabrication

- Energy & Power
- Machines
- Machinery Management
- Engineering
- Technology Applications

Agriculture Engineering: (Grade 4-8)

- Agriculture mechanics technology
- Safety with Agriculture electricity
- Agriculture Electricity and Electrical controls
- Metal Technology
- Small Engines
- Introduction to renewable energy
- Renewable fuel production

Ag Business: (Grade 7-8)

- Agriculture Economics
- Farm Management
- Agribusiness management
- Financial planning
- Agriculture development
- Product marketing
- Decision analysis