

Description

The Agriscience program at CTEC will provide students the opportunity to spend half their 11th and 12th grade years learning technical and professional skills consistently expected within the Agriculture industry with a focus in nursery and food production. Students in the CTEC – Agricultural Science program will have learning opportunities in horticulture, aquaponics (growing fish and plants symbiotically), hydroponics (growing plants using nutrient solutions without soil), micropropagation (using plant tissue culture methods to rapidly multiply stock plants), and food systems including production, distribution, and processing.

Student Outcomes

- Ability to produce, process, and distribute nursery and food products into a viable market using industry-driven practices
- Demonstrate a comprehensive understanding of integrated pest management practices
- Knowledge of business operations including ability to organize, plan, and manage in relation to nursery and food production industries
- Understand and practice safe sanitation and hazardous materials handling (HACCP)

May be able to earn industry certification in:
Integrated Pest Management

Students may be able to earn Dual Credit at
Chemeketa Community College

Agriculture Courses

Plant Propagation (1 credit)

Farm to Fork (0.5 credit)

Agriculture Business Management (0.5 credit)

Plant Science & Food Production (1 credit)

Adv. Ag Business Management (1 credit)

Suggested FTE

1.5 licensed Agriculture teachers

1.0 Instructional Assistant

0.5 English

0.5 Science

Curriculum Materials

A. Curriculum for Agricultural Science Education (CASE)

- a. Intro to Ag, Food, and Natural Resources
- b. Principles of Agricultural Science – Plant
- c. Natural Resources and Ecology
- d. Animal and Plant Biotechnology
- e. Food Science and Safety
- f. Ag Research and Development

Integrated Core Courses

English 11 (1 credit)

English 12 (1 credit)

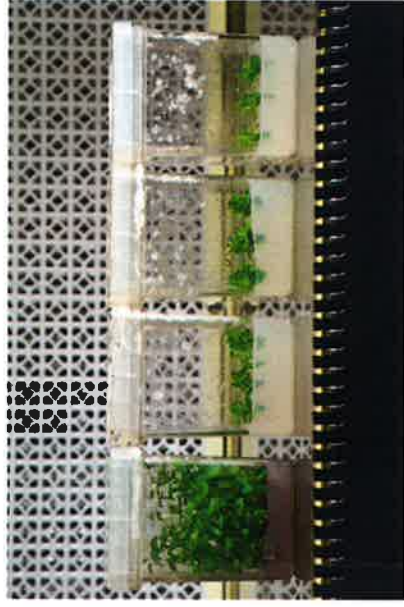
Advanced (Ag) Biology (1 credit)

Horticulture (1 credit)

Student Capacity

90-120

Micro propagation and Hydroponics



30% More Yield Across 8 Different Crops

Kale



Basil



5

HYDROPONIC FUN FACTS AND FIGURES

Hydroponics is a method of growing plants without soil. It is the fastest growing sector of agriculture, and it could very well dominate food production in the future. There are many advantages of hydroponics and here are 5 great reasons to start growing now...

hydro-pon-ics / hīdre 'päniks/

Mean: the science of growing or the production of plants in nutrient-rich solutions or moist inert materials, instead of in soil.

Latin: words "hydro" meaning water, and "ponos" meaning labor.



90%

farmers claim that some hydroponic crops use **90% less water** than the same crops in traditional soil farming.



1/4

you can plant **4 times** the amount of crops in the same space as traditional soil farming.



zero

grown in an inert medium **without soil** with perfectly balanced pH, nutrients solutions and highly oxygenated water which is delivered directly to the roots.



x2

some crops can **grow twice as fast** in hydroponics due to getting exactly the correct amount of nutrients, water and oxygen.



0.0

hydroponically grown crops can use **NO herbicide or pesticide** chemicals which significantly impact the environment and our bodies.

Hydroponics:

How It Works

