

V.A.

**CONNECTICUT STATE BOARD OF EDUCATION
Hartford**

**TO BE PROPOSED:
May 2, 2018**

RESOLVED, That the State Board of Education adopts the Agriculture, Foods and Natural Resources (AFNR) Career Cluster Content Frameworks, Connecticut Edition.

Approved by a vote of _____, this second day of May, Two Thousand Eighteen.

Signed: _____
Dr. Dianna R. Wentzell, Secretary
State Board of Education

CONNECTICUT STATE BOARD OF EDUCATION
Hartford

TO: State Board of Education

FROM: Dr. Dianna R. Wentzell, Commissioner of Education

DATE: May 2, 2018

SUBJECT: Adoption of the Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Frameworks, Connecticut Edition

Executive Summary

Introduction

The current Connecticut Agricultural Science and Technology Education (ASTE) Standards are based on the 2009 National Agriculture, Food and Natural Resources Standards created by the National Council for Agricultural Education (The Council). In 2015, The Council revised the 2009 national standards and released the Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards.

The 2015 Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards provide state agricultural education leaders and educators with a high-quality, rigorous set of standards to guide what students should know and be able to do after completing a program of study in each of the AFNR career pathways. Since the release of the 2015 Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Standards, the Connecticut State Department of Education (CSDE) has actively engaged stakeholders in the creation of the updated Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Frameworks, Connecticut Edition.

The Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Frameworks, Connecticut Edition enhances the national offerings by adding frameworks for beekeeping and maple syrup production and including two new pathways: (1) aquaculture and (2) marine trade. Additionally, the Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Frameworks, Connecticut Edition include crosswalks with several key frameworks and standards including the Next Generation Science Standards, Common Core, National Standards for Financial Literacy and Green/Sustainability Knowledge and Skill Statements.

History/Background

In December 2015, the CSDE engaged the Connecticut State Consulting Committee for Agriculture Science and Technology Education in a review of the National AFNR Standards. This committee voted to support the creation of a Connecticut Framework version of the National AFNR Standards that would replace the current Connecticut Agricultural Science and Technology Education Standards.

In 2016, the CSDE began the multi-stage review and revision process seeking input and guidance from: secondary and postsecondary educators; business and industry leaders; and agriculture, agricultural science, and technology education leaders. The review and revision process focused on ensuring that the Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Frameworks, Connecticut Edition:

-) reflect essential and up-to-date knowledge and skills that students need to be ready for college and career in a variety of agriculture, food and natural resources fields;
-) provide a sound basis upon which to design Connecticut focused agriculture, food and natural resources related courses; and
-) afford a wide-ranging source for creating meaningful formative and summative assessments to measure student's attainment of essential knowledge and skills.

Because of the feedback gathered in the review process, the CSDE organized committees of experts to create two Connecticut-specific pathways and frameworks: (1) aquaculture and marine trades, and (2) beekeeping and maple syrup production.

The draft Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Frameworks, Connecticut Edition, was reviewed by the following: all agricultural science and technology education programs; state and local consulting committees consisting of parents, students, and local business and industry; FFA Alumni groups; and the University of Connecticut (Appendix A). Over 200 reviewers rated the 2017 Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Frameworks, Connecticut Edition a 2.9 out of three (3) and several reviewers asked that the frameworks be utilized immediately by districts.

Recommendation

The CSDE presents the “Agriculture, Food and Natural Resources (AFNR) Career Cluster Content Frameworks, Connecticut Edition” for review and consideration of adoption.

Prepared by: Harold Mackin
Education Consultant, Academic Office

Approved by: Melissa K. Wlodarczyk Hickey, Ed.D.
Reading/Literacy Director

**Agriculture, Food & Natural Resources Career Cluster Frameworks
Connecticut Edition
Stakeholder Engagement/Review
Appendix A**

Organization	Audience
State Consulting Committee for Agricultural Science and Technology Education	Representing
December 2, 2015 AFNR Review	
Kevin Farr, Superintendent Killingly Schools	Superintendents of ASTE Centers
Jaunice Edwards	ASTE Department Heads/Directors Group
Katie Golembeski	ASTE Parents
Patrick O'Keefe	Connecticut Association of Agricultural Educators
Joseph Barsky	Connecticut Agriculture Experiment Stations
Milton Natusch	Connecticut FFA Executive Secretary
Harold Mackin	CSDE
Dr. Pat Jepson	UCONN College of Agriculture, Health and Natural Resources
Henry Talmage	Farm Bureau
Matt Staebner	Animal Science (Farmer)
Jon Trumbolo	Connecticut State FFA President
May 9, 2017 AFNR Update	
Robert Angeli	Superintendents of ASTE Centers
Justin Ferreira	Connecticut State FFA President
Harold Mackin	CSDE
Joseph Barsky	Connecticut Agriculture Experiment Stations
Milton Natusch	Connecticut FFA Executive Secretary
Dr. Pat Jepson	UCONN College of Agriculture, Health and Natural Resources
Kathryn Golembeski	ASTE Parents
ASTE Department Head/Directors Group	
November 16, 2016 and May 18, 2017	
Jaunice Edwards	Bloomfield ASTE
Lea Catherman	Bridgeport Aqua
Jenifer Pantazis	Glastonbury ASTE
Karen Davenport	Region 1 ASTE
Mark Burdock	Region 1 ASTE
Ken Couture	Killingly ASTE
Devon O'Keefe	Ledyard ASTE
Rebecca Rose	Lyman Hall High School ASTE

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Brenda Wildes	Lebanon ASTE
Rebecca Isaacson	Middletown ASTE
Bill Davenport	Region 14 ASTE
Mia Haaland	Region 7 ASTE
Karen Fitzpatrick	Vernon ASTE
Tim Visel	Sound School ASTE
Marion Stannard	Southington ASTE
Laura LaFlamme	Suffield ASTE
Pam Berlekovic	Trumbull ASTE
Dr. Robert Tremaglio	Trumbull ASTE
Charles Rowland	Region 6 ASTE
Virginia Hamilton	Stamford ASTE
National Expert Review	
The National Council for Agriculture Education	Appendix B of the Agriculture, Food & Natural Resources Career Cluster Frameworks, Connecticut Edition
Revising National AFNR Career Cluster Standards to Connecticut Edition, AFNR Career Cluster Frameworks	
August 23, 2016 - November 29, 2016	
Bridgeport Aqua Staff	Marine Trades and Aquaculture
Sound School Staff	Marine Trade and Aquaculture
Karen Davenport	Animal Science
David Moran	Plant Science
Matt Smith	Natural Resources & Aquaculture
Kathryn Dal Zin	Animal Science
Emily Picard	Natural Resources
Brenda Wildes	Animal Science
Geoff Picard	Natural Resources & Aquaculture
Mark Burdock	Agriculture Mechanics
Mike Kingsbury	Agriculture Mechanics
Amanda Thompson	Animal Science
Rebecca Isaacson	Plant Science
Ed Belinsky	Agriculture Mechanics
Marion Standard	Plant Science
Patrick O'Keefe	Agriculture Mechanics
Pam Berlekovic	Animal Science
Victoria Christian	Natural Resources

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Surveys 2016 and 2017	
Surveys were given to stakeholder groups, students, parents agriculture businesses, farmers by ASTE Department Heads	



CONNECTICUT STATE DEPARTMENT OF EDUCATION

Connecticut State Board of Education

The Agriculture, Food and Natural
Resources (AFNR) Career Cluster
Content Frameworks, Connecticut
Edition

May 2, 2018

The National Agriculture, Food and Natural AFNR Career Cluster Content Frameworks

Connecticut National Subject Matter Experts

Name	Organization	Title
Cynthia Chotkowski	EO Smith High School	Animal Science Teacher
Jen Cushman	Glastonbury High School	Head ASTE Teacher
Emily Picard	Lyman Hall ASTE	Agriscience Teacher
Harold Mackin	CSDE	ASTE Consultant
George Lyman	Regional #14	Natural Resources
Laura LaFlamme	Suffield ASTE	ASTE Director/ Teacher



Three Component Model of Agriculture Education

Agricultural education instruction is delivered through three major components:

- Classroom/Laboratory instruction (contextual learning);
- Supervised Agricultural Experience programs (work-based learning); and
- Student leadership organizations (National FFA Organization, National Young Farmer Educational Association and National Post-secondary Agricultural Student Organization).



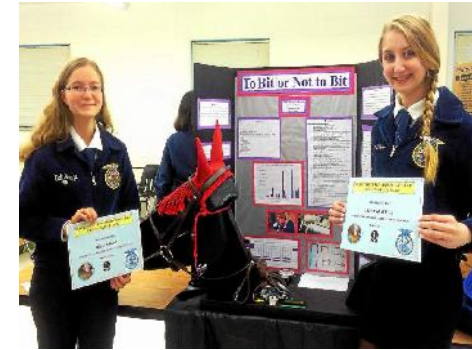
SUPERVISED AGRICULTURE EXPERIENCE (SAE)



CLASSROOM/ LABORATORY



LEADERSHIP (FFA)



AFNR Career Cluster Content Frameworks, Connecticut Edition

1. Agribusiness Systems
2. Animal Systems
3. Aquaculture
4. Biotechnology Systems
5. Environmental Service Systems
6. Food Products and Processing Systems
7. Marine Trades
8. Natural Resource Systems
9. Plant Systems
10. Power, Structural and Technical Systems



CROSSWALKS

APPENDIX C: EXAMPLE CROSSWALKS

A goal of the 2015 revision of the Agriculture, Food and Natural Resource Career Cluster Content Standards was to identify strategies for encouraging the adoption and use of this body of work. In addition to the revisions to update the technical content and improve clarity and consistency, the AFNR content standards were also cross-walked with several key frameworks to assist with state and local implementation.

Standards in the following key frameworks were cross-walked to the performance indicators in the AFNR Career Cluster Content Standards:

Common Core English Language Arts & Literacy

English Language Arts Standards. (2010, June 2). Retrieved February 25, 2015, from <http://www.corestandards.org/ELA-Literacy/>.

Common Core Mathematics

Mathematics Standards. (2010, June 2). Retrieved February 25, 2015, from <http://www.corestandards.org/Math/>.

Next Generation Science Standards

DCI Arrangements of Standards | Next Generation Science Standards. (2013, November). Retrieved February 25, 2015, from <http://www.nextgenscience.org/search-standards-dci>.

Green/Sustainability Knowledge and Skill Statements

Proposed Green/Sustainability Knowledge And Skill Statements. Version 2. 2012. Web. 25 Feb. 2015.

National Standards For Financial Literacy

National Standards For Financial Literacy. New York: Council for Economic Education, 2013. Web. 25 Feb. 2015.

In order for a crosswalk to be established, the content of the cross-walked standard must be **explicitly** taught in order to attain the related Performance Indicator in the AFNR Content Standards given the stated sample measurements. Educators in the field of science, math and language arts reviewed and provided formative feedback on all crosswalks to help confirm their face validity.

The crosswalks identified are not a finite list of all potential crosswalks. They are based upon the **sample** measurements identified for each of the performance indicators. If states or local educators edit or add to the stated sample measurements to meet local needs or emphasize specific academic content additional crosswalks may be identified.

