



Sunshine State Standards/Curriculum Integration



I am a CTE Teacher - why do I
have to worry about academics?

*Student's success is everyone's
responsibility!*

Integration of academics is important to better
prepare students technically and academically
for success in their postsecondary education
and future careers.

Research shows...

When academic and CTE content is presented in an integrated model, students are able to identify the real-world applicability of academic concepts. The contextualized learning that occurs through integration makes the connection between the academic content and the CTE content more explicit for students. Thus, their questions regarding “Why do I need to know this?” or “When will I use this?” are answered.

Ok – so how do I integrate?

1. Teach from and understand CTE integrated crosswalks.
2. Participate in available professional development
3. Utilize established lesson
4. Team teach or collaborate with academic teachers
5. Fully integrate - CTE courses counts for academic credits (Alternative Credit Pilot, Ag Foundations, Health Science 1 and 2) .

Crosswalked Frameworks:

Program: 8106800 Agritechnology

01.0 Describe the history of agriculture and its influence on the global economy--The student will be able to:

01.01 Investigate the history of agriculture and its relationship to science and

technology. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SS.A.1.4.1, 4;

SS.A.2.4.1, 2;

SS.A.3.4.1, 5, 8; SS.A.3.4.9; SS.A.5.4.1; SS.B.1.4.1, 4;

SC.912.E.5.7,

SC.912.L.14.1

01.02 Analyze the impact of agriculture on the local, state, national and global economy. LA.A.1.4.1, 2, 3, 4; LA.A.2.4.4; LA.B.1.4.1, 2, 3; LA.B.2.4.1, 2, 3; LA.C.1.4.1; LA.C.2.4.1; SS.A.3.4.3, 8, 10;

SS.A.4.4.1,

6; SS.A.5.4.3, 5; SS.B.2.4.1, 4; SC.912.L.14.1, SC912.L.17.13;

MA.912.A.2.1; MA.912.S.3.1, 3

What do the letters and numbers mean?

Science Example

- **Benchmark Number:** SC.912.L.14.1
- **Benchmark Description:** Describe the scientific theory of cells (cell theory) and relate the history of its discovery to the process of science.
- **Subject Area:** Science
- **Grade Level:** 912
- **BODY OF KNOWLEDGE:** Life Science
- **Standard:** Organization and Development of Living organisms –
 - A. Cells have characteristic structures and functions that make them distinctive.
 - B. Processes in a cell can be classified broadly as growth, maintenance, reproduction, and homeostasis.
 - C. Life can be organized in a functional and structural hierarchy ranging from cells to the biosphere.
 - D. Most multicellular organisms are composed of organ systems whose structures reflect their particular function.

Math Example

- **Benchmark Number:** MA.912.A.2.1
- **Benchmark Description:** Create a graph to represent a real-world situation.
- **Subject Area:** Mathematics
- **Grade Level:** 912
- **Body of Knowledge:** Algebra
- **Standard:** relations and functions –
Draw and interpret graphs of relations.
Understand the notation and concept of a function, find domains and ranges, and link equations to functions.

NGSSS Continued:

- **SC.912.L.14.1**

- Science standards – 9th – 12th, Life Science,
- Could also be Physical Science, Earth and Space, Nature of Science

- **MA.912.A.2.1**

- Math standards – - 9th - 12th Algebra,
- Could also be Calculus, Discrete Mathematics, Financial Literacy, Geometry, Probability, Statistics, Trigonometry

- <http://www.floridastandards.org/index.aspx>

Professional Development Opportunities

- [Career and Technical Education Reading program CATER](#)
Training for career and technical educators to enable them to provide reading intervention for fluent Level 1 and Level 2 students through an intensive reading course using their career and technical content materials. - **New class starting in September!!!**
- [Florida Online Reading Professional Development](#)
FOR-PD is an online staff development project designed to help teachers improve reading instruction for learners in grades PreK-12.
- [SREB Math and/or Science](#)
Training on the process of integrating mathematics and /or science into career/technical studies through authentic projects-based units. Participants work together in teams of mathematics/science and career/technical teachers to plan integrated project-based units and lessons with authentic student assignments.

CTE Connection Projects

- Projects designed to provide career and technical education teachers a curriculum that integrates the Sunshine State Standards with standards for identified Career and Technical education courses.
- <http://167.93.251.46/CareerConnectionFCAT/>

Project 2

Agriscience Education

Course #: 8121510

Grade 9-12

Plant Parenthood - Asexual and Sexual Propagation

1. PROJECT CONNECTION

Teaching Components; Project Summary; Instructional Focus; Rigor/Relevance Framework/Project SPS

2. READING CONNECTION

Principles of Plant Production

3. MATH CONNECTION

Seed Germination Rates

4. SCIENCE CONNECTION

Plant Propagation- Asexual Propagation Lab

5. PRESENTATION CONNECTION

**Plant Propagation- Ornamental Horticulture
Demonstration**

6. CROSSWALKS

Outcomes/SPS and FCAT/Essential Work Skills



Collaborate

CTE teachers share responsibility for the academic achievement of CTE students and must take responsibility to strengthen academic integration activities, based on performance data generated by the accountability system.

- **Know the data!** Identify resources to find test data (levels), 504's, IEP's, etc. for all students
- **Learn the language!** - Work with academic teachers to map the CTE curricula and create academic-enhanced lessons.

Alternative Credit Pilot

- Last year, Senate Bill 1906 (FS. 1002.375) created an Alternative Credit Pilot which allowed for the opportunity for students enrolled in Career and Technical Education programs that resulted in the earning of a nationally or state-recognized industry certification as defined by the Agency for Workforce Innovation in accordance with the criteria described in s. [1003.492\(2\)](#), to be awarded credit for courses in which a student is not enrolled, but for which the student may earn academic credit.
- Eligible alternative credit courses include Algebra 1a, Algebra 1b, Algebra 1, Geometry, and Biology.
- Alternative credits shall be awarded by enrolling in a CTE course or sequence of courses of which the majority of the standards-based content in the course description is consistent with the alternative credit course description approved by the Department of Education and the passing with a minimum passing scores (70 %) of an end-of-course exam approved by the Department of Education.
- Current courses - Introduction to Engineering Design, Engineering Technology 1

What should I do?

- Be familiar with new Math and Science Standards

<http://www.floridastandards.org/index.aspx>

- Implement them into your lessons whenever possible
- Use FCAT Connection projects -
<http://www.career-connection.org/>
- Join FACTE

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