

# MA in CTE Portfolio ECT 6948 - Practicum in CTE – Summer 2013

## Section II. Core Understanding of CTE Part 1: A Conceptual Model for CTE



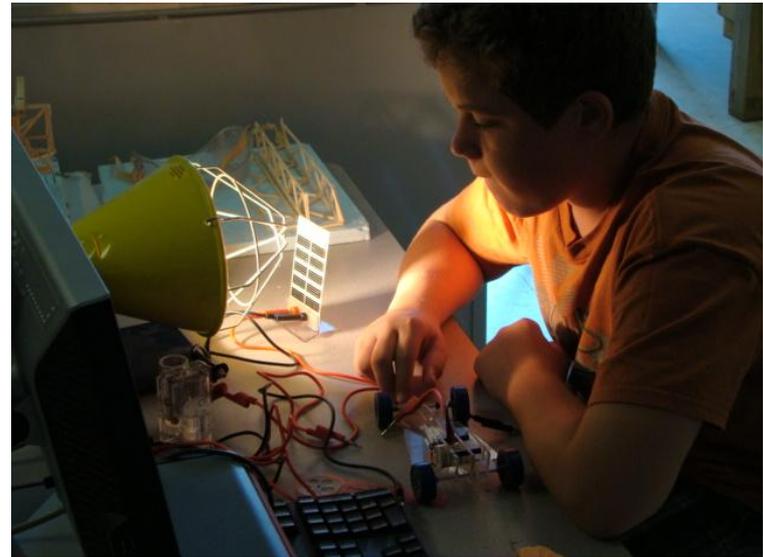
# Haile Middle School Engineering

**Program Vision and Purpose**

**Curriculum and Instruction**

**Internal Supports**

**External Supports**



# Program Vision and Purpose

- ▶ Student success is a tool to gauge the effectiveness of Career and Technical Student Organizations and sometimes the best marketing tool for a program. The hands on opportunities and leadership skills acquired often give participants an edge above other students. Student's success with certifications and competitions is a defining assessment of student achievement (Decken, 2012).
- ▶ It is the mission of the Haile Middle School Engineering program to establish lifelong learners, through a positive community classroom environment. Students are expected to be a team player and assist each other in the problem solving process while participating in career related task to simulate today's work environment.
- ▶ Common core standards benefit transient society. Academy standards play a role in students familiarity in leaning environments across the country. Average classroom in 900 square feet and we have filled them up with desks and individual chairs. School environment should mimic the work environment. Common Core standards focuses on the skills which come along with the content.



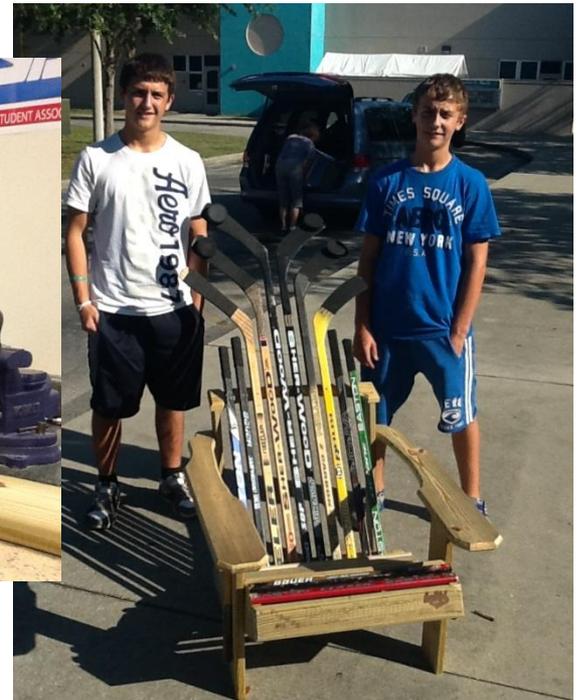
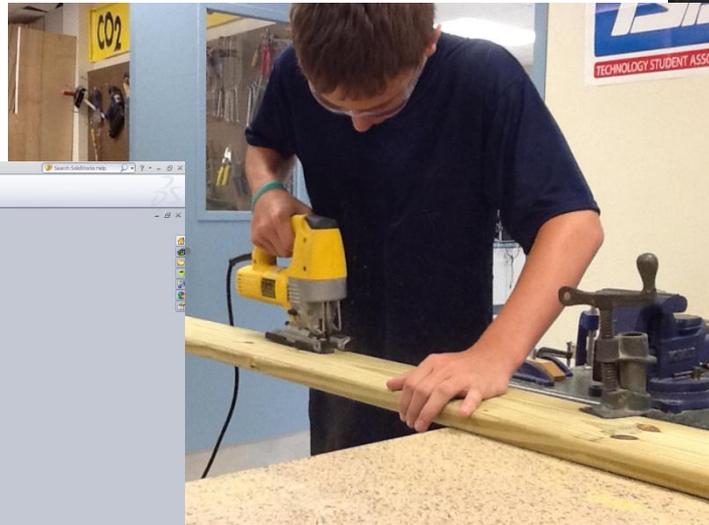
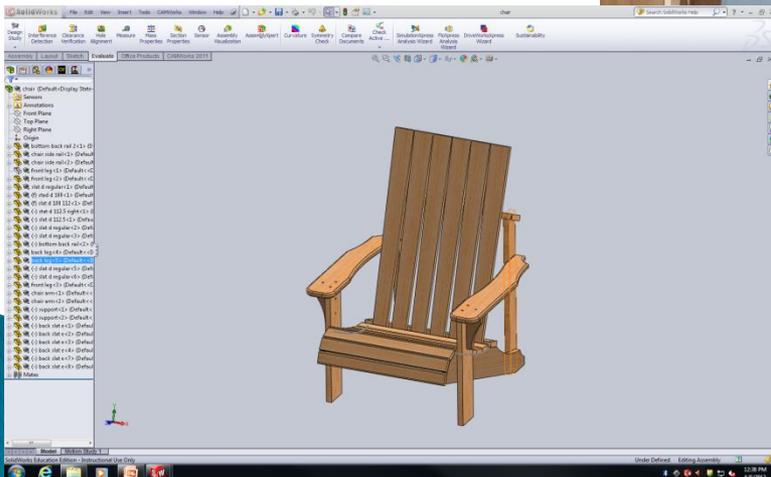
# Curriculum and Instruction

- ▶ Research exposed grading is not critical to instruction. More effective teachers gauge student learning with specific feedback on the learning mastered. Grades hold a stronger value as rewards rather than a punishment. Poor teachers who utilize grades as punishment create undesirable affects on the relationships between teacher and student. Effective teachers develop systems which avoid subjective grading, because teacher perceptions have great impacts on students behavior and judgments of their performance (Wong, 2005).
- ▶ This course provides students with an introduction to the knowledge, human relations, and technological skills found today in technical professions.. Students will participate in career based projects and competitions. Students will be introduced to industry certifications and career fields by creating innovative independent study projects in robotics, Manufacturing, Laser Engraving, 3D CAD design and CNC Manufacturing.

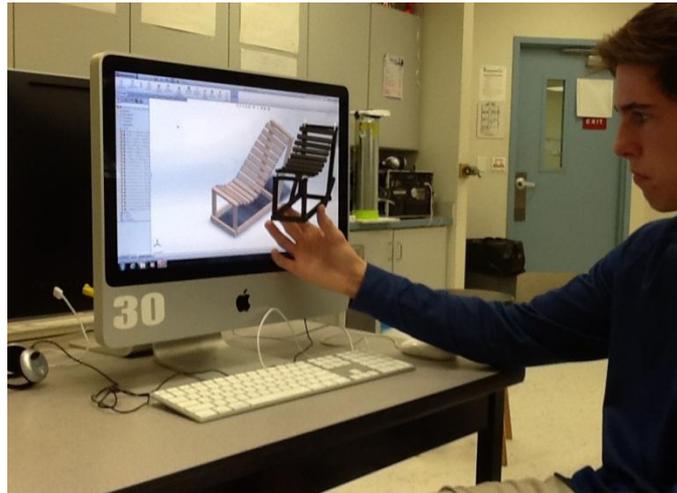


# Design to Manufacturing

- ▶ Assist students in spatial concepts
- ▶ Better Understand elements of design
- ▶ [http://www.cudacountry.net/html/sw\\_chair.html](http://www.cudacountry.net/html/sw_chair.html)



# Design to Manufacturing



# Internal Supports

The class environment a teacher creates is a critical connection to the learning achievement of a student. Teachers need knowledge and understanding in regard to the establishment of the classroom environment, and knowledge of how to assess the utilization of the environment. Similar to industry, students will need to understand some key concepts to be successful in the classroom setting. Character, productivity, attendance, respect, teamwork, cooperation, communication, attitude, tolerance, and commitment are all character traits which will be recognized in a classroom environment designed to maximize student learning (Foster, 2013). “The most interesting people are usually those who are also the most interested” (37). Teachers must have a strong focus on rigor and relevance within the classroom. Backward design is a process in which a teacher can easily encompass these traits into daily lessons. Backward design focuses on the learner’s needs and the expected outcomes. Too often teachers focus on the information they want to teach and what materials they have to teach with. The backward design model targets a focus on expected outputs of learning instead of inputs used in learning (Wiggins, 2005). Lessons which are clearly focused on a big idea or picture are assets which prove to be beneficial to both teacher and students. The backward design model creates a better paced and organized lesson to ensure appropriate benchmarks and standards are reached. Identified results, determined acceptable evidence and planned learning experiences and instruction are the three stages to the backward design model. Through use of an essential question to determine the knowledge which will be achieved by the end of the class and using the three stages of backward design a teacher can place a better emphasis on the overall objective mastered by the end of the lesson (Wiggins, 2005).



# Technology Student Assoc. (TSA)



## Mission Statement

The Technology Student Association fosters personal growth, leadership, and opportunities in technology, innovation, design, and engineering. Members apply and integrate science, technology, engineering and mathematics concepts through co-curricular activities, competitive events and related programs.

# External Supports

The goal of American public schools is to create a society where nearly all people are literate. Research stated in 1995, 99% of the American public is literate (12). A focus on (a) public opinion, (b) knowing the communities are key elements to continuing the growth of American schools (Fiore, 2010). “Real school reform cannot occur if it ignores circumstances of student’s lives outside of school” (28). Teachers currently face a society where the public perceives their role in education (Fiore, 2010). Student learning can be improved by developing a plan on connection between classroom and community which is *simple, visible and accountable* (Fiore, 2010). Teachers should take time to understand the thoughts and feeling of the community they serve. Recommendations for bridging this connection are avenues to inform the public. Teachers should “allow information from the public to flow to the school and from the school to the public” (5). 46% of the public give their local schools grades of C, D, or F. Key relationships should be developed with local organizations, and stakeholders should be taken into consideration in order to better embrace a school and community connection (Fiore, 2010). A school will always need to have a focus on continuous improvement. However, school budgets will continue to get tighter, and more work will be required of less teachers. School Improvement measures should acknowledge key communicators being welcomed into the school daily. This relationship will better allow information to flow from the school to the public. This information can also be enhanced through open houses, plays, and sporting events (Fiore, 2010).



# Community Connection

## Local Manufacturing Association Awards (SAMA)

### Middle School Students pass Industry Certification

