



NEWS BACKGROUND

“Adults often say to students, ‘*What you learn in high school will impact the future.*’ But they are wrong. What we are learning and doing at Central Campus is having an impact now.”

--David, Central Campus Senior (Application Participant)

Central Campus is a regional K-12 school that is unique because of the variety of educational opportunities offered to students. Students from 29 school districts and 57 schools in central Iowa attend Central Campus.

Over the last three years, the Des Moines school district has completed extensive renovations that are transforming the Central Campus building from a 1918 Ford car factory into a modern educational space retrofitted with energy efficient materials. For example, the single-pane windows were replaced with double-pane glazed windows, and the renovation design takes advantage of a tremendous increase in natural light, which has reduced the use of artificial lights. Lighting voltage was increased from 120V to 277V to expand lighting circuit efficiency, the original lighting fixtures were upgraded from T12 (direct) to T8 (direct/indirect) to improve the quality and efficiency of the lighting, and occupancy sensors were installed to reduce energy consumption. In addition, high-efficient water source heat pumps were installed to reduce the use of steam heating, and energy recovery ventilation was added.

Along with the physical building renovations, Central Campus is developing a more environmentally conscious culture at the school through practices and education. For example, the cafeteria switched from disposable to reusable plates, and the school hosts an annual Energy Awareness Fair that promotes energy-saving practices and products. Multiple Central Campus programs incorporate environmental and sustainability issues into the curriculum. For example:

- Home Building students use sustainable and reclaimed products in the refurbishment of houses. For instance, students have repurposed old wooden bleachers as hardwood flooring, instead of purchasing new wood.
- The Aviation program works with the Iowa Congressional Delegation to acquire gliders, jets, and helicopters for teaching tools that would otherwise have been sent to salvage.
- Last year, the Welding program began recycling unused scrap metals, recycling 43,480 pounds of metal. This year, the program has already recycled 3,100 pounds of metal.
- The Teacher Academy program is moving toward paperless work by using computer templates that can be accessed for assessment and put directly into electronic portfolios.
- Culinary Arts installed a grow cart to cultivate herbs and salad ingredients, and a newly installed Energy Star dishwasher uses less hot water.

- An automated system was installed in the Horticulture greenhouse that waters seedlings during off-peak hours.
- Animal Science students use recycled materials to create wildlife habitat sculptures, and students lead environmental and conservation youth groups.
- CADD students study and design houses that incorporate LEED criteria. Energy efficiency and low impact housing, sustainability, and reclamation are at the forefront of each project.
- CTAN students are involved with the benefits of cloud computing, which cuts energy costs by 38%. The CTAN/software classroom is moving to virtualized systems, which reduces the number of running servers and workstations.

One of the most unique Central Campus programs is IESA (Iowa Energy and Sustainability Academy). IESA equips students with skills needed for success in postsecondary education and in emerging renewable energy careers. The two-year course focuses on (1) Sustainability issues, (2) Energy conservation and management, (3) Green technologies, and (4) Renewable energy through a combination of rigorous academics and hands-on technical education.

IESA students complete numerous lab experiments that labs focus on natural and renewable resources (land, air, and water) and explore traditional fossil fuels and alternative energy resources and technology. The lab experiments help students think of the local and global impact and the short and long term impact of using the Earth's resources.

In addition, partnerships have been established with multiple public and private institutions. IESA students complete field experiences at partner institution facilities; the field experiences enable students to see first-hand the variety of issues that affect energy and sustainability. Students are also exposed to an array of careers available in the green collar workforce.

The IESA program has also had a tangible impact on Central Campus. For example, IESA students conducted classroom energy audits and provided teachers tips on how to reduce energy consumption through simple changes like unplugging appliance when not in use. The students also send out weekly energy tips to encourage conservation and recycling. Last year, IESA students instituted a building-wide recycling program that has had a tremendous impact:

	2010-2011 school year	2011-2012 school year (through 2/24/12*)
Paper	20,186 lbs	19,125 lbs
Bottles	3,170	3,324
Cans	2,241	1,670

** 13 remaining 2011-12 collection dates*

The physical changes made to the building, environmental components incorporated into existing curriculum and programs, and emphasis placed on renewable energy careers are just a few of the things Central Campus is doing to address sustainability, health, and environmental education for students in Des Moines.