Center Cass School District 66

CURRICULUM GUIDE

Applied Technology n

APPLIED TECHNOLOGY CURRICULUM GUIDE

The Applied Technology course students will learn the five areas of technology: Communication, Transportation, Manufacturing, Construction and Bio-Related technologies. Students will show an understanding of these five areas, by completing modules.

A "module" is an individual unit of study that two students complete over a period of eight to ten days. Each module is an individual self-sustaining "station" with all the curriculum, software and computer hardware.

Some stations have additional hardware such as a: wind tunnel, laser, fiber optics trainer, electronics trainer, CNC milling machine, weather station, vacuum mold machine, injection mold machine, robotic arm, video camera & lighting equipment, fluid power trainer, alternative energy trainer, exploring mechanisms trainer, radio broadcasting equipment, and an engineering stress analyzer.

Students could study any of the following modules during a trimester: Aerodynamics, Alternative Energy, Animation, Architecture, Automation & Robotics, Computer Aided Design (CAD), Computer Graphic Design, Computer Numerical Control (CNC) Milling, Digital Video Editing, Engineering & Stress Analysis, Exploratory Electronics, Exploratory Mechanisms, Fiber Optics & Lasers, Flight Simulation, Fluid Power, Introduction to Technology, Meteorology & Forecasting, Plastics Technology, Radio Broadcasting, Space & Rocketry, and Video Production.

Students will use the Lab-Volt curriculum software to complete a module. It is a seven lesson curriculum with quizzes, and a Post Test.

The class is a hands on lab with equipment and software at each station. At each module students will complete some kind of project. Some projects are computer generated. Such projects could be computer drawings (CAD), Architectural drawings, Comp. Graphic designs, computer animations. Some projects are hands on projects such as: radio shows, balsa bridges, plastic molds, weather forecasts, CNC Milled projects, robotic programs, balsa planes, video produced commercials, completed rockets.

Students in sixth grade will complete three to four modules. Seventh grade will complete five modules.
Eighth graders will complete five to six modules.

At the Modules, students will:

- Collaborate on assigned work to complete the tasks at a module.
- Become independent learners.
- Use the "Applied Technology Problem Solving Model" by re-reading the information, discussing possible solutions with their partner (or teacher) and then do/or try something to solve the problem.

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Research careers associated with a module.
Use a computer each day to complete tasks.
Show proficiency at various third party software packages.
Complete a "Time-line" activity.
Demonstrate an understanding of the "Environmental Impacts" of technology.

Students will:

- perform activities that demonstrate an understanding how to use technology in communication and problem solving. (State Technology Standard 2A)
- use industry standard software (at many modules) to demonstrate knowledge on the uses of computers and technology in education. (State Technology Standard 1F)
- adhere to copyright laws in the access and use of the information from technology sources.(State Technology Standard 2H)
- explore and use computer/technology resources including educational software. (State Technology Standard 3B)
- use on-line search tools. (State Technology Standard 6D)
- use instruction that fosters/reflects higher level thinking skills in problem solving (State Technology Standard 8D)
- cooperatively learn in groups as part of the students' tasks and assignments. (State Technology Standard 8E)