

WHAT IS THE TECHNOLOGY LAB?

The tech lab provides students with hands-on interactive multimedia experiences which feature open-ended problem solving opportunities. The modules were created by Paxton/Patterson of Chicago, Illinois, a division of EduSystems. This electronic computer management system strongly emphasizes integration of core academic courses such as mathematics, science, reading, and narrative and persuasive writing.

Students are assigned in pairs to modules by the management system and rotate through the fourteen modules in the 7th & 8th grades.

MODULES IN THE CGMS LAB

COMPUTER AIDED DESIGN

--understand CAD as a communication process and its uses in various technologies; explore fundamentals of drafting and various houseplans; create a variety of drawings using AutoSketch software

COMPUTER GRAPHICS

--describe communication technology, the design process, and different uses of graphics; create and evaluate a sign, a brochure, and a business card; create an animation using installed software

ELECTRICITY

--use a multimeter to understand voltage, current and resistance; develop and understand basic electrical circuits; utilize ac/dc, switches, lights and motors; explore magnetism

ENVIRONMENT & ECOLOGY

--grow plants without soil; learn about the cycle of water and conservation; explore pH testing; learn about packaging, recycling, and waste

FLIGHT TECHNOLOGY

--learn about history and future of flight systems and basic aerodynamics; construct a space station using software; explore NASA website; construct and launch a compressed air rocket; calculate altitude and distance of launch.

HEALTH AND FITNESS

--learn about seven major body systems; operate biomedical equipment and make predictions relative to exercise; learn about healthy diet, nutrition, blood pressure, sleep disorders, and fitness training careers; produce an exercise warm-up program

INFORMATION TECHNOLOGY

--compare and contrast past and present information processing systems; use Microsoft Office to write a business letter; create a spreadsheet and graph; create and present a PowerPoint multi-media slideshow including links to websites and digital photos; plan a trip using digital mapping.

LASER TECHNOLOGY

--identify laser applications for industrial and communications operations and daily life; use laser safely; experience the use of sound, light, and lenses and their impact on a laser; explore fiber optics information

MATERIALS PROCESSING

--learn safety procedures when using tools and machines; construct a CD container, learn about aluminum recycling and the use of plastics to help save natural resources, create a plastic picture frame, use injection mold to make a handle for a screwdriver

RESEARCH AND DEVELOPMENT

--explore vehicle design and the laws of aerodynamics and mass; learn about the phases of research and development; design, build and race a CO₂ dragster; understand more about vehicle safety and injury protection

ROBOTICS

--identify characteristics of various types and sizes of robots; describe artificial intelligence as applied to robotic systems; label major parts of an industrial robot; program "Cye", our robot, to move in various ways

STRUCTURAL TECHNOLOGY

--construct, determine mass, and strength test several types of beams; design and strength test a truss and a balsa wood bridge; identify major stresses and causes of structural failure on spanning structures; learn preparation and requirements for careers related to building structures



VIRTUAL ARCHITECTURE

--identify tools used by architects, designers, and homeowners; use computer software to modify the interior and exterior of a house, create a 3-D room using a database of objects; create a virtual walkthrough utilizing CAD software



INSTRUCTOR:
Mae Thomas
Technology

VIDEO PRODUCTION

--develop a major production focusing on newscasts and human-interest short subjects; complete several short scripting and shooting assignments; use pre-planning, reading, and writing skills to develop scripts; learn to edit and crop and add transitions and narration using iMovie software



ADMINISTRATION:

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Council Grove
Middle School
Technology
Center

MISSION STATEMENT:

USD 417 employees, parents, and patrons through their cooperative efforts assure district students of the knowledge, skills, and attitudes necessary to develop into lifelong learners who respect themselves and others, contribute to their communities, and succeed in a changing world.