Kellman Academy Computer and Technology Curriculum

PROGRAM OVERVIEW

The Computer and Technology program at Kellman Academy is student centered and project based. Class time is maximized with brief teacher led demonstrations and extensive student "hands-on" work. The class takes place in a Windows PC computer lab. The program builds proficiency through complex, fun and relevant projects that intrinsically build sophisticated technical skills.

The program is centered on two themes that encourage this development. The first theme is teaching students to view the computer as a toolbox; full of tools they can mix, match, and use together to realize their ideas. The more tools they understand and can use together, the greater their projects can be. For example, in this program, students will create web sites and interactive CD-ROMs. To complete these involved projects, students will have to learn a large array of programs and techniques, and use them together seamlessly. Notepad (to write HTML), HyperStudio (a multimedia authoring program), MS Office, DavkaWriter, Internet Explorer, Adobe Photo Elements (for graphics and images), Audacity and MS Voice Recorder (for audio editing and recording), file management, advanced keyboard features like Print Screen are just a sample of the technology tools that students will manipulate in order to create. This combination of hardware and software comprises a huge technology toolkit that gives students almost unlimited possibilities to create, and builds savvy and sophisticated digital age kids who can transfer these skills to other endeavors.

The second theme is teaching students how to plan, control and organize their ideas using graphic organizers and concept maps. Also referred to as mind-mapping, this method allows students to easily diagram ideas visually. It is a visual way of outlining that allows students to quickly organize and manage their ideas. Mind-mapping is a particularly effective technique for brainstorming, planning paragraphs, outlining for research, and planning any complex project. By using mind-mapping as a key step in planning a project and in writing, students develop and hone their visions, and see the strengths and deficiencies of their work. Critical thinking and self-evaluation is facilitated through concept mapping. This highly transferable skill will serve students throughout life, as projects get more complex.

ACCEPTABLE USE

Kellman Academy has an Acceptable Use Policy in place that describes in detail how school computers and technology equipment may be used. It explains that the use of the school computer equipment, the network and the Internet is a privilege that is contingent on appropriate use. Failure to follow this policy will result in disciplinary action, and possibly the revocation of this privilege.

GRADING

For upper grades, grading for this course is A-F. Lower grades follow a different model. Grades are based on achievement (quality of work product), effort (how a student uses class time and to what degree s/he challenges him/herself), and behavior (treatment of others, listening to direction, and appropriate conduct).

Below is a brief outline of material we hope to cover. Note that these projects are ambitious and have aggressive timelines. Therefore, the curriculum is subject to modification at any time, and it does change from year to year.

CONTACT INFORMATION

To contact me for any reason, simply email me at jberg@kellmanacademy.org or leave a message with the front desk.

EIGHTH GRADE
Emphasis: Graphics, video production, Internet Research, Computer Ethics, Operating System, Advanced Word Processing.

Capstone Project: "Digital Videos" Student made movies in Mini DV format. Students will write scripts, storyboard, film, edit and produce their own short film. Will this be the year of the First Annual Kellman Film Festival? Final Projects will be burned to DVD and distributed to each student.

Major Projects/ Units/ Software used:

- Personal Calendar, Address Book (Mail Merge - MS Word, Excel)
- Computer Ethics (Internet Explorer, Discussion, Analysis)
- Internet Research (Internet Explorer, Inspiration)
- Movie Making (Inspiration, MS Word, MS Movie Maker, Roxio Easy Creator)

SEVENTH GRADE
Empahsis: Desktop Publishing, Advanced Word Processing, HTML, web site creation, Internet research, PowerPoint.

Capstone Project: "Online Public Service Announcements." Student created web sites about topical issues in technology, gathered with sound Internet research practice. Projects will be developed in HTML using Notepad, Adobe PhotoElements and MS Voice Recorder. Planning for this project will be done using Internet Explorer, Inspiration and Word. Proper documentation and citation of Internet sources is utilized for research. For examples of 2006 projects, visit http://kellmanacademy.org/studentwork.asp.

Major Projects/ Units/ Software used:

- Desktop Publishing (MS Word)
- Bar/Bat Mitzvah Thank You Notes (Mail Merge, MS Word)
- Personal Calendars (Mail Merge, MS Word)
- History of Everyday Things (Internet Research, PowerPoint, Public Speaking)
- Introduction to HTML (Notepad)
- Internet (advanced searching, research and reliability of web sites, documentation, security, viruses, spy-ware)
- Personal Web Site (Notepad, MS Paint, Adobe PhotoElements)
- Online Public Service Announcements (See Above for details)

SIXTH GRADE

Emphasis: Ethical Use of Computer, Desktop Publishing, Hebrew Word Processing, Internet research, Concept mapping and Outlining (mind-mapping), Data Analysis, Presentations, Multimedia and Instructional Design.

Capstone Project: "Interactive Hebrew." Students will create an interactive CD that teaches an aspect of the Hebrew Language. Final projects will be burned to CD. Students will utilize established Instructional Design methodology to create their projects. They will plan and establish scope and sequence using Inspiration, and will storyboard their projects on paper. Students will use MS Paint, Internet Explorer, and Voice Recorder to create graphics and audio files for their project. Then they will incorporate these pieces into a functional interactive computer based tutorial using HyperStudio – a multimedia authoring tool. For samples of 2006 projects, ask to see the CD-ROM.

Major Projects/ Units/ Software used:

- "Personal Identity Cards" (Desktop Publishing – DavkaWriter, MS Word, Internet Explorer)
- "Early Man" (Collaboration with Mrs. Cohen (Internet Research , Mind Map (Internet Explorer, Inspiration))
- Introduction to Excel (sorting data, functions, graphing)
- "Weather Forecast" (Excel - Data analysis, graphing, PowerPoint – presentation as a meteorologist)
- "My Favorite Jew" (Internet Research, PowerPoint, Oral Presentation)
- "Interactive Hebrew" (Multimedia – see Capstone Project description for details)

FIFTH GRADE

Emphasis: Desktop Publishing, PowerPoint, Excel, Parts of the Computer, Internet Safety and Computer Ethics, Mind-Mapping, Multimedia.

Capstone Project: "Multimedia D'Var Torah." Students will create an interactive multimedia D'Var Torah that depicts and explicates their Torah Portion. Final projects will be burned to CD. Students will utilize established Instructional Design methodology to create their projects. They will plan and establish scope and sequence using Inspiration, and will storyboard their projects on paper. Students will use MS Paint, Internet Explorer, and Voice Recorder to create graphics and audio files for their project. Then they will incorporate these pieces into a functional interactive computer based tutorial using HyperStudio – a multimedia authoring tool. For samples of 2006 projects, ask to see the CD-ROM.

Major Projects/ Units/ Software used:

- "Newsletter" - Desktop Publishing, Internet Research (MS Word, Internet Explorer)
- "My Favorite Idioms" – Presentation (PowerPoint)
- Introduction to Excel (MS Excel)
- "Class Survey" - Data analysis, graphing (Excel)
- "Computer Dissection" – Computer hardware, memory
- "Wedding Invitation" – DavkaWriter (Collaboration with Terry Silver)
- "Multimedia D'Var Torah" – Multimedia (see Capstone Project for details)

FOURTH GRADE

Emphasis: Mind-mapping, Word Processing, Keyboarding. The foci this year are on mastering the use of visual diagrams to map complex and multifaceted ideas, understanding the Internet, and on multimedia.

Major Projects/ Units/ Software used:

- "Summer Map" (Kidspiration, MS Word – using maps to plan paragraphs)
- "Story Map" (Kidspiration – using maps to logically diagram elements of a story)
- "Reverse Map" (Kidspiration – using maps to break down an original text"
- "Gameboard" (MS Word – introduction to tables for page layout)
- "Chayai Sarah" (Kidspiration, MS Word – using Kidspiration to plan, organize and outline content, and MS Word to create a newsletter)

- Introduction to Internet Safety
- Introduction to Multimedia (Hyperstudio)
- Introduction to Internet Reliability of Information (Internet Explorer)
- US State Research (Internet Explorer) Collaboration with Nadine Grinbergs

THIRD GRADE

Emphasis: Mind-mapping, Hebrew and English Word Processing, Keyboarding, mastery of basic computing skills, such as saving and opening files. The main themes of the year are on developing a deeper understanding of visual diagrams, and on using mind-maps as a guide to paragraph writing and story telling. Most assignments focus on creating mind-maps that detail Jewish Holidays. These are created in Kidspiration, and incorporate increasing amounts of features and complexity throughout the year.

Key Software: Kidspiration, MS Word, DavkaWriter, MS Paint, DavkaWriter, MS Voice Recorder, Internet Explorer, Type to Learn Jr.

SECOND GRADE

Emphasis: Improved basic computing skills such as mastering saving files, learning to open files, and understanding the concept of the school network. In addition to core computing skills, the main thems of this year are learning to map ideas graphically to guide sentence writing and learning to manage and complete multi-week assignments.

Key Software: Kidspiration, Type to Learn, Jr., Scholastic Keys, JumpStart Advanced 2nd Grade

FIRST GRADE

Emphasis: Logging onto the school network independently (using user name and password), saving files, navigating the PC, typing and printing work, using the mouse to input and manipulate images, using Kidsiration to diagram and plan ideas, sentence writing.

Key Software: Kidspiration, Type to Learn, Jr., Scholastic Keys, Ulpan Aleph, Shalom Uvrachah.

KINDERGARTEN

Emphasis: Logging on and off independently, familiarity with the keyboard and mouse, independently launching and quitting programs, familiarity with computer vocabulary.

Key Software: Kidspiration, Type to Learn, Jr., Scholastic Keys, Ulpan Aleph, Ollo at the Sunny Valley Fair.