ANESU Planning Tool
Grade Cluster 9 - 12

NETS Standard 6
Technology Operations and Concepts
Students demonstrate a sound understanding of technology concepts, systems, and operations.
Students:

Performance Indicator A
Understand and use technology systems.

VT GE 9-12
Students recognize a variety of file types, and utilize appropriate applications to open, convert, optimize, transfer, and work with files.
Students integrate a variety of file types to create a document or presentation.
Students keep their systems and personal data safe and secure.

Examples
* Students safely turn computers and other digital devices on and off and log in and out for those devices.
* Students navigate digital handheld and touch interface devices by choosing menu items or icons to make selections and access information.
Examples of digital tools above may include: desktops, laptops, personal learning devices and interactive touch devices such as a SMART Board, iPad, iPod, tablet, digital camera, and scientific probes

* Students demonstrate an understanding of file and workspace management by choosing short, descriptive filenames, creating a set of appropriately named folders and sub-folders and saving their files to the appropriate folder based on common attributes (on network, online, and personal devices).
* Students protect passwords and personally identifiable information as they safely login in to, and out of, local and online environments.
Students keyboard effectively, use texting devices, interactive touch screens, and audio/video input and output equipment.

Performance Indicator B
select and use applications effectively and productively.

VT GE 9-12
Students independently select digital tools and applications, including online, to use for real-world tasks and justify the selection based on efficiency and effectiveness.
Students successfully employ data-collection technology to gather, view, analyze, and report results for content-related problems.

Examples
* Students are asked to research the school's parking space shortage and propose solutions by posting them to the class wiki. Students use digital cameras to gather spatial data, poll peers and adults for suggestions, debate the issues and solutions in an online class forum and use design software to create parking lot designs.
* While studying water quality health of the local watershed, students electronically (GPS, meters, probes and online) gather data about elevation, coordinates, pH, dissolved oxygen, water flow, and temperature. Combining this information into spreadsheets with available biological data, students use graphs and charts to make inferences about the health of the local watershed. A mapping program is used to plot coordinates of data collections so details and physical locations can be compared.
Examples of digital tools above may include: PBworks or other wiki site, SurveyMonkey, KidBlog, Sketchup, Google Spreadsheet, digital camera, scientific probes and probeware, and Google Earth

Performance Indicator C
troubleshoot systems and applications.

VT GE 9-12
Students communicate and problem solve technology issues using accurate terminology. They analyze and solve hardware and software problems, configure and troubleshoot hardware, software, and connectivity to optimize learning and productivity.

Examples
* Students are encouraged to join technology leadership teams or a student-run help desk. As students learn, they teach others by developing troubleshooting "steps" of their own - based on their own successes/failures, and share their knowledge through a tutorial.
* By working with peers, online support, and search engines students help themselves, teachers, and peers to solve daily issues or effectively explain issues to the help desk. Issues could include: 1) no connection on SMART Board, 2) malfunctioning mouse, 3) incompatible device drivers, 4) or lack of Internet connectivity.

Examples of digital tools above may include: desktops, laptops, iPads, iPods, digital cameras, Flip video cameras, online forums such as http://forums.cnet.com

Performance Indicator D
transfer current knowledge to learning of new technologies.

VT GE 9-12
Students will recognize common, similar features and functions in digital environments and independently apply those to new technology experiences.
Students will analyze the capabilities and limitations of current and emerging technologies and assess the potential of these technologies to address academic, personal, social, lifelong learning, and career needs.
Students will identify successful applications in their own education.
Students will evaluate online forum - such as wikis or blogs - versus in-class discussion. Students will identify successful applications in their own education.

Examples
* Students experience online/distance learning opportunities to help determine whether this environment is personally feasible.
* A school's policy is to block social networking sites, so students research the safety features and academic potentials of these sites, develop protocols for their use in school, and petition the school administration to allow sites for educational purposes.
* Students evaluate a word processor to complete a task or assignments versus using Google Docs - or other online forum.
* Students help setup and assist teachers and peers with new technology tools.
* During a class investigation about the death penalty, and after discussing the issue with peers and the teacher, students access an online forum to find differing and varied opinions on the topic.
* Students apply troubleshooting knowledge to new devices, such as cameras, iPods, smartphones, and additional technologies, as such devices have similar connection potential either through Bluetooth, networking, or USB.
* Students apply basic troubleshooting skill sets to virtually any given device that requires a connection.
Examples of digital tools above may include: Moodle or other online content management system, PBwiki, Blogger, Google Chat Dim Dim, Skype, Facebook, personal learning devices enabled with Bluetooth including iPads, iPods, smartphones, productivity programs such as iWorks, MS Office, or Open Office, Google Docs

Scenarios: The Big Picture

What's Up with the Frogs?
Can We Get There from Here?
Green Tape