Hunterdon Preparatory School
Technology Curriculum

At the Hunterdon Preparatory School, students are exposed to technology not only through the lens of language arts, but also in mathematics. By utilizing programs such as *Alice* and *Khan Academy*, math skills are integrated into technology lessons through varying sources which incorporate number systems, algebraic expressions, geometry, statistics, and probability. Students practice creating various types of grafts and tables by synthesizing information from texts while also analyzing data provided by more sophisticated sources. Students leave Technology classes better suited to tackle a changing world, progress successfully in school, and function as 21st century citizens in a community that is technology-centered.

While basic skills are relevant and important, the information technology environment our students live and work in has brought new challenges. The explosion of online information resources, search engines, social networking, blogs, wikis, texting, and media on demand are a few examples of technologies that did not even exist ten years ago. The difficulties facing high school students and the skills they will need to be successful academically and in their careers are constantly changing. Our Technology curriculum is designed to provide Hunterdon Preparatory School students with the skills and tools they will need to successfully navigate the 21st Century information environment.

A primary focus in Technology class is developing "information literacy" – skills to evaluate the accuracy and legitimacy of information sources students are exposed to on a daily basis. Coordinating the technology curriculum with other subjects offered at HPS, we work to develop students' information literacy skills in a hands-on manner. Information literacy is crucial in today's technology-driven society. In our Technology classes, students gain an understanding of not only which sources are biased, but focus on learning how to judge the quality of content found on the Internet. As there are very few filters for information found on the World Wide Web, students must learn to filter their own content through analysis, evaluation, sourcing, and peer review.

Technology classes at the Hunterdon Preparatory School are taught at five levels. Our middle school students and new ninth graders in our Troupe homeroom learn foundation skills to enable students to efficiently, effectively and responsibly use technology. The curriculum emphasizes skills to collaborate, problem-solve, and communicate in an increasingly complex world driven by technology. Students will build a foundation in keyboarding, Microsoft Office, and searching the Internet for accurate and reliable information. Practical skills learned include developing

and working with Word documents, PowerPoint presentations, Publisher templates, and Excel spreadsheets. Students will also explore the influence of emerging technologies on daily life, and on the ethical and appropriate use of different technologies in a variety of circumstances and situations.

Students in our Nest homeroom will learn how to utilize the Internet to do authentic research, exploring a variety of online sources, including texts (primary and secondary sources), graphs, quantitative data, opinion pieces, news articles, memoirs, journal articles, historical, scientific, or economic accounts, and many more. Students learn to evaluate information (as well as evaluate the quality of information searches, peer reviewed content, etc. for research on history, science, and English projects), how to use Word to develop documents that follow APA or MLA standards, use of Microsoft Excel for graphing, statistical analysis, and other data-driven assignments**.** The purpose of Internet –based research is for students to identify reputable resources and practice analyzing digital texts. Students then synthesize this information and work towards developing conclusions which shall be expressed via 21st century communication skills (such as a Word document, presentation using Power Point or other slide show program, or other creative projects using the computer.) In this way, students may take the knowledge gained in Technology class and utilize it throughout their educational careers, improving writing and reading skills, public speaking skills, and gaining experience in professional abilities. Students build upon these skills in each of their classes, working towards proficiency across the curriculum.

The homeroom known as the Hive at the Hunterdon Preparatory School focuses on proper use of the Internet so that students gain an understanding of cyber etiquette and appropriate 21st century communication skills. Although this concept is explored at every level of Technology instruction, it is with our older students that the urgency for students to filter their online responses outside of school becomes not only more relevant but absolutely crucial. Cyber safety is a goal for everyone and students should recognize the importance of keeping their posts suitable for the public nature of the Internet and that impulsive and inappropriate posts can lead to dire real-life consequences.

Students in the Cave and our fifth year students are expected to have mastered the Technology concepts necessary to navigate both the Internet and Microsoft Office software to prepare for transition to college and careers. Their Technology instruction comes within Transition class as they explore and organize the steps needed to truly be prepared when high school is over. Transition plans that are somewhat scattered as their final year begins take new precedence through the help of structured learning experiences, career exploration opportunities and the nurturance and support of the entire community at the Hunterdon Preparatory School.

COURSE OBJECTIVES

- Student will construct a simple spreadsheet, enter data, and interpret the information.
- Student will create documents with advanced text-formatting and graphics using word processing.
- Student will design and produce a basic multimedia project.
- Student will plan and design a simple database, define fields, input data, and produce a report using sort and query.
- Student will use network resources for storing and retrieving data.
- Student will create, organize and manipulate shortcuts.
- Student will demonstrate an understanding of how changes in technology impact the workplace and society.
- Student will exhibit legal & ethical behaviors when using information and technology, and discuss consequences of misuse.
- Student will choose appropriate tools & information resources to support research & solve real world problems.
- Students will cite specific textual evidence to support analysis of science and technical texts.
- Students will determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
- Students will follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
- Students will determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context

- Students will analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.
- Students will integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
- Students will be able to distinguish among facts, reasoned judgment based on research findings, and speculation in a text.
- Students will be able to compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.
- Student will create a database, define fields, input data, produce a report using sorts & query and interpret the data.
- Student will develop a document or file for inclusion into a website or web page.
- Student will construct a spreadsheet, enter data, using functions to manipulate data, generate charts & graphs, and interpret results.
- Student will discuss the capability of emerging technologies & software in the creation of documents & files.
- Student will exhibit legal & ethical behaviors when using information and technology, and discuss consequences of misuse.
- Student will make informed choices among technology systems, resources, & services in a variety of contexts.
- Student will evaluate information sources for accuracy, relevance, and appropriateness.
- Student will integrate new information into existing knowledge base and communicate the results in a project or presentation.

- Student will provide various examples of how technological developments have shaped human history.
- Student will use a computer assisted design (CAD) system in the development of a project.
- Student will develop and edit page layouts in different formats using desktop publishing and graphics software.
- Student will create a multi-page document with citations in word processing.
- Student will produce a multimedia project using text, graphics, moving images and sound.
- Student will create documents including a resume and a business letter.
- Students will cite specific textual evidence to support analysis of science and technical texts.
- Students will determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
- Students will follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
- Students will determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context
- Students will analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.
- Students will integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).