

Glendale Unified School District

Senior High School

June 17, 2014

Department: CTE

Course Title: Applied Technology 3-4 (GenYes)

Course Number: 5142/5143

Grade Level: 10-12

Semester Credits: 10

Recommended Prerequisite: Teacher Recommendation, completion of Applied Technology 1-2 with a "C" or better.

Recommended Textbook: Generation Yes Online Curriculum

Course Description: GenYES students learn cutting edge technologies and collaborate directly with teachers to implement 21st century skills into the classroom. Students develop skills related to computer technologies, concepts, and terminology. Students learn the functions of computers in education, business, and society. Students will explore and consider computer-related issues such as ethical solutions, social networking, and media sharing. Students will use word processing, spreadsheet, database, and presentation software. Hands-on experiences include exploring Web 2.0, diverse operating systems, and emerging technologies for potential classroom implementation. GenYES students will troubleshoot computer problems in hardware and software while working with teachers as mentors in general computer usage.

I. Standards

A. Common Core State Standard - Technology Integration

1. ELA Writing.9-10/11-12. 2a: Introduce a topic or thesis statement; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting, graphics, and multimedia when useful to aiding comprehension.

2. ELA Writing.9-10/11-12. 6: Use technology, including the Internet, to produce, publish, and update individual or shared writing products, in response to ongoing feedback, including new arguments or information. Taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
3. ELA Writing.9-10/11-12. 8: Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation including footnotes and endnotes.
4. ELA Speaking and Listening.9-10/11-12. 2
 - a. Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.
5. ELA Speaking and Listening.9-10/11-12. 5
 - a. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
6. Literacy in History/Social Studies, Science, and Technical Subjects: Reading Standards for Literacy in History/Social Science.9-10/11-12. 7
 - a. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.
7. Literacy in History/Social Studies, Science, and Technical Subjects: Reading Standards for Literacy in History/Social Science.9-10/11-12. 8
 - a. Assess the extent to which the reasoning and evidence in a text support the author's claims. Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other information.

B. 21st Century Student Outcomes - Information, Media and Technology Skills

1. Information Literacy

a. Access and Evaluate Information

- (1) Access information efficiently (time) and effectively (sources).
- (2) Evaluate information critically and competently.

b. Use and Manage Information

- (1) Use information accurately and creatively for the issue or problem at hand.
- (2) Manage the flow of information from a wide variety of sources.
- (3) Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information.

2. Media Literacy

a. Analyze Media

- (1) Understand both how and why media messages are constructed, and for what purposes.
- (2) Examine how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors.
- (3) Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of media.

b. Create Media Products

- (1) Understand and utilize the most appropriate media creation tools, characteristics and conventions.
- (2) Understand and effectively utilize the most appropriate expressions and interpretations in diverse, multi-cultural environments.

- C. 21st Century Student Outcomes - ICT (Information, Communications and Technology) Literacy
 - 1. Apply Technology Effectively
 - a. Use technology as a tool to research, organize, evaluate and communicate information.
 - b. Use digital technologies (computers, PDAs, media players, GPS, etc.), communication/networking tools and social networks appropriately to access, manage, integrate, evaluate and create information to successfully function in a knowledge economy.
 - c. Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of information technologies.
- D. National Education Technology Standards (NETS) For Students
 - 1. Creativity and Innovation - MAKE IT
 - 2. Communication and Collaboration - SHARE IT
 - 3. Research and Information Fluency - FIND IT
 - 4. Critical Thinking, Problem Solving, and Decision Making - SOLVE IT
 - 5. Digital Citizenship - PROTECT IT
 - 6. Technology Operations and Concepts - USE IT
- II. Sample Assessments
 - A. Technology Assistance Projects
 - B. Performance Task Rubrics
 - C. GenYes Website Student Evaluation Tools
- III. Topic of Study - Suggested Time Distribution - Applied Technology 3-4
 - A. GenYes Basics
 - 1. Ed Tech Topics 3 Weeks

The technology topics in this unit can be used as the basis for lessons for a GenYES class, as inspiration for TAPs, or as small-group GenYES projects. They are designed to show how GenYES students can help teachers with popular educational technology resources such as mobile devices, educational apps, BYOT (Bring Your Own Technology), digital storytelling, and more.

2. GenYES Concluding Activities 2 Weeks

This unit contains concluding activities for a GenYES program. In addition to completing any last TAPs, students create a portfolio of their work and discuss ways to publicize their successes and recruit students and teachers to participate next year. Celebrate your achievements and recognize outstanding projects in a class- or school-wide ceremony.

B. Technology Skills

1. Multimedia Presentations 2 Weeks

In this unit, students learn the principles and skills necessary to plan, develop, and present multimedia slideshows and other digital creations to convey information and help teachers present instructional material.

2. Web Publishing 2.5 Weeks

This unit will give GenYes students the tools to create content for the web. By learning to create their own websites, not only will students be able to support learning in teachers' classes, but they will also learn a structured process of design and development that they can use in other classes or for their own personal interests.

3. Computer Programming and Game Design 3 Weeks

The invention of the computer has changed the world as we know it. Throughout this course, students have learned about many ways to use computers to create, collaborate, and share. This activity takes this a step further, to show students that they can master the computer and make it do what they want, not just use software that other people have created. The logic, process, and troubleshooting inherent in the computer programming process are invaluable in teaching true technology literacy to students.

4. Simulation, Modeling, and Data 2 Weeks

One of the important capabilities of computers is their ability to deal with large amounts of data. This has revolutionized the study of almost every subject taught in school, from population studies in history to science simulations that predict experimental results with as much accuracy as doing the actual experiments themselves. In this unit, we explore some of the applications that allow students to collect and manipulate data, simulate the real world, and model their ideas in three dimensions.

C. 21st Century Issues

1. Media Influence 3 Weeks

This unit is designed to help students recognize the power of the Internet as a communication vehicle. Billions of dollars are spent by the advertising industry in promoting products to the teenage population. As students recognize the influence their voice can have on these advertisers through electronic communication, they are also learning how the Internet can become a tool for social change.

2. Contemporary Social Issues 3 Weeks

In this unit, students brainstorm about social, vocational, and health-related issues that impact or concern young people today. After selecting a topic, each student researches the issue and creates a multimedia project that shares the information with the class.

3. Career Exploration 2 Weeks

In this unit, each student selects a career to research on the Internet and describe in a multimedia presentation to the class. The activities emphasize advanced techniques for creating and delivering effective oral presentations that look and sound professional.

D. Technology Support

1. Researching Solutions 1 Week

Giving students the tools to find answers to their own questions improves their skills as troubleshooters and independent thinkers. These abilities are valuable in every part of school and life, as well as in solving technical support problems.

2. TAPs (Technology Assistance Projects) 15 Weeks

a. Planning Leadership Projects

Now that students know how the TAP tool works, they are ready to learn how TAPs help teachers and other adults in their school. Collaboration between students and teachers is key to the GenYES process and students need to understand their responsibilities as co-partners in the model. In this activity, students discuss interpersonal skills and critique the student-teacher interactions in a role-play exercise. As with any tool, there are effective and ineffective ways to use technology to enhance learning. This activity is designed to get students thinking about the ways that they learn best, and how TAPs can help teachers create more engaging and active learning experiences for students. The themes of this discussion should be an ongoing component of your GenYES program as students work on TAPs and continue to think critically about their own learning.

E. Leadership

1. Leadership in the 21st Century 1 Week

In this unit, students explore themes related to leadership in the modern world. By using technology to research and express various traits of good leadership, students will begin thinking of themselves as leaders not just in using technology at their school, but as active and responsible members of a team and a community.

2. Being a Leader 1 Week

A primary emphasis of GenYES is the cultivation of student leadership in schools and communities. This unit helps students see TAPs, mentoring, collaborating, and all their other GenYES roles as part of a personal mission to lead by creating and sharing powerful projects with technology.

3. Teaching as a Leader 1 Week

This unit explores ideas of teaching and learning in the context of leadership. As they examine learning styles, teaching techniques, and the philosophy of hands-on, interactive education, students learn how to share their knowledge in a constructive, effective way.

F. Community Service

1. Community Leaders 1 Week

In this unit, students organize a meeting with local leaders through the GenYES class. This Leaders Day event helps publicize GenYES in the school and community and helps students identify areas where they can volunteer to use their advanced technology skills to develop a community service project.

2. Community Service Projects (See D, b.)

This unit gives advanced GenYES students a chance to apply their technology skills outside of school on projects that help an organization in the wider community. Students identify technology-based community service opportunities and use the TAP system to collaborate with community members, learn the necessary technology skills, and complete community service projects.