Technology Curriculum

Manhattan Public School District 3

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VISION

Technology is a tool for creating, expressing and communicating ideas. Manhattan Public Schools believe technology is an effective and necessary tool, capable of enhancing both the communication ability and productive capacity of our students, staff, and community. We believe Manhattan Public School students must be competitive in an ever-changing world. The opportunity to develop technological proficiency will empower Manhattan students and staff to maximize their access to information, enhance problem-solving skills, and develop effective communication skills in the Information Age.

GRADE LEVEL OBJECTIVES & COURSE DESCRIPTIONS

Kindergarten

Basic Operations, Concepts, and Ethics:

- Demonstrate appropriate use and care of computers.
- Identify computer parts: monitor, keyboard, disk drives, mouse, printer, and speakers.
- Identify keys on a keyboard: spacebar, return key, shift key, delete key, and caps lock key.
- Identify and use the mouse appropriately.
- Be able to log into and out of programs.
- Be aware of Acceptable Use Policy.

Productivity Tools and Communication Tools:

- Be aware of the different uses of a computer: including creating original documents, practicing skills, and accessing information on the Internet.
- Be able to use graphics and sequences such as shapes, size, colors, and various objects.
- Be able to use paint tools.
- Be able to keyboard simple words and student names.
- Create a simple sentence with an illustration using graphics.
- Participate in a teacher directed problem solving activity using the computer as a tool.
- Be aware that the computer can be used as a tool to communicate around the world.

First Grade

Basic Operations, Concepts, and Ethics:

- Review Kindergarten skills.
- Be able to use the mouse efficiently.
- Be aware of Acceptable Use Policy.

Productivity Tools and Communication Tools:

- Review and apply previous level skills.
- Begin to use word processing applications.
- Be able to use graphics and sequences such as shapes, size, colors, and various objects.
- Utilize the computer to create a pie, bar, column, and a line chart (graph) with specific data.
- Utilizing word processing software to create a paragraph story with an illustration using clip art and student graphics.

Second Grade

Basic Operations, Concepts, and Ethics:

- Review and apply previous level skills.
- Understand and experience how a computer works: input and output.
- Begin to insert and eject disks.
- Begin to learn how to use copy, cut, and paste tools.
- Be able to use the mouse efficiently.
- Begin to use two hands for keyboarding. Introduction of the home row.
- Begin to save and retrieve documents on disks and hard drive.
- Be aware of Acceptable Use Policy.

Productivity Tools and Communication Tools:

- Review and apply previous level skills.
- Participate in a multimedia group project.
- Introduce to use of a spreadsheet.
- Participate in a teacher guided Internet exploration using a web browser.

Third Grade

Basic Operations, Concepts, and Ethics:

- Review and apply previous level skills.
- Begin to save and retrieve documents on disks and hard drive.

Productivity Tools and Communication Tools:

- Review and apply previous level skills.
- Use of a spreadsheet.
- Access Internet sites by use of bookmarks.

Fourth Grade

Basic Operations, Concepts, and Ethics:

- Review and apply previous level skills.

Begin to use the desktop environment for:
- Formatting
- Views
- Identify hard drive and documents
- Applications and folders
- Selecting printers
- Accessing the network
- Using menus
- Copying files
- Deleting files
- Using find command

- Scrolling
- Selecting, deselecting
- Practice keyboard commands.
- Keyboarding to develop basic skills. Teach Keystroke reaches and build keyboarding skills to the level of approximately 20 words per a minute.
- Discuss the ethical use of Netiquette.
- Be aware of Acceptable Use Policy. This includes copyright rules for software, downloads, and online graphics.

Productivity Tools and Communication Tools:

- Use word processing applications: use the cursor to highlight text, center text, change font and size, style, color, and print.
- Begin to use spell checker, page break, Thesaurus, a page set up, hanging indents, spacing, insert pictures, zoom, paint, and draw tools within a word processing document.
- Be able to use graphics and sequences such as shapes, size, colors, and various objects.
- Save and retrieve documents to and from a specific location.
- Participate in a group multimedia project using digital images and sound.
- Research a spreadsheet
- Research a database.
- Develop problem-solving skills.
- Use telecommunications to send an e-mail, attach files, download files, reply to messages, and forward messages.
- Participate in a teacher guided Internet exploration using a web browser.
- Access Internet sites by use of bookmarks.
- Begin to use web browser tools.

Fifth Grade

Basic Operations, Concepts, and Ethics:

- Demonstrate K - 4 skills

Use the desktop environment:

- Review and apply previous level skills.
- Using keyboard commands
- Save and retrieve documents to and from specific locations
- Keyboarding to develop basic skills. Teach Keystroke reaches and build keyboarding skills to the level of approximately 25 words per a minute.
- Discuss the ethical use of Netiquette.
- Be aware of Acceptable Use Policy. This includes copyright rules for software, downloads, and online graphics.

Productivity Tools and Communication Tools:

- Review and apply previous level skills.
- Create a spreadsheet.
- Create a database.

- Research using a database.
- Develop thinking skills and programming skills.

Use telecommunications to:

- Send and receive e-mail
- Attach files
- Download files
- Reply to messages
- Copy messages
- Practice appropriate Netiquette

Sixth - Eighth Grade

Basic Operations, Concepts, and Ethics:

- Demonstrate proficiency in K - 5 skills.
- Demonstrate a basic understanding of how a computer works.
- Develop and demonstrate troubleshooting strategies.
- Copy, save, and delete onto and from disks.
- Create an informative multimedia presentation used to define a problem, gather information, analyze information, organize information, and synthesize information.
- Develop Keyboarding skills. Teach Keystroke reaches and build keyboarding skills to the level of 30 words per a minute in sixth grade, 35 wpm in seventh and 40 wpm in eighth.
- Demonstrate a moral and ethical approach to the use of technology.
- Apply telecommunication ethics.
- Apply the ethical use of Netiquette.
- Apply the Acceptable Use Policy. This includes copyright rules for software, downloads, and online graphics.

Productivity Tools and Communication Tools:

- Demonstrate proficiency in K - 5 skills.
- Access information through technologies.
- Choose appropriate software and hardware to complete tasks.
- Build basic webpage, using HTML, graphics, hyperlinks and page publishing
- Build multiple spreadsheets
- Use of publication software: software publication design, graphics and fonts
- Create and utilize portfolios
- Develop multimedia and presentation skills.
- Use scanner and digital camera for multimedia presentations.
- Access files in network and using telecommunications.

High School Course Descriptions

Computers

Students will learn the basic functions of computers, their internal components and peripherals. They will also use MS OFFICE 2013 to learn word processing with Word and use of spreadsheets with Excel. This includes the use of charts. They will also learn the use of Powerpoint to create digital presentations.

Advanced Computers

Students will learn the basics of building Web pages with HTML and JavaScript language. A unit on building and using databases will be taught using Access. Students will learn how to use Adobe Photoshop to create and edit digital photos.   The last unit will teach the basics of Video Editing with Adobe Premiere or Serif MoviePlus

Desktop Publishing

This yearlong course utilizes the skills that are necessary to publish a quality yearbook. Skills include: principles of layout and design, photography, basic elements of photo editing, journalism and marketing. Word processing and computers are suggested prerequisites to the course.

AutoCAD

This class is aimed at introducing and familiarizing students with the general operating principles of Computer-Aided Design and Drafting (CADD). The AutoCAD LT 2015 software and the drawing techniques introduced during the course are reinforced through many hands-on drawing exercises. The course and the hands-on exercises are intended to help students establish and maintain key CADD concepts and to build a strong foundation for further exploration into the exciting field of Computer-Aided Engineering
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Assessments

I. **Technology Learner Goal: Basic Technology Operation**

Students will demonstrate the basic use and operation of technologies, as evidenced by teacher observation, individual projects, student demonstration and teacher generated tests.

II. **Technology Learner Goal: Acceptable Use**

Students will appropriately utilize technology and information sources, as evidenced by teacher observation.

III. **Technology Learner Goal: Troubleshooting**

Students will demonstrate the ability to troubleshoot basic computer problems, as evidenced by teacher observation.

IV. **Technology Learner Goal: Keyboarding**

Students will achieve a proficient level of keyboarding, as evidenced by timed writings, teacher observation and students' original work.

V. **Technology Learner Goal: Word Processing**

Students will demonstrate the ability to create documents within a word processing program, as evidenced by teacher observation, students' original work and teacher generated tests.

VI. **Technology Learner Goal: Spreadsheet**

Students will demonstrate the ability to create and utilize a spreadsheet, as evidenced by teacher observation, students' original work and teacher generated tests/simulations.

VII. **Technology Learner Goal: Database**

Students will demonstrate the ability to create and utilize a database, as evidenced by teacher observation, students' original work and teacher generated tests.

VIII. **Technology Learner Goal: Publication Software**

Students will demonstrate the ability to create professional business publications, as evidenced by teacher observation, students' original work and teacher generated tests/simulations.

IX. **Technology Learner Goal: Multi-media Presentations**

Students will appropriately select and utilize the proper technologies to create original presentations, as evidenced by teacher observation, students' original work and teacher generated simulations.

X. **Technology Learner Goal: Internet Use**

Students will demonstrate the ability to access and retrieve information through the Internet, as evidenced by teacher observation, students' integration of Internet materials into various works and teacher generated tests/simulations.

XI. **Technology Learner Goal: Web Page Design**

Students will demonstrate the ability to create web pages, as evidenced by teacher observation, students' original work and teacher generated tests/simulations.

XII. **Technology Learner Goal: Technology Application and Integration**

Students will apply technology tools to create original works, as evidenced by teacher observation, students' original work and teacher evaluation of projects.

XIII. **Technology Learner Goal: Desktop Publishing**

Students will demonstrate the ability to create well-designed publication layouts and produce the school yearbook, as evidenced by teacher observation, students' original work, and teacher generated simulations.

XIV. **Technology Learner Goal: AutoCAD**

Students will demonstrate the ability to create CADD drawings for a variety of purposes, as evidenced by teacher observation, students' original work, and teacher generated simulations.