

**BERNARDS TOWNSHIP PUBLIC SCHOOLS  
BASKING RIDGE, NEW JERSEY**

**K-8 Technology Assessment**

**Grade K - 8**

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Summer 2007

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Basking Ridge, New Jersey

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*This document has been aligned with the  
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2007/2008

## **PROGRAM PHILOSOPHY**

Computers have become a part of our daily lives. Knowledge of computers, or computer literacy, is becoming an increasingly important ingredient for success. The world in which our students live includes computers in the home, in the workplace, and in almost every aspect of their lives. Therefore, it is imperative that the elementary and middle school computer program strives to prepare our students for the Information Age.

The Bernards Township program for technology introduces the students to various uses of computers, software and other technology tools. The emphasis is on proficiency with the use of computers, but should not be limited specific programs, as the technology is rapidly changing. With this in mind, the curriculum should allow for flexibility and change within a structure of applications and uses for computers.

The Bernards Township computer curriculum provides a sequence of educational objectives, including theory and practicality, providing the basis for computer literacy for all students. Computer literacy is an understanding of the effects that computers have had and will have on our society, an understanding of the computer as a tool and a resource, and a basic level of comfort using the computer. Students will be involved in projects that allow them to use technology in an interdisciplinary manner, thus better preparing them for life in and outside of school. With the completion of the computer classes in grades K-5 and the cycle courses in sixth and seventh grade, students will be prepared to undertake the more complex courses at Ridge High School and utilize computers with proficiency in their daily lives.

The following demonstrates the breakdown of objectives for grades K-7 and how they align to the New Jersey State 8.1.4 and 8.1.8 Technology Standards and the National Educational Technology Standards.

### **Assessment Reporting:**

The below listed assessments spanning K-7 will be utilized by the school district to ensure that students have met the NJ CCCS 8.1. All assessments have been created with a focus on utilizing technology as a tool for creating cross curriculum products and for developing proficiency with various technology tools. During the creation of these assessments special attention was paid to the NETS standards to ensure the students are also prepared to meet the standards set by ISTE.

### **Assessment Tracking:**

Students will demonstrate the 8.1.4 Standards by grade 4 by achieving an S or better in Computers. Students will demonstrate the 8.1.8 Standards by grades 5-8 achieving an S or better in Grade 5 and achieving a grade B- or better in Grade 6 and 7 in the Computer Cycle course. Student assessment samples will be stored on the district server and the grade will be tracked by the instructors and departmental supervisor for reporting purposes.

## **Grades K-5**

The K-5 technology proficiencies are integrated into the core curriculum content. The technology coordinator, classroom teacher, and media specialist deliver the proficiencies in a collaborative way to the students. The students acquire a creative, unique, and authentic educational experience, which accommodates various learning styles. The technology education program acknowledges the power and potential of technology for everyone's lives, as tools for thinking, learning and exploring.

### **STUDENT GOALS**

- All students will use technology to become independent, lifelong learners.
- All students will use technology resources for problem solving, communication, and illustration of thoughts and ideas
- All students will be able to utilize the multimedia features of technology.
- All students will develop the ability to work cooperatively and collaboratively on projects.
- All students will understand the impact of technology on society.

### **STRATEGIES/ACTIVITIES**

The activities used to teach the K-5 technology proficiencies are designed in conjunction with the classroom and special area teachers at each elementary school. Technology is a tool for learning, communicating, and creating. The classroom teachers and the technology coordinators work together to design lessons that promote technology use in the various content areas.

## **GRADE 3**

### **Endangered Species**

#### **Objective:**

Students will use the Internet to research an Endangered Species. They will use the information to create a report in Microsoft Word and a presentation using PowerPoint.

#### *8.1.4 Standards Addressed*

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.
- 8.1.4.A4 Produce a simple finished document using word processing software.
- 8.1.4.A6 Create and present a multimedia presentation using appropriate software.
- 8.1.4.A7 Create and maintain files and folders.
- 8.1.4.A9 Use basic computer icons.
- 8.1.4.B2 Recognize and practice responsible social and ethical behaviors when using technology, and understand the consequences of inappropriate use including: Internet access, Copyrighted material, On-line library resources, Personal security and safety issues
- 8.1.4.B3 Practice appropriate Internet etiquette.
- 8.1.4.B5 Recognize the need for                                         4                                         accessing and using information.

- 8.1.4 B6 Identify and use web browsers, search engines, and directories to obtain information to solve real world problems.
- 8.1.4.B7 Locate specific information by searching a data base.

*NETS Standards Addressed:*

Basic operations and concepts

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

Social, ethical, and human issues

- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

*Assessment utilized:* Students are assessed based on submission of completed endangered species research packet, report, and presentation. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

## **Grade 4**

### **Keyboarding Instruction**

#### **Objective:**

Students will learn the touch operation of the alphanumeric keyboard characters. Students will be able to type with accuracy while using proper keyboarding technique.

#### *8.1.4 Standards Addressed*

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.
- 8.1.4.A9 Use basic computer icons.
- 8.1.4.B2 Recognize and practice responsible social and ethical behaviors when using technology, and understand the consequences of inappropriate use including: Internet access, Copyrighted material, On-line library resources, Personal security and safety issues
- 8.1.4.B5 Recognize the need for accessing and using information.

*Assessment utilized:* Students are assessed based on a 2 minute timed test administered upon completion of typing instruction.

## Explorer Research, Colonial Research

### Objective:

Students will be able to use the Internet to research information and use word processing software to create a document compiling their research

#### 8.1.4 Standards Addressed

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.
- 8.1.4.A4 Produce a simple finished document using word processing software.
- 8.1.4.A7 Create and maintain files and folders.
- 8.1.4.A9 Use basic computer icons.
- 8.1.4.B2 Recognize and practice responsible social and ethical behaviors when using technology, and understand the consequences of inappropriate use including: Internet access, Copyrighted material, On-line library resources, Personal security and safety issues
- 8.1.4.B3 Practice appropriate Internet etiquette.
- 8.1.4.B4 Recognize the ethical and legal implications of plagiarism of copyrighted materials.
- 8.1.4.B5 Recognize the need for accessing and using information.
- 8.1.4 B6 Identify and use web browsers, search engines, and directories to obtain information to solve real world problems.

#### NETS Standards Addressed:

Basic operations and concepts

- Students are proficient in the use of technology.

Social, ethical, and human issues

- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.
- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

*Assessment utilized:* Students are assessed based on submission of completed research packets and reports. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

## **Revolutionary War Battles**

### **Objective:**

Students will use the Internet to research information about the Revolutionary War and use the information to create a multimedia presentation

### *8.1.4 Standards Addressed*

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.
- 8.1.4.A6 Create and present a multimedia presentation using appropriate software.
- 8.1.4.A7 Create and maintain files and folders.
- 8.1.4.A9 Use basic computer icons.
- 8.1.4.B1 Discuss the common uses of computer applications and identify their advantages and disadvantages.
- 8.1.4.B3 Practice appropriate Internet etiquette.
- 8.1.4.B4 Recognize the ethical and legal implications of plagiarism of copyrighted materials.
- 8.1.4.B5 Recognize the need for accessing and using information.
- 8.1.4 B6 Identify and use web browsers, search engines, and directories to obtain information to solve real world problems.

### *NETS Standards Addressed:*

Basic operations and concepts

- Students are proficient in the use of technology.

Social, ethical, and human issues

- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

*Assessment utilized:* Students are assessed based on submission of completed research packet and presentation. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

## Ocean “I Search”

### Objective:

Students will choose a topic relating to the ocean. They will formulate questions and use the Internet to research the answers. Students will compose paragraphs and insert pictures to create a brochure about their topic.

### 8.1.4 Standards Addressed

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.
- 8.1.4.A4 Produce a simple finished document using word processing software.
- 8.1.4.A7 Create and maintain files and folders.
- 8.1.4.A9 Use basic computer icons.
- 8.1.4.B2 Recognize and practice responsible social and ethical behaviors when using technology, and understand the consequences of inappropriate use including: Internet access, Copyrighted material, On-line library resources, Personal security and safety issues
- 8.1.4.B3 Practice appropriate Internet etiquette.
- 8.1.4.B4 Recognize the ethical and legal implications of plagiarism of copyrighted materials.
- 8.1.4.B5 Recognize the need for accessing and using information.
- 8.1.4.B6 Identify and use web browsers, search engines, and directories to obtain information to solve real world problems.

### NETS Standards Addressed:

Basic operations and concepts

- Students are proficient in the use of technology.

Social, ethical, and human issues

- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

Technology problem-solving and decision-making tools

- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

*Assessment utilized:* Students are assessed based on submission of completed research packet and brochure. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.



## **Anthology**

### **Objective:**

Students will transfer writing pieces that they have composed throughout the year to Microsoft Word and compile them into an anthology.

#### *8.1.4 Standards Addressed*

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.
- 8.1.4.A4 Produce a simple finished document using word processing software.
- 8.1.4.A7 Create and maintain files and folders.
- 8.1.4.A9 Use basic computer icons.

#### *NETS Standards Addressed:*

Basic operations and concepts

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

Social, ethical, and human issues.

- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

*Assessment utilized:* Students are assessed based on submission of completed anthology. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

## **Grade 5**

### **Biomes**

#### **Objective:**

Students will use the Internet to complete research about Biomes. Students will use the information gathered to create a field guide/scrapbook about Biomes

#### *8.1.4 Standards Addressed*

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.
- 8.1.4.A4 Produce a simple finished document using word processing software.
- 8.1.4.A7 Create and maintain files and folders.
- 8.1.4.A9 Use basic computer icons.

- 8.1.4.B1 Discuss the common uses of computer applications and identify their advantages and disadvantages.
- 8.1.4.B2 Recognize and practice responsible social and ethical behaviors when using technology, and understand the consequences of inappropriate use including: Internet access, Copyrighted material, On-line library resources, Personal security and safety issues
- 8.1.4.B3 Practice appropriate Internet etiquette.
- 8.1.4.B5 Recognize the need for accessing and using information.
- 8.1.4 B6 Identify and use web browsers, search engines, and directories to obtain information to solve real world problems.
- 8.1.4.B7 Locate specific information by searching a data base.

#### *8.1.8 Standards Addressed*

- 8.1.8.A1 – Use appropriate technology vocabulary.
- 8.1.8.A2 – Use common features of an operating system (e.g. creating and organizing files and folders.
- 8.1.8.A4 – Input and access data and text efficiently and accurately through proficient use of other input devices, such as a mouse.
- 8.1.8.A5 – Create documents with advanced text-formatting and graphics using Word Processing.
- 8.1.8.A10 – Use network resources for storing and retrieving data.
- 8.1.8.B2 – Exhibit legal and ethical behaviors when using information and technology and discuss consequences of misuse.
- 8.1.8.B4 – Describe and practice safe internet usage.
- 8.1.8.B6 – Choose appropriate tools and information resources to support research and solve real world problems, including but not limited to: online resources and databases, search engines and subject directories.
- 8.1.8.B7 – Evaluate the accuracy, relevance, and appropriateness of print and non-print electronic information resources.
- 8.1.8.B8. Use computer applications to modify information independently and/or collaboratively to solve problems.
- 8.1.8.B10 – Determine when technology tools are appropriate to solve a problem and make a decision.

#### *NETS Standards Addressed*

##### Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

##### Technology communications tools

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

##### Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.

- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

*Assessment utilized:* Students are assessed based on submission of completed research packet and field guide. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

### **Westward Expansion/Spending Project/School Day Activities**

#### **Objective:**

Students will be able to create a spreadsheet using student-gathered data, use formulas to analyze data, and create graphs to display the data

#### *8.1.4 Standards Addressed*

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.
- 8.1.4.A5 Produce and interpret a simple graph or chart by entering and editing data on a prepared spreadsheet template.
- 8.1.4.A7 Create and maintain files and folders.
- 8.1.4.A9 Use basic computer icons.
- 8.1.4.B1 Discuss the common uses of computer applications and identify their advantages and disadvantages.

#### *8.1.8 Standards Addressed*

- 8.1.8.A1 – Use appropriate technology vocabulary.
- 8.1.8.A2 – Use common features of an operating system (e.g. creating and organizing files and folders).
- 8.1.8.A4 – Input and access data and text efficiently and accurately through proficient use of other input devices, such as a mouse.
- 8.1.8.A7 – Construct a simple spreadsheet, enter data, and interpret the information.
- 8.1.8.A10 – Use network resources for storing and retrieving data.
- 8.1.8.B6 – Choose appropriate tools and information resources to support research and solve real world problems, including but not limited to: online resources and databases, search engines and subject directories.
- 8.1.8.B8. Use computer applications to modify information independently and/or collaboratively to solve problems.
- 8.1.8.B10 – Determine when technology tools are appropriate to solve a problem and make a decision.

#### *NETS Standards Addressed:*

Basic operations and concepts

- Students demonstrate a sound understanding of the nature and operation of technology systems.

- Students are proficient in the use of technology.

#### Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

#### Technology problem-solving and decision-making tools

- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

*Assessment utilized:* Students are assessed based on submission of completed packet and spreadsheets. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

### **Significant People of the Civil War**

#### **Objective:**

Students will research key players in the Civil War and use the information to create a multimedia presentation

#### *8.1.4 Standards Addressed*

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.
- 8.1.4.A6 Create and present a multimedia presentation using appropriate software.
- 8.1.4.A7 Create and maintain files and folders.
- 8.1.4.A9 Use basic computer icons.
- 8.1.4.B1 Discuss the common uses of computer applications and identify their advantages and disadvantages.
- 8.1.4.B2 Recognize and practice responsible social and ethical behaviors when using technology, and understand the consequences of inappropriate use including: Internet access, Copyrighted material, On-line library resources, Personal security and safety issues
- 8.1.4.B3 Practice appropriate Internet etiquette.
- 8.1.4.B5 Recognize the need for accessing and using information.
- 8.1.4 B6 Identify and use web browsers, search engines, and directories to obtain information to solve real world problems.

#### *8.1.8 Standards Addressed*

- 8.1.8.A1 – Use appropriate technology vocabulary.
- 8.1.8.A2 – Use common features of an operating system (e.g. creating and organizing files and folders.
- 8.1.8.A4 – Input and access data and text efficiently and accurately through proficient use of other input devices, such as a mouse.
- 8.1.8.A8 – Design and produce a basic multimedia project.
- 8.1.8.A10 – Use network resources for storing and retrieving data.

- 8.1.8.B2 – Exhibit legal and ethical behaviors when using information and technology and discuss consequences of misuse.
- 8.1.8.B4 – Describe and practice safe internet usage.
- 8.1.8.B5 – Describe and practice etiquette when using the Internet and Electronic Mail.
- 8.1.8.B6 – Choose appropriate tools and information resources to support research and solve real world problems, including but not limited to: online resources and databases, search engines and subject directories.
- 8.1.8.B7 – Evaluate the accuracy, relevance, and appropriateness of print and non-print electronic information resources.
- 8.1.8.B8. Use computer applications to modify information independently and/or collaboratively to solve problems.
- 8.1.8.B10 – Determine when technology tools are appropriate to solve a problem and make a decision.

*NETS Standards Addressed:*

Basic operations and concepts

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

Social, ethical, and human issues

- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

*Assessment utilized:* Students are assessed based on submission of completed research packet and presentation. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

## **Civil War Newspaper**

### **Objective:**

Students will use the Internet to research a Civil War topic and compose a newspaper story about the topic using Microsoft Word

### *8.1.4 Standards Addressed*

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.

- 8.1.4.A4 Produce a simple finished document using word processing software.
- 8.1.4.A7 Create and maintain files and folders.
- 8.1.4.A9 Use basic computer icons.
- 8.1.4.B2 Recognize and practice responsible social and ethical behaviors when using technology, and understand the consequences of inappropriate use including: Internet access, Copyrighted material, On-line library resources, Personal security and safety issues
- 8.1.4.B3 Practice appropriate Internet etiquette.
- 8.1.4.B5 Recognize the need for accessing and using information.
- 8.1.4.B6 Identify and use web browsers, search engines, and directories to obtain information to solve real world problems.

#### *8.1.8 Standards Addressed*

- 8.1.8.A1 – Use appropriate technology vocabulary.
- 8.1.8.A2 – Use common features of an operating system (e.g. creating and organizing files and folders.
- 8.1.8.A4 – Input and access data and text efficiently and accurately through proficient use of other input devices, such as a mouse.
- 8.1.8.A5 – Create documents with advanced text-formatting and graphics using Word Processing.
- 8.1.8.A10 – Use network resources for storing and retrieving data.
- 8.1.8.B2 – Exhibit legal and ethical behaviors when using information and technology and discuss consequences of misuse.
- 8.1.8.B4 – Describe and practice safe internet usage.
- 8.1.8.B6 – Choose appropriate tools and information resources to support research and solve real world problems, including but not limited to: online resources and databases, search engines and subject directories.
- 8.1.8.B7 – Evaluate the accuracy, relevance, and appropriateness of print and non-print electronic information resources.
- 8.1.8.B8. Use computer applications to modify information independently and/or collaboratively to solve problems.
- 8.1.8.B10 – Determine when technology tools are appropriate to solve a problem and make a decision.

#### *NETS Standards Addressed:*

##### Basic operations and concepts

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

##### Social, ethical, and human issues

- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

##### Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

##### Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.

##### Technology problem-solving and decision-making tools

- Students use technology resources for solving problems and making informed decisions.
- Students employ technology in the development of strategies for solving problems in the real world.

*Assessment utilized:* Students are assessed based on submission of completed newspaper article and newspaper. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

## **Anthology**

### **Objective:**

Students will transfer writing pieces that they have composed throughout the year to Microsoft Word and compile them into an anthology.

#### *8.1.4 Standards Addressed*

- 8.1.4.A1 Use basic technology vocabulary.
- 8.1.4.A2 Use basic features of an operating system (e.g., accessing programs, identifying and selecting printer, finding help).
- 8.1.4.A3 Input and access text and data, using appropriate keyboarding techniques or other input devices.
- 8.1.4.A4 Produce a simple finished document using word processing software.
- 8.1.4.A7 Create and maintain files and folders.
- 8.1.4.A9 Use basic computer icons

#### *8.1.8 Standards Addressed*

- 8.1.8.A1 – Use appropriate technology vocabulary.
- 8.1.8.A2 – Use common features of an operating system (e.g. creating and organizing files and folders.
- 8.1.8.A4 – Input and access data and text efficiently and accurately through proficient use of other input devices, such as a mouse.
- 8.1.8.A5 – Create documents with advanced text-formatting and graphics using Word Processing.
- 8.1.8.A10 – Use network resources for storing and retrieving data.

#### *NETS Standards Addressed:*

##### Basic operations and concepts

- Students demonstrate a sound understanding of the nature and operation of technology systems.
- Students are proficient in the use of technology.

##### Social, ethical, and human issues.

- Students develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

##### Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

*Assessment utilized:* Students are assessed based on submission of completed anthology. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

## Grade 6

The grade 6 computer cycle is designed to strengthen the students' technology skills to enhance their achievement in their academic courses as well as introducing new skills. In the computer cycle, the students will work to increase the speed and accuracy of their keyboarding skills using the program Typing Instructor Deluxe. Student evaluation in this course will consist of timely completion of all class production work and timed writings. In addition there will be graded assessments on the completion of projects and techniques learned using Microsoft Word.

### **I. Computer Lab Objectives:**

Students will be able to:

- A. Understand course requirements and class procedures/rules. (8.1.8.B3, 8.1.8.B2)
- B. Identify username and password for network. (8.1.8.B2, 8.1.8.B3)
- C. Understand the proper network procedures. (8.1.8.A10, 8.1.8.A12)
- D. Log on to the network. (8.1.8.B2, 8.1.8.B3)

#### *8.1.8 Standards Addressed:*

- 8.1.8.A10 – Use network resources for storing and retrieving data.
- 8.1.8.A12 – Create, organize, and manipulate shortcuts.
- 8.1.8.B2 – Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse.
- 8.1.8.B3 – Explain the purpose of the Acceptable Use Policy and the consequences of inappropriate use of technology.

#### *NETS Standards Addressed:*

1. Basic operations and concepts
  - Students demonstrate a sound understanding of nature and operation of technology systems.
  - Students are proficient in the use of technology.
2. Social, ethical, and human issues
  - Students understand the ethical, cultural, and societal issues related to technology.
  - Students practice responsible use of technology systems, information, and software.
  - Students develop positive attitudes toward technology used that support lifelong learning, collaboration, personal pursuits, and productivity.

*Assessment utilized:* Students and parents discuss, read, and sign the district acceptable use policy prior to receiving access to school network.

### **II. Keyboarding Objectives:**

Students will develop speed and accuracy on the computer by learning the touch operation of the alphanumeric keyboard characters by being able to:

- A. Operate the letter keys, number and symbol keys and basic service keys by touch. (8.1.8.A3)
- B. Keyboard words, sentences and paragraphs with continuity, good technique and good form. (8.1.8.A3)



- C. Correct errors using various techniques.
- D. Proofread
- E. Develop good work habits, including self-control when working under pressure. (8.1.8.B2)
- F. Keyboard straight copy paragraph material of average difficulty, between 20-25 words per minute within a prescribed error tolerance of one error per minute for three minutes. (8.1.8.A3)
- G. Recognize the various proofreader's symbols and type papers making the required revisions.

*8.1.8 Standards Addressed:*

- 8.1.8.A3 – Demonstrate effective input of text and data using touch keyboarding with appropriate technique.
- 8.1.8.B2 – Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse.

*Assessment utilized:*

Student evaluation consists of the following:

- Teacher observation using Keyboarding Technique Checklist
- Speed and Accuracy Checks (2 minute timed test)

**III. Word Processing Objectives:**

To develop Intermediate Word Processing skills, the Students will be able to:

- A. Familiarize themselves with word processing software tools (8.1.8.A1)
- B. Create and manipulate tables (8.1.8.A11)
- C. Determine proper page setup
- D. Incorporate images and graphics into documents (8.1.8.A5, 8.1.8.B4)
- E. Design and evaluate layout of documents (8.1.8.B10)
- F. Compose original material at the computer to develop creative writing and thinking skills. (8.1.8.A3, 8.1.8.A6)
- G. Utilize:
  - File menu – New/Open, Save/Save as, Page Set Up, Print
  - Format text – font, size, style, color
  - Justify text – left, right, center, justify
  - Tools – spelling, thesaurus, cut and paste
  - Page Set up – margins, orientation
  - WordArt – color, shape, shadow

*8.1.8 Standards Addressed:*

- 8.1.8.A1 – Use appropriate technology vocabulary.
- 8.1.8.A3 – Demonstrate effective input of text and data using touch keyboarding with appropriate technique.
- 8.1.8.A4 – Input and access data and text efficiently and accurately through proficient use of other input devices, such as a mouse.
- 8.1.8.A5 – Create documents with advanced text-formatting and graphics using Word Processing.
- 8.1.8.A6 – Create a file containing customized information by merging documents
- 8.1.8.A11 – Choose appropriate electronic graphic organizer to create, construct, or design a document.

- 8.1.8.B4 – Describe and practice safe internet usage.
- 8.1.8.B10 – Determine when technology tools are appropriate to solve a problem and make a decision.

*NETS Standards Addressed:*

3. Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

*Assessment utilized:* Students are assessed based on submission of completed autobiographical book jacket. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

## **Grade 7**

### **Course Description**

In the 7<sup>th</sup> grade computer cycle students learn to use the computer as a practical tool. Knowledge of proper keyboarding skills is reinforced through the use of Typing Instructor Deluxe 16. Students will also complete the M&M activity, an interdisciplinary project involving the use of a variety of computer applications. Students devise hypotheses related to the contents of a tube of M&M minis as well as hypotheses related to the class data. Data will be collected and analyzed using Microsoft Excel. Students will also generate graphs to visually display their results. Each student will create an advertisement using graphic software for a new product to be sold by the M&M Company. In addition, each team will develop a PowerPoint presentation to share the results of their experiment with the class.

### **Activities:**

**Keyboarding Reinforcement:** Students will continue to develop speed and accuracy on the computer by learning the touch operation of the alphanumeric keyboard characters by being able to:

- A. Operate the letter keys, number and symbol keys and basic service keys by touch. (8.1.8.A3)
- B. Keyboard words, sentences and paragraphs with continuity, good technique and good form. (8.1.8.A3)
- C. Correct errors using various techniques.
- D. Proofread
- E. Develop good work habits, including self-control when working under pressure. (8.1.8.B2)
- F. Keyboard straight copy paragraph material of average difficulty, between 20-25 words per minute within a prescribed error tolerance of one error per minute for three minutes.
- G. Recognize the various proofreader's symbols and type papers making the required revisions.

### *8.1.8 Standards Addressed:*

- 8.1.8.A3 – Demonstrate effective input of text and data using touch keyboarding with appropriate technique.
- 8.1.8.B2 – Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse.

### *Assessment utilized:*

Student evaluation consists of the following:

- Teacher observation using Keyboarding Technique Checklist
- Speed and Accuracy Tests

**Hypothesis Worksheet:** Students develop a number of hypotheses related to the contents of a tube of M&M minis as well as the class data and document their hypotheses, reasons, and results in a table in Microsoft Word.

Students will be able to:

- A. Create and manipulate tables (8.1.8.A11, 8.1.8.A1)
- B. Enter data into appropriate cells in a table. (8.1.8.A3)

### *8.1.8 Standards Addressed:*

- 8.1.8.A1 – Use appropriate technology vocabulary.

- 8.1.8.A3 – Demonstrate effective input of text and data, using touch keyboarding with proper technique.
- 8.1.8.A11 – Choose appropriate electronic graphic organizer to create, construct, or design a document.

*Assessment utilized:* Students are assessed based on submission of completed website. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

**Spreadsheet / Graphs:** Students create a spreadsheet in Microsoft Excel in order to analyze their project data. The spreadsheet must be formatted correctly, including appropriate print settings, headings, column width, etc. Formulas are utilized in order to analyze data. Graphs are generated from data in order to report results visually.

Students will be able to...

- A. Enter data into appropriate cells (8.1.8.A1, 8.1.8.A3, 8.1.8.A4, 8.1.8.A7, 8.1.8.A9)
- B. Enter formulas to automate calculations (8.1.8.B8, 8.1.8.A7, 8.1.8.B10)
- C. Utilize the fill function to copy/paste a formula (8.1.8.B8, 8.1.8.A12, 8.1.8.B10)
- D. Generate graphs to visually display data (8.1.8.A9, 8.1.8.A7, 8.1.8.A12, 8.1.8.B10)
- E. Format cells for number & percents (8.1.8.A1, 8.1.8.A3, 8.1.8.A4, 8.1.8.A12)
- F. Demonstrate appropriate spreadsheet layout (8.1.8.A3, 8.1.8.A4)

*8.1.8 Standards Addressed:*

- 8.1.8.A1 – Use appropriate technology vocabulary.
- 8.1.8.A3 – Demonstrate effective input of text and data, using touch keyboarding with proper technique.
- 8.1.8.A4 – Input and access data and text efficiently and accurately through proficient use of other input devices, such as a mouse.
- 8.1.8.A7 – Construct a simple spreadsheet, enter data, and interpret the information.
- 8.1.8.A9 – Plan and create a simple database, define fields, input data, and produce a report using sort and query.
- 8.1.8.A12 – Create, organize, and manipulate shortcuts.
- 8.1.8.B8 – Use computer applications to modify information independently and/or collaboratively to solve problems.
- 8.1.8.B10 – Determine when technology tools are appropriate to solve a problem and make a decision.

*NETS Standards Addressed:*

5. Technology research tools
  - Students use technology to locate, evaluate, and collect information from a variety of sources.
  - Students use technology tools to process data and report results.
  - Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.
6. Technology problem-solving and decision-making tools
  - Students use technology resources for solving problems and making informed decisions.

- Students employ technology in the development of strategies for solving problems in the real world.

*Assessment utilized:* Students are assessed based on submission of completed spreadsheet and graphs. Project is evaluated using rubrics assessing satisfactory application of all skills related to objectives above.

**Interesting Facts:** Students will research and compile information from the Internet.

Students will be able to:

- A. Utilize the Internet as an effective research tool for: (8.1.8.B6, 8.1.8.A1, 8.1.8.B2, 8.1.8.B5)
  - a. Information (8.1.8.B4, 8.1.8.B7)
- B. Engage in a discovery-oriented, inquiry-based instruction model in order to accomplish a variety of tasks (8.1.8.B6)

*8.1.8 Standards Addressed:*

- 8.1.8.A1 – Use appropriate technology vocabulary.
- 8.1.8.B2 – Exhibit legal and ethical behaviors when using information and technology and discuss consequences of misuse.
- 8.1.8.B5 – Describe and practice etiquette when using the Internet and Electronic Mail.
- 8.1.8.B6 – Choose appropriate tools and information resources to support research and solve real world problems, including but not limited to: online resources and databases, search engines and subject directories.
- 8.1.8.B7 – Evaluate the accuracy, relevance, and appropriateness of print and non-print electronic information resources.

*NETS Standards Addressed:*

5. Technology research tools

- Students use technology to locate, evaluate, and collect information from a variety of sources.
- Students use technology tools to process data and report results.
- Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

*Assessment utilized:* Students are assessed based on submission of completed website. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

**Advertisement:** Students create an advertisement using art software and existing images. Art software tools and corresponding settings are learned.

Students will be able to use art software to:

- A. Utilize the print screen function to copy / paste an image (8.1.8.A1, 8.1.8.A12)
- B. Download images from the internet (8.1.8.A12)
- C. Use art software features and tools to modify images: (8.1.8.B5, 8.1.8.B10)
  - a. Crop
  - b. Resize
  - c. Add text
  - d. Paint

D. Integrate modified images into a presentation (8.1.8.A1, 8.1.8.A8, 8.1.8.B5)

*8.1.8 Standards Addressed:*

- 8.1.8.A1 – Use appropriate technology vocabulary.
- 8.1.8.B10 – Determine when technology tools are appropriate to solve a problem and make a decision.
- 8.1.8.A8 – Design and produce a basic multimedia project.
- 8.1.8.A12 – Create, organize, and manipulate shortcuts.
- 8.1.8.B5 – Describe and practice “etiquette” when using the internet and electronic mail.

*NETS Standards Addressed:*

3. Technology productivity tools

- Students use technology tools to enhance learning, increase productivity, and promote creativity.
- Students use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

*Assessment utilized:* Students are assessed based on submission of completed advertisement. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.

**Website:** The results from the project are presented through a website created with a website editor. Skills learned include formatting text, applying a website theme, adding images, and providing hyperlinks to internal and external web pages.

Students will be able to:

- A. Create a multimedia presentation using Front Page (8.1.8.A2, 8.1.8.A4, 8.1.8.A5, 8.1.8.A8, 8.1.8.A10, 8.1.8.B8)
- B. Integrate clip art
- C. Compose original material at the computer to develop creative writing and thinking skills. (8.1.8.A3, 8.1.8.A6)
- D. Integrate images from a variety of sources (8.1.8.A5, 8.1.8.B4)
- E. Incorporate images and graphics into documents (8.1.8.A5)
- F. Incorporate graphs from Microsoft Excel (8.1.8.A6, 8.1.8.A10)
- G. Demonstrate ability to use appropriate color scheme
- H. Convey results of a scientific study using a visual medium (8.1.8.B1)

*8.1.8 Standards Addressed:*

- 8.1.8.A1 – Use appropriate technology vocabulary.
- 8.1.8.A2 – Use common features of an operating system (e.g. creating and organizing files and folders).
- 8.1.8.A4 – Input and access data and text efficiently and accurately through proficient use of other input devices, such as a mouse.
- 8.1.8.A5 – Create documents with advanced text-formatting and graphics using Word Processing.
- 8.1.8.A6 – Create a file containing customized information by merging documents.

- 8.1.8.A8 – Design and produce a basic multimedia project.
- 8.1.8.A10 – Use network resources for storing and retrieving data.
- 8.1.8.A11 – Choose appropriate electronic graphic organizer to create, construct, or design a document.
- 8.1.8.A12 – Create, organize, and manipulate shortcuts.
- 8.1.8.B1 – Demonstrate an understanding of how changes in technology impact the workplace and society.
- 8.1.8.B4 – Describe and practice safe internet usage.
- 8.1.8.B10 – Determine when technology tools are appropriate to solve a problem and make a decision.

*NETS Standards Addressed:*

4. Technology communications tools

- Students use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

*Assessment utilized:* Students are assessed based on submission of completed website. Project is evaluated using a rubric that assesses satisfactory application of all skills related to objectives above.