



Pine Grove Area
SCHOOL DISTRICT

Technology Curriculum

**Fourth Grade Business, Computer, and
Information Technology**

BOARD APPROVED AUGUST 2007

I. PHILOSOPHY

The Fourth Grade Business, Computer, and Information Technology course of the Pine Grove Area School District has been structured to introduce the fourth grade students to a technology course that continues at the basic level. The course will allow for the accommodation of many learning styles, motivational levels, and academic abilities.

II. CORE CONCEPTS

1. Electronic Communication Methods - Understanding the various methods of electronic communication
2. Basic Computer Communications - Ability to communicate effectively at a basic level with the use of a computer
3. Software - Ability to manipulate through appropriate grade level software
4. Basic Computer Operations - Ability to perform appropriate hardware functions using subject-oriented terminology and technique
5. Image Manipulation - Ability to manipulate images on the computer to create a visually pleasing document
6. Word Processing - Ability to key text into a document

III. COURSE OF STUDY

A. Course Name: Business, Computer, and Information Technology

B. Grade Level: Fourth Grade

C. Length of Course: Full Year

1. Frequency: 1 day every 5-day cycle

2. Duration: 43 minutes

D. Academic Level: Fourth Grade

E. Credits: 0

F. Prerequisites: none

G. Course Description:

The BCIT Fourth Grade Course will introduce the students to computer safety and ethics. Computers basics will include: parts of a computer, computer do's and don'ts, working with the mouse and keyboard, and opening and closing programs. Students will apply the proper hand positions for keyboarding and will utilize the home row, enter, and space bar. In the area of word processing, children will continue to practice entering text and numbers, use the space bar, move to a new line, and key in the alphabetic letters. They will utilize the toolbar applications to format their documents. They will use the paint and drawing features in various programs and import those drawings into their documents. The students will also be introduced through teacher demonstration the following applications: spreadsheet, database, desktop publishing, word processing, and the internet.

IV. CONTENT: Business, Computer, and Information Technology/ Grade 4

CORE CONCEPT 1: Electronic communication methods

MAJOR OBJECTIVE: Understanding the various methods of electronic communication

CURRICULUM STANDARD:			
State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p>PA STANDARD 3.6.B Know that informational technology involves encoding, transmitting, receiving, storing, retrieving and decoding.</p> <ul style="list-style-type: none"> Identify electronic communication methods that exist in the school and community (e.g., digital cameras, fax, scanner, telephone, internet, television, DVD, fiber optics) Identify graphic reproduction methods Describe appropriate image generating techniques (e.g., photography, video, digital imagery) Demonstrate the ability to communicate an idea by applying basic sketching and drawing techniques with digital tools 	<p>Teacher will guide students to:</p> <ul style="list-style-type: none"> Utilize basic drawing tools to illustrate a graphic Identify digital cameras, telephone, fiber-optics, internet as ways to share information across the world Utilize a digital camera to take a picture Design a document by inserting a picture downloaded from a digital camera or a scanner 	<p>Teacher evaluation of:</p> <ul style="list-style-type: none"> Partner projects Individual projects Class work Teacher observation Independent activities Cooperative activities Teacher demonstration and student observations Student demonstrations Oral presentations Oral questions and answers Worksheets 	<ul style="list-style-type: none"> Instructor generated resources Software programs, including but not limited to Bailey’s Book House, Sammy’s Science House, Travel the World with Timmy, Trudy’s Time and Place House, Stanley’s Sticker Stories, Frippletown, Thinkin Things Collection 2, Kip Phonics, Kid Phonics 2, KidWorks Deluxe, Ultimate Writing and Creativity Center , Type to Learn 3, Type to Learn Jr, Kid Pix, Print Shop, Hyper Studio, Accelerated Reader, Compass Learning, MS Word Textbook resources On-line resources Internet Explorer Digital cameras Scanner

CONTENT: Business, Computer, and Information Technology/ Grade 4

CORE CONCEPT 2: Basic Computer Communications

MAJOR OBJECTIVE: Ability to communicate effectively at a basic level with the use of a computer

CURRICULUM STANDARD:			
State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p>PA STANDARD 3.7.E Identify basic computer communications systems.</p> <ul style="list-style-type: none"> • Apply a web browser • Apply basic electronic mail functions. • Use on-line searches to answer age appropriate questions 	<p>Teacher will guide students to:</p> <p>Apply knowledge of the alphanumeric keys and special keys (e.g. escape key, space bar, delete/backspace, enter)</p> <p>Apply knowledge of how to open a browser and to search for information</p> <p>Bookmark specific sites of interest</p> <p>Compare and contrast various age appropriate websites for information and content</p> <p>Investigate questions for answers to age appropriate web searches</p> <p>Discuss and demonstrate electronic mail functions and how it is used to communicate with others</p>	<p>Teacher evaluation of:</p> <ul style="list-style-type: none"> ▪ Partner projects ▪ Individual projects ▪ Class work ▪ Teacher observation ▪ Independent activities ▪ Cooperative activities ▪ Teacher demonstration and student observations ▪ Student demonstrations ▪ Oral presentations ▪ Oral questions and answers ▪ Worksheets 	<ul style="list-style-type: none"> ▪ Instructor generated resources ▪ Software programs, including but not limited to Bailey’s Book House, Sammy’s Science House, Travel the World with Timmy, Trudy’s Time and Place House, Stanley’s Sticker Stories, Fripplertown, Thinkin Things Collection 2, Kip Phonics, Kid Phonics 2, KidWorks Deluxe, Ultimate Writing and Creativity Center , Type to Learn 3, Type to Learn Jr, Kid Pix, Print Shop, Hyper Studio, Accelerated Reader, Compass Learning, MS Word ▪ Textbook resources ▪ Internet Explorer

CONTENT: Business, Computer, and Information Technology/ Grade 4

CORE CONCEPT 3: Software

MAJOR OBJECTIVE: Ability to manipulate through appropriate grade level software

CURRICULUM STANDARD:			
State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p>PA STANDARD 3.7.D Use basic computer software.</p> <ul style="list-style-type: none"> • Apply operating system skills to perform basic computer tasks • Apply basic word processing skills • Apply specific instructional software as directed by the teacher • Identify and utilize simple graphic materials generated by the computer 	<p>Teacher will guide students to:</p> <p>Maneuver through selected programs after introduction Decide which menu options and commands should be used to perform specific tasks</p> <p>Utilize and demonstrate selected instructional software with adult guidance for academic support</p> <p>Demonstrates and translate knowledge of alphanumeric keys and special keys</p> <p>Apply basic word processing skills to edit, copy, move, save, and print text with formatting (centering lines, using tabs, forming paragraphs)</p> <p>Evaluates simple problems in software and basic computer components</p>	<p>Teacher evaluation of:</p> <ul style="list-style-type: none"> ▪ Teacher observation ▪ Independent activities ▪ Cooperative activities ▪ Teacher demonstration and student observations ▪ Student performance ▪ Individual projects ▪ Partner projects 	<ul style="list-style-type: none"> ▪ Instructor generated resources ▪ Software programs, including but not limited to Bailey’s Book House, Sammy’s Science House, Travel the World with Timmy, Trudy’s Time and Place House, Stanley’s Sticker Stories, Frippletown, Thinkin Things Collection 2, Kip Phonics, Kid Phonics 2, KidWorks Deluxe, Ultimate Writing and Creativity Center , Type to Learn 3, Type to Learn Jr, Kid Pix, Print Shop, Hyper Studio, Accelerated Reader, Compass Learning, MS Word ▪ Internet Explorer

CONTENT: Business, Computer, and Information Technology/ Grade 4

CORE CONCEPT 4: Basic Computer Operations

MAJOR OBJECTIVE: Ability to perform appropriate hardware functions using subject-oriented terminology

CURRICULUM STANDARD:			
State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p>PA STANDARD 3.7.C Identify basic computer operations and concepts.</p> <ul style="list-style-type: none"> • Identify the major parts necessary for a computer to input and output data • Explain and demonstrate the basic use of input and output devices (e.g., keyboard, monitor, printer, mouse) • Explain and demonstrate the use of external and internal storage devices (e.g., disk drive, CD drive) 	<p>Teacher will guide students to:</p> <p>Demonstrate and apply knowledge of basic computer hardware: e.g. keyboard and mouse, printer, monitor, CD's, case for the CPU (central processing unit)</p> <p>Handles CD's and other computer equipment with care</p> <p>Summarize the basic functions of hardware (keyboard and mouse provide input, printer and monitor provide output, CD provides storage, CPU processes information)</p> <p>Classify potential hazards to computer media (damage caused to CD's by dust and scratches; caused to computers by excessive heat, smoke, and moisture)</p>	<p>Teacher evaluation of:</p> <ul style="list-style-type: none"> ▪ Partner projects ▪ Individual projects ▪ Class work ▪ Teacher observation ▪ Independent activities ▪ Cooperative activities ▪ Teacher demonstration and student observations ▪ Student demonstrations ▪ Oral presentations ▪ Oral questions and answers ▪ Worksheets ▪ Classroom Discussions 	<ul style="list-style-type: none"> ▪ Instructor generated resources ▪ Textbook resources ▪ Software programs, including but not limited to Bailey's Book House, Sammy's Science House, Travel the World with Timmy, Trudy's Time and Place House, Stanley's Sticker Stories, Fripplertown, Thinkin Things Collection 2, Kip Phonics, Kid Phonics 2, KidWorks Deluxe, Ultimate Writing and Creativity Center , Type to Learn 3, Type to Learn Jr, Kid Pix, Print Shop, Hyper Studio, Accelerated Reader, Compass Learning, MS Word

CONTENT: Business, Computer, and Information Technology/ Grade 4

CORE CONCEPT 4: Basic Computer Operations

MAJOR OBJECTIVE: Ability to perform appropriate hardware functions using subject-oriented terminology

CURRICULUM STANDARD:			
State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p>PA STANDARD 3.7.C Identify basic computer operations and concepts.</p> <ul style="list-style-type: none"> • Identify the major parts necessary for a computer to input and output data • Explain and demonstrate the basic use of input and output devices (e.g., keyboard, monitor, printer, mouse) <p>Explain and demonstrate the use of external and internal storage devices (e.g., disk drive, CD drive)</p>	<p>Understands basic facts about networked computers (can connect to each other via modem and telephone line, or through local network systems or internet and intranet)</p>	<p>Teacher evaluation of:</p> <ul style="list-style-type: none"> ▪ Partner projects ▪ Individual projects ▪ Class work ▪ Teacher observation ▪ Independent activities ▪ Cooperative activities ▪ Teacher demonstration and student observations ▪ Student demonstrations ▪ Oral presentations ▪ Oral questions and answers ▪ Worksheets <p>Classroom Discussions</p>	<ul style="list-style-type: none"> ▪ Instructor generated resources ▪ Textbook resources ▪ Software programs, including but not limited to Bailey’s Book House, Sammy’s Science House, Travel the World with Timmy, Trudy’s Time and Place House, Stanley’s Sticker Stories, Fripptown, Thinkin Things Collection 2, Kip Phonics, Kid Phonics 2, KidWorks Deluxe, Ultimate Writing and Creativity Center , Type to Learn 3, Type to Learn Jr, Kid Pix, Print Shop, Hyper Studio, Accelerated Reader, Compass Learning, MS Word

CONTENT: Business, Computer, and Information Technology/ Grade 4

CORE CONCEPT 5: Image manipulation

MAJOR OBJECTIVE: Ability to manipulate images on the computer to create a visually pleasing document

CURRICULUM STANDARD:			
State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p>PA STANDARD 3.7.D Use basic computer software.</p> <ul style="list-style-type: none">Utilize basic computer graphic generated software to create a specific curricular project	<p>Teacher will guide students to:</p> <p>Applies skills learned to insert graphics into a program or document for orientation and resizing.</p> <p>Move objects to other areas of presentation</p> <p>Create a document using various font styles, sizes, and colors</p> <p>Choose which tool bar applications should be used to create a formatted document (center, left and right align, bold underline)</p>	<p>Teacher evaluation of:</p> <ul style="list-style-type: none">Individual projectsClass workTeacher observationTeacher demonstration and student observationsStudent demonstrationsPartner projects	<ul style="list-style-type: none">Instructor generated resourcesTextbook resourcesSoftware programsMicrosoft WordDigital camerasScannerInternet

CONTENT: Business, Computer, and Information Technology/ Grade 4
 CORE CONCEPT 6: Word Processing
 MAJOR OBJECTIVE: Ability to key text into a document

CURRICULUM STANDARD:			
State Standard/Student Expectation	Specific Content	Assessments	Resources/Materials
<p>PA STANDARD 3.7.D Use basic computer software.</p> <ul style="list-style-type: none"> Apply basic word processing skills to practice letter recognition and letter association on the keyboard 	<p>Teacher will guide students to:</p> <p>Utilize color-coded keyboard to identify letters on keyboard</p> <p>Utilize keyboarding program</p> <p>Demonstrate the use of the alphanumeric keys and special keys (delete/backspace, enter, space bar, shift, punctuation marks)</p> <p>Demonstrate proper posture while working at the computer station</p> <p>Create back-up copies of stored text</p> <p>Demonstrate proper fingerings for the alphabet, beginning from the home row</p>	<p>Teacher evaluation of:</p> <ul style="list-style-type: none"> Individual projects Class work Teacher observation Independent activities Teacher demonstration and student observations Student demonstrations Oral presentations Oral questions and answers Daily typing practice 	<ul style="list-style-type: none"> Instructor generated resources Textbook resources Software programs Type to Learn 3 program

V. EXPECTED LEVELS OF ACHIEVEMENT

A. Students are expected to reach the fourth grade level of achievement in mathematics. These skills include all of those noted in the specific content area of this curriculum.

B. Grading system for all fourth grade technology classes is as follows:

Grading Scale	
S	Satisfactory
N	Needs Improvement
O	Outstanding

C. Each student's grade will be determined at the conclusion of each marking period.