



MIDDLE SCHOOL COURSE OUTLINE

<b>Department</b>	Technology				
<b>Course Title</b>	Computers An Introduction	<b>Course Code</b>	1337		
<b>Abbreviation</b>	Computers Intro	<b>Grade Level</b>	6-8		
<b>Course Length</b>	1 semester	<b>Required</b>		<b>Elective</b>	Yes

**COURSE DESCRIPTION:**

Students taking this elective will be introduced to various basic computer skills. They will learn how to use and understand basic computer related terms, identify basic computer hardware components and peripheral devices, i.e. keyboard, mouse, printer, CD-ROM. Students will also be introduced to basic word-processing skills which will include correct use of the keyboard and will have the opportunity to practice on a daily basis. Students will be introduced to spreadsheet skills and will create simple multi-media presentations. Correct terminology related to hardware, software and applications will be introduced and reinforced throughout the semester. This course will prepare students for Intermediate level technology courses in middle school. They will understand the legal, social and ethical issues related to the use of computers in our daily life.

**GOALS:** National Educational Technology Standards for Students

**1. 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

**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 towards technology uses that support lifelong learning, collaboration, personal pursuits, and productivity

**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

**4. Technology communication tools**

- Students use technology 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

### 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

## PERFORMANCE CRITERIA

Evaluation will be based on student performance on the various applications being taught in the course. Assessments will include speed and accuracy tests for keyboarding, and project portfolios that display proficiency in word-processing. Students who receive a grade of C or D are considered partially proficient in the skills taught in this course. A “C” indicates that the student has sufficient skills to move on to the next level, whereas a “D” indicates that the student needs more development of foundational skills.

Applications	Advanced Proficient	Proficient	Partially Proficient		Not Proficient
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>F</u>
<b>Keyboarding</b>	Demonstrates a high level of skill in the use of – <ul style="list-style-type: none"> <li>➢ Both hands and appropriate fingers on the keyboard</li> <li>➢ Home Row</li> <li>➢ Return, Spacebar, Esc, Shift, Tab, Delete and Arrow keys</li> <li>➢ Number keys</li> <li>➢ Punctuation mark keys</li> </ul>	Without making significant errors is able to use – <ul style="list-style-type: none"> <li>➢ Both hands and appropriate fingers on the keyboard</li> <li>➢ Home Row</li> <li>➢ Return, Spacebar, Esc, Shift, Tab, Delete and Arrow keys</li> <li>➢ Number keys</li> <li>➢ Punctuation mark keys</li> </ul>	Makes some errors when using – <ul style="list-style-type: none"> <li>➢ Both hands and appropriate fingers on the keyboard</li> <li>➢ Home Row</li> <li>➢ Return, Spacebar, Esc, Shift, Tab, Delete and Arrow keys</li> <li>➢ Number keys</li> <li>➢ Punctuation mark keys</li> </ul>	Makes several errors when - <ul style="list-style-type: none"> <li>➢ Both hands and appropriate fingers on the keyboard</li> <li>➢ Home Row</li> <li>➢ Return, Spacebar, Esc, Shift, Tab, Delete and Arrow keys</li> <li>➢ Number keys</li> <li>➢ Punctuation mark keys</li> </ul>	Unable to use - <ul style="list-style-type: none"> <li>➢ Both hands and appropriate fingers on the keyboard</li> <li>➢ Home Row</li> <li>➢ Return, Spacebar, Esc, Shift, Tab, Delete and Arrow keys</li> <li>➢ Number keys</li> <li>➢ Punctuation mark keys</li> </ul>
<b>Word Processing</b>	Demonstrates a high level of skill in – <ul style="list-style-type: none"> <li>➢ Using terminology</li> <li>➢ Formatting text by selecting fonts, style and size</li> <li>➢ Setting margins</li> <li>➢ Justifying text and indenting</li> <li>➢ Changing page orientations</li> <li>➢ Proofing text using tools such as spell check</li> </ul>	Without making significant errors is able to - <ul style="list-style-type: none"> <li>➢ Use terminology</li> <li>➢ Format text by selecting fonts, style and size</li> <li>➢ Set margins</li> <li>➢ Justify text and indenting</li> <li>➢ Change page orientations</li> <li>➢ Proof text using tools such as spell check</li> </ul>	Makes some errors when - <ul style="list-style-type: none"> <li>➢ Using terminology</li> <li>➢ Formatting text by selecting fonts, style and size</li> <li>➢ Setting margins</li> <li>➢ Justifying text and indenting</li> <li>➢ Changing page orientations</li> <li>➢ Proofing text using tools such as spell check</li> </ul>	Makes several errors when - <ul style="list-style-type: none"> <li>➢ Using terminology</li> <li>➢ Formatting text by selecting fonts, style and size</li> <li>➢ Setting margins</li> <li>➢ Justifying text and indenting</li> <li>➢ Changing page orientations</li> <li>➢ Proofing text using tools such as spell check</li> </ul>	Unable to <ul style="list-style-type: none"> <li>➢ Use terminology</li> <li>➢ Format text by selecting fonts, style and size</li> <li>➢ Set margins</li> <li>➢ Justify text and indenting</li> <li>➢ Change page orientations</li> <li>➢ Proof text using tools such as spell check</li> </ul>

Applications	Advanced Proficient	Proficient	Partially Proficient		Not Proficient
	A	B	C	D	F
<b>Spreadsheet</b>	Demonstrates a high level of skill in – <ul style="list-style-type: none"> <li>➤ Setting up a spreadsheet</li> <li>➤ Editing, sorting and retrieving data</li> <li>➤ Creating graphs</li> <li>➤ Using simple formulas</li> <li>➤ Printing data sheets</li> </ul>	Without making significant errors is able to - <ul style="list-style-type: none"> <li>➤ Set up a spreadsheet</li> <li>➤ Edit, sort and retrieve data</li> <li>➤ Create graphs</li> <li>➤ Use simple formulas</li> <li>➤ Print data sheets</li> </ul>	Makes some errors in- <ul style="list-style-type: none"> <li>➤ Setting up a spreadsheet</li> <li>➤ Editing, sorting and retrieving data</li> <li>➤ Creating graphs</li> <li>➤ Using simple formulas</li> <li>➤ Printing data sheets</li> </ul>	Makes several errors in - <ul style="list-style-type: none"> <li>➤ Setting up a spreadsheet</li> <li>➤ Editing, sorting and retrieving data</li> <li>➤ Creating graphs</li> <li>➤ Using simple formulas</li> <li>➤ Printing data sheets</li> </ul>	Unable to - <ul style="list-style-type: none"> <li>➤ Set up a spreadsheet</li> <li>➤ Edit, sort and retrieve data</li> <li>➤ Create graphs</li> <li>➤ Use simple formulas</li> <li>➤ Print data sheets</li> </ul>
<b>Multimedia</b>	Demonstrates a high level of skill in – <ul style="list-style-type: none"> <li>➤ Creating and editing slides</li> <li>➤ Changing font, size, style and color of text</li> <li>➤ Arranging layout of graphics and text</li> <li>➤ Customizing presentation by adding transitions, sounds, animations and timing</li> </ul>	Without making significant errors is able to – <ul style="list-style-type: none"> <li>➤ Create and edit slides</li> <li>➤ Change font, size, style and color of text</li> <li>➤ Arrange layout of graphics and text</li> <li>➤ Customize presentation by adding transitions, sounds, animations and timing</li> </ul>	Makes some errors in- <ul style="list-style-type: none"> <li>➤ Creating and editing slides</li> <li>➤ Changing font, size, style and color of text</li> <li>➤ Arranging layout of graphics and text</li> <li>➤ Customizing presentation by adding transitions, sounds, animations and timing</li> </ul>	Makes several errors in – <ul style="list-style-type: none"> <li>➤ Creating and editing slides</li> <li>➤ Changing font, size, style and color of text</li> <li>➤ Arranging layout of graphics and text</li> <li>➤ Customizing presentation by adding transitions, sounds, animations and timing</li> </ul>	Unable to – Without making significant errors is able to – <ul style="list-style-type: none"> <li>➤ Create and edit slides</li> <li>➤ Change font, size, style and color of text</li> <li>➤ Arrange layout of graphics and text</li> <li>➤ Customize presentation by adding transitions, sounds, animations and timing</li> </ul>

**OUTLINE OF CONTENT AND TIME ALLOTMENT: (18 weeks)**

The course of study includes skills in using and applying various applications. The skills covered in this course are foundational computer skills based on the National Educational Technology Standards for Students. The sequencing and time allotments are recommendations and may be modified to meet student needs.

Application	NETS Standard	Skills	Time
<b>Introduction</b>	1. <i>Basic operations and concepts</i> <ul style="list-style-type: none"> <li>▪ Nature and operation of technology systems</li> </ul>	<ul style="list-style-type: none"> <li>▪ Initial assessment of skills</li> <li>▪ History of computers</li> <li>▪ Hardware – CPU, monitor, keyboard, peripherals</li> <li>▪ Managing files in a network environment</li> <li>▪ Software – Operating systems, network applications, productivity tools, Browsers</li> </ul>	2 weeks
<b>Keyboarding</b> (This can be spread over the semester with daily practice)	3. <i>Productivity tools</i> <ul style="list-style-type: none"> <li>▪ Use productivity tools to enhance learning, increase productivity</li> </ul>	Students will learn the correct techniques of operating a keyboard, which include the use of: <ul style="list-style-type: none"> <li>▪ Both hands and appropriate fingers on keyboard</li> <li>▪ Home row</li> <li>▪ RETURN, SPACEBAR, ESC, SHIFT, TAB, DELETE and arrow keys</li> <li>▪ Number keys</li> <li>▪ Punctuation mark keys</li> </ul>	3 weeks

Application	NETS Standard	Skills	Time
<b>Legal Issues &amp; Information Access</b>	<p>2. <i>Social, ethical and human issues</i></p> <ul style="list-style-type: none"> <li>▪ Ethical, cultural, societal issues</li> <li>▪ Responsible use of technology systems, information &amp; software</li> </ul> <p>5. <i>Technology research tools</i></p> <ul style="list-style-type: none"> <li>▪ Students use technology to locate, evaluate, and collect information from a variety of sources</li> <li>▪ Students use technology tools to process data and report results</li> <li>▪ Students evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks</li> </ul>	<ul style="list-style-type: none"> <li>▪ Copyright</li> <li>▪ District Acceptable Use Policy</li> <li>▪ Netiquette</li> <li>▪ Privacy/safety issues</li> <li>▪ Citation of sources</li> <li>▪ Information Access</li> <li>▪ </li> </ul>	2 weeks
<b>Word Processing</b>	<p>3. <i>Productivity tools</i></p> <ul style="list-style-type: none"> <li>▪ Use productivity tools to enhance learning, increase productivity</li> </ul>	<p>Students will learn basic skills to create and modify their documents using the following formatting skills:</p> <ul style="list-style-type: none"> <li>▪ select fonts, style and size</li> <li>▪ set margins</li> <li>▪ justify text and indenting</li> <li>▪ change page orientation settings</li> </ul>	4 weeks
<b>Spreadsheet</b>	<p>3. <i>Productivity tools</i></p> <ul style="list-style-type: none"> <li>• Use productivity tools to enhance learning, increase productivity</li> </ul>	<p>Students will learn to:</p> <ul style="list-style-type: none"> <li>▪ Set up a spreadsheet</li> <li>▪ Edit, sort and retrieve data</li> <li>▪ Create graphs</li> <li>▪ Create simple formulas</li> </ul>	2 weeks
<b>Multi-media</b>	<p>4. <i>Technology communication tools</i></p> <ul style="list-style-type: none"> <li>▪ Students use technology to collaborate, publish, and interact with peers, experts, and other audiences</li> <li>▪ Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences</li> </ul>	<p>Students will create and orally present multi-media presentation using one of the following applications: PowerPoint, HyperStudio, ClarisWorks Slide-Show, Kid-Pix, etc. Skills will include the following:</p> <ul style="list-style-type: none"> <li>▪ Create, edit slides</li> <li>▪ Change font, size, style, color</li> <li>▪ Arrange layout of graphics and text</li> <li>▪ Customize the presentation mode by adding transitions, sounds, animations and timing</li> </ul>	3 weeks
<b>Projects/ Assessments</b>		<ul style="list-style-type: none"> <li>▪ Students will create notes for final presentations and practice oral delivery skills prior to final presentation.</li> <li>▪ Timed practices</li> <li>▪ Projects/presentations</li> </ul>	2 weeks

**METHODS:** A variety of instructional strategies will be utilized to accommodate all learning styles including, but not limited to:

**Lesson Design & Delivery:** Teachers will incorporate these components of lesson design during direct instruction and inquiry activities. The order of components is flexible, depending on the teacher’s vision for the individual lesson. For instance, the objective and purpose, while present in the teacher’s lesson plan, are not made known to the students at the beginning of an inquiry lesson.

<p><b>Essential Elements of Effective Instruction Model for Lesson Design Using Task Analysis</b></p>	<p>Anticipatory Set Objective Standard Reference Purpose Input Modeling Check for Understanding Guided Practice Closure Independent Practice</p>
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Some components may occur once in a lesson, but others will recur many times. Checking for understanding occurs continually; input, modeling, guided practice and closure may occur several times. There may even be more than one anticipatory set when more than one content piece is introduced.

**Active Participation:** Teachers will incorporate the principles of active participation and specific strategies to ensure consistent, simultaneous involvement of the minds of all learners in the classroom. Teachers should include both covert and overt active participation strategies, incorporating cooperative learning structures and brain research. Some of the possible active participation strategies include:

Possible methods to implement overt active participation (Oral, Written and/or Gestures)			<u>Active Participation</u>  <b>Strategy Name &amp; Description</b>	Possible lesson design component to incorporate the given active participation strategy		
<b>O</b>	<b>W</b>	<b>G</b>		<b>Anticipatory Set</b>	<b>Check for Understanding</b>	<b>Closure</b>
X			<b>Think-Pair-Share:</b> All students receive individual time to formulate an answer, pair up with a partner to discuss and then share out to class.	X	X	X
	X		<b>Response Boards:</b> Students type their responses on the computer and share with their neighbor	X	X	X
		X	<b>Hand Signals:</b> A private gesture with the hands. Most effective to teacher (as a check for understanding) when students keep gestures close to their chest so other students can not see their answer. Examples include: Thumbs up/down, open/closed fist, one-finger/two fingers, arms crossed/uncrossed.		X	
X			<b>Whip Around, Pass Option:</b> Teacher whips around the room until getting an oral answer/comment from each student. Students do have the option to pass the first time around.	X		X
	X		<b>Reflection/Summary writing:</b> Students use electronic journals to independently reflect on the learning.			X
	X		<b>Attentive Lecture:</b> In this strategy students are not allowed to take notes as the teacher is giving content information. Every 2-3 minutes, the teacher stops giving instruction and students are to write the crucial input given in the last few minutes in their notebooks.		X	

Possible methods to implement overt active participation (Oral, Written and/or Gestures)			<u>Active Participation</u>	Possible lesson design component to incorporate the given active participation strategy		
O	W	G	Strategy Name & Description	Anticipatory Set	Check for Understanding	Closure
X		X	<b>Group Alerting:</b> After presenting material, teacher asks a question. Without calling on an individual, the teacher pauses to let the entire group formulate an answer. After pausing, the teacher calls on a particular student. When the student has finished answering, the teacher cues the whole class to respond to the individual's answer with a thumbs-up or thumbs-down gesture.		X	X

**Literacy and Differentiation Strategies:**

Learning styles and learning challenges of your students may be addressed by implementing combinations of the following:

<p><b><u>Reading Strategies in Technology</u></b></p> <ul style="list-style-type: none"> <li>▪ Learning Logs</li> <li>▪ Pre-teaching</li> <li>▪ Vocabulary</li> <li>▪ Pre-reading</li> <li>▪ Text Structures</li> <li>▪ Trail Markers</li> <li>▪ Reciprocal Teaching</li> <li>▪ Functional Text</li> <li>▪ Anticipation Guide</li> </ul>	<p><b><u>SDAIE Strategies for English Learners</u></b></p> <ul style="list-style-type: none"> <li>▪ Tapping/Building Prior Knowledge (Graphic Organizers, Schema)</li> <li>▪ Grouping Strategies</li> <li>▪ Multiple Intelligences</li> <li>▪ Adapt the Text</li> <li>▪ Interactive Learning (Tutorials, Simulations, Visuals)</li> <li>▪ Acquisition Levels</li> <li>▪ Language Sensitivity</li> <li>▪ Lower the Affective Filter (including Processing Time)</li> <li>▪ Home/School Connection (including Cultural Aspects)</li> </ul>	<p><b><u>Differentiation for Advanced Learners</u></b></p> <ul style="list-style-type: none"> <li>▪ Curriculum Compacting</li> <li>▪ Tiered Assignments</li> <li>▪ Flexible Grouping</li> <li>▪ Acceleration</li> <li>▪ Depth and Complexity</li> <li>▪ Independent Study</li> </ul>
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**MATERIALS USED IN TEACHING THE COURSE:** A variety of instructional tools will be used to meet the needs of all students –

- Macs or PCs
- Keyboarding software:
  - Typing Time
  - Century 21 Computer Keyboarding
- Word-processing applications
  - Microsoft Word
  - Internet Access
- Spreadsheet applications
  - Microsoft Excel
- Multi-media applications
  - PowerPoint
- Internet Access
  - Internet Explorer
  - Netscape Navigator
- Textbooks:
  - Computer Concepts
  - Integrated Computer Projects

## **STANDARD GRADING SCALE**

**A** = 90% - 100%

**B** = 80% - 89%

**C** = 70% - 79%

**D** = 60% - 69%

**F** = Below 60%

**EVALUATION:** Student achievement in this course will be measured using multiple assessment tools including but not limited to:

- Timed practices
- Quizzes/tests
- Projects
- Portfolios
- Technology Performance Criteria

The standard grading scale is used to determine grades on quizzes and tests. The performance criteria determine the proficiency level of students in using and applying computer skills.

Submitted by: Vanitha Chandrasekhar

School/Office: Technology Office

Original Date:

Revised Date: 10-15-04