



OFFICE OF CURRICULUM, INSTRUCTION & PROFESSIONAL DEVELOPMENT

MIDDLE SCHOOL COURSE OUTLINE

Department	Technology				
Course Title	Exploring Computers	Course Code	1334		
Abbreviation	Computers Expl	Grade Level	6		
Course Length	Trimester	Required		Elective	Yes

COURSE DESCRIPTION:

This course is an exploratory course to learn the basics of keyboarding, information literacy, word-processing, excel, and multi-media. Students will also learn about internet safety, cyberbullying and social, legal and ethical issues related to use of technology, including acceptable use and copyright.

NATIONAL EDUCATIONAL TECHNOLOGY STANDARDS FOR STUDENTS 2007 (ISTE)

1. Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

- apply existing knowledge to generate new ideas, products, or processes.
- create original works as a means of personal or group expression.
- use models and simulations to explore complex systems and issues.
- identify trends and forecast possibilities.

2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:

- interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
- communicate information and ideas effectively to multiple audiences using a variety of media and formats.
- develop cultural understanding and global awareness by engaging with learners of other cultures.
- contribute to project teams to produce original works or solve problems.

3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information. Students:

- plan strategies to guide inquiry.
- locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- process data and report results.

4. Critical Thinking, Problem Solving, and Decision Making

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

Students:

- identify and define authentic problems and significant questions for investigation.
- plan and manage activities to develop a solution or complete a project.
- collect and analyze data to identify solutions and/or make informed decisions.
- use multiple processes and diverse perspectives to explore alternative solutions.

5. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:

- advocate and practice safe, legal, and responsible use of information and technology.
- exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
- demonstrate personal responsibility for lifelong learning.
- exhibit leadership for digital citizenship.

6. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

- understand and use technology systems.
- select and use applications effectively and productively.
- troubleshoot systems and applications.
- transfer current knowledge to learning of new technologies.

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 technology skills. 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
	A	B	C	D	F
Keyboarding	Demonstrates a high level of skill in the use of – <ul style="list-style-type: none"> ➤ Both hands and appropriate fingers on the keyboard ➤ Home Row ➤ Return, Spacebar, Esc, Shift, Tab, Delete and Arrow keys ➤ Number keys ➤ Punctuation mark keys 	Without making significant errors is able to use – <ul style="list-style-type: none"> ➤ Both hands and appropriate fingers on the keyboard ➤ Home Row ➤ Return, Spacebar, Esc, Shift, Tab, Delete and Arrow keys ➤ Number keys ➤ Punctuation mark keys 	Makes some errors when using – <ul style="list-style-type: none"> ➤ Both hands and appropriate fingers on the keyboard ➤ Home Row ➤ Return, Spacebar, Esc, Shift, Tab, Delete and Arrow keys ➤ Number keys ➤ Punctuation mark keys 	Makes several errors when - <ul style="list-style-type: none"> ➤ Both hands and appropriate fingers on the keyboard ➤ Home Row ➤ Return, Spacebar, Esc, Shift, Tab, Delete and Arrow keys ➤ Number keys ➤ Punctuation mark keys 	Unable to use - <ul style="list-style-type: none"> ➤ Both hands and appropriate fingers on the keyboard ➤ Home Row ➤ Return, Spacebar, Esc, Shift, Tab, Delete and Arrow keys ➤ Number keys ➤ Punctuation mark keys
Word Processing	Demonstrates a high level of skill in – <ul style="list-style-type: none"> ➤ Using terminology ➤ Formatting text by selecting fonts, style and size ➤ Setting margins ➤ Justifying text and indenting 	Without making significant errors is able to - <ul style="list-style-type: none"> ➤ Use terminology ➤ Format text by selecting fonts, style and size ➤ Set margins ➤ Justify text and indenting 	Makes some errors when - <ul style="list-style-type: none"> ➤ Using terminology ➤ Formatting text by selecting fonts, style and size ➤ Setting margins ➤ Justifying text and indenting 	Makes several errors when - <ul style="list-style-type: none"> ➤ Using terminology ➤ Formatting text by selecting fonts, style and size ➤ Setting margins ➤ Justifying text and indenting 	Unable to <ul style="list-style-type: none"> ➤ Use terminology ➤ Format text by selecting fonts, style and size ➤ Set margins ➤ Justify text and indenting ➤ Change page orientations
Spreadsheet	Demonstrates a high level of skill in – <ul style="list-style-type: none"> ➤ Setting up a spreadsheet ➤ Formatting ➤ Editing, sorting and retrieving data 	Without making significant errors is able to - <ul style="list-style-type: none"> ➤ Set up a spreadsheet ➤ Format ➤ Edit, sort and retrieve data 	Makes some errors in- <ul style="list-style-type: none"> ➤ Setting up a spreadsheet ➤ Formatting ➤ Editing, sorting and retrieving data 	Makes several errors in - <ul style="list-style-type: none"> ➤ Setting up a spreadsheet ➤ Format ➤ Editing, sorting and retrieving data 	Unable to - <ul style="list-style-type: none"> ➤ Set up a spreadsheet ➤ Format ➤ Edit, sort and retrieve data
Multimedia	Demonstrates a high level of skill in – <ul style="list-style-type: none"> ➤ Creating and editing slides ➤ Changing font, size, style and color of text ➤ Presentation 	Without making significant errors is able to – <ul style="list-style-type: none"> ➤ Create and edit slides ➤ Change font, size, style and color of text ➤ Present 	Makes some errors in- <ul style="list-style-type: none"> ➤ Creating and editing slides ➤ Changing font, size, style and color of text ➤ Presenting 	Makes several errors in – <ul style="list-style-type: none"> ➤ Creating and editing slides ➤ Changing font, size, style and color of text ➤ Presenting 	Unable to – Without making significant errors is able to – <ul style="list-style-type: none"> ➤ Create and edit slides ➤ Change font, size, style and color of text ➤ Present

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 2007 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
Introduction	<p>6. <i>Technology Operations and Concepts</i></p> <ul style="list-style-type: none"> ▪ Students demonstrate a sound understanding of technology concepts, operations and operations, 	<ul style="list-style-type: none"> ▪ Hardware – CPU, monitor, keyboard, peripherals ▪ Managing files in a network environment 	1 weeks
Keyboarding (This can be spread over the semester with daily practice)	<p>6. <i>Technology Operations and Concepts</i></p> <ul style="list-style-type: none"> ▪ Students demonstrate a sound understanding of technology concepts, operations and operations, 	<ul style="list-style-type: none"> ▪ Correct hand and finger placement/usage ▪ Home row ▪ Return, Spacebar, Esc., Shift, Tab, Delete, Arrow keys ▪ Punctuation keys 	1 weeks
Legal Issues/Internet Use and Safety	<p>3. <i>Research and Information Fluency</i></p> <ul style="list-style-type: none"> • Students apply digital tools to gather, evaluate, and use information. <p>5. <i>Digital Citizenship</i></p> <ul style="list-style-type: none"> • Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. 	<ul style="list-style-type: none"> ▪ Copyright ▪ District Acceptable Use Policy ▪ Netiquette ▪ Internet Safety ▪ Cyberbullying ▪ Information literacy 	2 week
Word Processing	<p>2. <i>Communication and Collaboration</i></p> <ul style="list-style-type: none"> • Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. <p>5. <i>Technology Operations and Concepts</i></p> <ul style="list-style-type: none"> ▪ Students demonstrate a sound understanding of technology concepts, operations and operations, 	<ul style="list-style-type: none"> ▪ Terminology ▪ Format text – fonts, style, size ▪ Margins ▪ Justifying text and indentation ▪ Page orientation ▪ Create, insert, and resize graphics ▪ Delete, cut, copy, paste text 	2 weeks
Excel	<p>5. <i>Technology Operations and Concepts</i></p> <ul style="list-style-type: none"> ▪ Students demonstrate a sound understanding of technology concepts, operations and operations, 	<ul style="list-style-type: none"> ▪ Set up a spreadsheet ▪ Format spreadsheet ▪ Create graphs ▪ Sort data 	2 weeks

Multimedia	<p><i>1. Creativity and Innovation</i></p> <ul style="list-style-type: none"> ▪ Students demonstrate creative thinking, construct knowledge and develop innovative products and processes using technology. <p><i>2. Communication and Collaboration</i></p> <ul style="list-style-type: none"> ▪ Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. 	<ul style="list-style-type: none"> ▪ Create slides ▪ Font, size color ▪ Slide transitions ▪ Presentation 	1 weeks
Projects/ Assessments		<ul style="list-style-type: none"> ▪ Final Presentation ▪ Projects ▪ Timed tests (keyboarding) 	1 week

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>Essential Elements of Effective Instruction Model for Lesson Design Using Task Analysis</p>	<p>Anticipatory Set Objective Standard Reference Purpose Input Modeling Check for Understanding Guided Practice Closure Independent Practice</p>
---	--

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>	Possible lesson design component to incorporate the given active participation strategy		
O	W	G	Strategy Name & Description	Anticipatory Set	Check for Understanding	Closure
X			Think-Pair-Share: 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		Response Boards: Students type their responses on the computer and share with their neighbor	X	X	X
		X	Hand Signals: 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			Whip Around, Pass Option: 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		Reflection/Summary writing: Students use electronic journals to independently reflect on the learning.			X
	X		Attentive Lecture: 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	
X		X	Group Alerting: 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:

<u>Reading Strategies in Technology</u>	<u>SDAIE Strategies for English Learners</u>	<u>Differentiation for Advanced Learners</u>
<ul style="list-style-type: none"> ▪ Learning Logs ▪ Pre-teaching ▪ Vocabulary ▪ Pre-reading ▪ Text Structures ▪ Trail Markers ▪ Reciprocal Teaching ▪ Functional Text ▪ Anticipation Guide 	<ul style="list-style-type: none"> ▪ Tapping/Building Prior Knowledge (Graphic Organizers, Schema) ▪ Grouping Strategies ▪ Multiple Intelligences ▪ Adapt the Text ▪ Interactive Learning (Tutorials, Simulations, Visuals) ▪ Acquisition Levels ▪ Language Sensitivity ▪ Lower the Affective Filter (including Processing Time) ▪ Home/School Connection (including Cultural Aspects) 	<ul style="list-style-type: none"> ▪ Curriculum Compacting ▪ Tiered Assignments ▪ Flexible Grouping ▪ Acceleration ▪ Depth and Complexity ▪ Independent Study

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 – Southwestern, Thomson Learning.
- Word-processing applications
 - Microsoft Office Suite
- Textbooks:

Basic Text:

Computer Concepts: Basics, Wells/Ambrose, Thomson Course Technology, 2001 or 2004

Supplemental Text:

Integrated Computer Projects, Momorella/Hohenstein, Southwestern Thomson Learning, 2003

Century 21 Computer Keyboarding, Hoggatt/Shank/Robinson, Southwestern Learning, 2002.

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: 09/11/09

Board Date: 10/6/09