

Title

Introduction to the One-Computer Classroom (formerly Tech120)

Audience

This course is intended for K-12 pre-service and in-service teachers.

Prerequisites

To successfully participate and complete the assignments in this course, the learner must:

- Have past experience using the classroom computer.
- Have past experience working with the Internet.
- Be familiar with taking an online course or have completed the “Practice Learning Online with TeacherLine” course.
- Be familiar with elementary or middle school educational content.

Course Description

In this course, educators will explore effective ways to use technology as a teaching aid. A single computer can help educators lead engaging discussions, manage dynamic cooperative learning experiences, make dazzling presentations, inspire self-discovery, and manage responsibilities and paperwork. Learners will be introduced to and begin to explore the use of the computer as a presentation tool, for personal productivity, for creating interactive group experiences, and as a student learning center. As a final task, they will create and implement a lesson plan that uses the computer in one of these roles.

Instructor/Facilitator

See instructor/facilitator sheet

Credits

To be determined by college or university

Goals

The overall goal of this course is for learners to develop, implement, and revise a lesson using the classroom computer in a way that is new to them. By completing the weekly assignments, learners will have completed their final project by Session 6.

By the end of this course, learners will:

- Identify and develop a plan for using the software and hardware available to them in their classroom and school.
- Understand how they would use the computer in one of four different categories of classroom computer use: as a presentation tool, for personal productivity, as a learning center, and for interactive group activities.
- Understand how they can enhance their current lessons by using the computer in a different way and apply this to their professional practice.
- Incorporate the classroom computer into their teaching in a category that is new to them.



Outline of Content and Assignments

After previewing the documents in the Course Information section, learners will proceed to the Course Content to complete the following six sessions, working through each session in order. Essential information pertaining to the topic is presented within each session. Also, throughout the sessions, learners are asked to articulate their ideas in various forms: they are encouraged to reflect on their ideas and experiences in their online journal; the discussions in the discussion forum are designed to allow learners to glean information from other learners' experiences with strategies both prior to and following the completion of the assignments. For the final project, learners will be asked to develop a detailed plan of how to incorporate the computer in their classroom in at least one of the following categories: presentation tool, personal productivity, learning station, or interactive group activity. To complete the final project, learners will implement their plan in their classroom and then write a reflection paper assessing the outcome.

This course is designed to address ISTE's *Educational Technology Standards and Performance Indicators for All Teachers*. These standards define the fundamental concepts, knowledge, skills, and attitudes for applying technology in educational settings.

This course specifically addresses the following ISTE NETS*T:

I. Technology Operations and Concepts

Teachers demonstrate a sound understanding of technology operations and concepts. Teachers:

- A. Demonstrate introductory knowledge, skills, and understanding of concepts related to technology.
- B. Demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

II. Planning and Designing Learning Environments and Experiences

Teachers plan and design effective learning environments and experiences supported by technology. Teachers:

- A. Design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
- B. Apply current research on teaching and learning with technology when planning learning environments and experiences.
- C. Identify and locate technology resources and evaluate them for accuracy and suitability.
- D. Plan for the management of technology resources within the context of learning activities.

III. Teaching, Learning, and the Curriculum

Teachers implement curriculum plans that include methods and strategies for applying technology to maximize student learning. Teachers:

- B. Use technology to support learner-centered strategies that address the diverse needs of students.
- C. Apply technology to develop students' higher order skills and creativity.
- D. Manage student learning activities in a technology-enhanced environment.

Visit cnets.iste.org for a full list of the ISTE's *Educational Technology Standards and Performance Indicators for All Teachers* and more information about these standards.

Session 1: Technology in the One-Computer Classroom



This course takes a practical and meaningful approach to making the most of each learner's hardware and software resources. As a first step, learners will take inventory of the technology currently available to them and learn what their colleagues in this course have in their own classrooms. From there, they will begin exploring how you can use that software and hardware in four different ways to help create a dynamic classroom where great learning experiences are taking place.

By the end of this session, learners will be able to:

- Define their professional goals and expectations for this course in their online journal.
- Explain their prior knowledge and experiences of using one computer in their classroom in their online journal.
- Identify and discuss the software and hardware they have access to.
- Explain and discuss the ideal technology set up for their classroom.
- Reflect on their technology and compare with that of fellow learners in the discussion forum.
- Reflect and explain how they have used software or Web resources in their classroom in their online journal.

Write in online journal

- Reflect on expectations for the course.
- Reflect on prior knowledge of use of classroom computer.
- Reflect on the following: "If you intend that your students investigate engaging questions and problems, then software can be used in a variety of ways to make that process richer and more meaningful." — Kahn (2000)
 - Have you ever used software or Web resources in the ways she describes? If so, please give specific examples from your teaching.
 - Secondly, which (if any) of the examples that she gives would you be interested in trying in your classroom?

Assignment

- Complete software and hardware inventory of classroom resources.

Read

- "Part of the Process: Problem-Based Education in the One-Computer Classroom"

View videos (not required)

- "Introduction to the One-Computer Classroom"
- "The Paradigm Shift"

Participate in an online discussion

- Introduce yourself to fellow learners
- Discuss your ideal technology set-up for your classroom

Session 2: The Computer as a Presentation Tool

This session will focus on the first category of classroom computer use—the computer as a presentation tool. Learners are to complete one of the four assignment choices, using either resources provided or tools available to them on their classroom computers.

By the end of this session, learners will be able to:

- Evaluate and discuss the role of the computer in the classroom.
- Reflect upon their own use of the computer as a presentation tool in their online journal.
- Evaluate and discuss examples of how teachers use computers as presentation tools.

Assignment



- Create a presentation using available software.

Write in online journal

- Reflect on created presentation.

View video

- “The Computer as a Presentation Tool”

Participate in an online discussion

- Respond to the lesson presented in the video.

Activities and resources (not required)

- In Focus
- Smarttech
- AppleWorks Slideshow WalkThrough
- The Graph Club WalkThrough
- Graph Master Walkthroughs
- PBS Technology & Teaching Tutorials
- Inspiration and Kidspiration WalkThroughs
- Inspiration and Kidspiration Free Trials
- Microsoft PowerPoint WalkThrough
- Google
- Yahoo

Read (not required)

- “Six Steps to a Dynamite Presentation”
- “Presentation Software and the Single Computer”

Session 3: The Computer for Personal Productivity

This session explores the second category of classroom computer use—using the computer for personal productivity. Through readings, activities and assignments, learners will see how one computer can make teachers more productive.

By the end of this session, learners will be able to:

- Locate, identify, and/or create classroom materials using productivity resources.
- Examine, explore, and discuss Internet and software personal productivity resources.
- Reflect upon the usefulness and effectiveness of personal productivity resources.

Assignments

Option 1: Create Classroom Materials

- NCTM Illuminations
- HPR*TEC
 - QuizStar WalkThrough (pdf)
 - Web Worksheet Wizard WalkThrough (pdf)
- Discovery School Puzzle Maker
- Essentials Online
 - Essentials Math Worksheets WalkThrough (pdf)
 - Essentials Math Puzzles WalkThrough (pdf)
 - Essentials Word Worksheets WalkThrough (pdf)
 - Essentials Word Puzzles WalkThrough (pdf)



Option 2: Locate Five Educational Templates

Option 3: Plan a Class Web Site or Online Newsletter

- SchoolNotes.com
- eBoard
- Placemark

Option 4: Locate Five Lesson Plans

- PBS TeacherSource
- ISTE's Educator Resource
- LDONline
- Educator's Reference Desk

Participate in an online discussion

- Post your assignment and describe how it will make your job easier, how it will save you time, and any difficulties you encountered.

Read

- "Online Tools That Really Shine: I Know That, E-Wally and the Quest, and Reading A to Zs"

Write in online journal

- Reflect on the use of productivity tools to help make a teacher's job easier.

Resources (not required)

- TimeLiner
- Stationery Studio

View video (not required)

- "The Computer for Personal Productivity"

Session 4: The Computer in the Learning Center and for Interactive Group Activities

This session will examine two more categories of classroom computer use—using the computer for interactive group activities and using the computer in a learning station. Through readings and videos, learners will see how other teachers teach in these ways.

By the end of this session, learners will be able to:

- Compare and contrast their approach to setting up a classroom research center in their online journal.
- Evaluate, explain, and discuss the role of the computer in promoting the skills necessary for students to solve real-life problems in collaboration with other students.
- Evaluate and discuss the use of the computer for interactive group activities.

Read

- "The Research Cycle 2000"
- "FOCUS: Five Rules for Writing a Great WebQuest"

Write in online journal

- Reflect on the following: "Compare and contrast your approach to setting up a research station to the one described by Jamie McKenzie in the article."

View videos

- "The Computer as a Learning Station"



- “Interactive Group Software”

Participate in an online discussion

- Respond to the following: “The real world needs the skills the computer is teaching them. So it's getting them ready for real world: solving problems, working together in groups, real life situations. Those are all the things the computer is making available to the teacher in an easy manner to use.” —Redelings
 - Do you agree or disagree with the above statement?
- Respond to the following: “Choose a type of interactive group activity you read about or viewed in the video. How is the activity collaborative?”

Additional resource (not required)

- Decisions, Decisions

Session 5: Your Lesson Plan

In the first four sessions of this course, we explored four different categories of classroom computer use. In this session learners will create a lesson or classroom resources using the computer in a way that is new to them. Through peer review in the discussion forum, they will refine their work before implementing it or using it in Session 6.

By the end of this session, learners will be able to:

- Reflect upon the changing landscape of technology in schools in general, and in their classrooms specifically.
- Create a plan that incorporates the computer in their classroom in one of the four categories discussed in this course.
- Revise and suggest changes to the plans of two fellow learners in the discussion board.

Read

- “Oh, The Changes We've Seen: A Retrospective Look At How Technology Has Affected The Way Students Learn And Teachers Teach”
- “Plumstead County School District: Tips for Effective Peer Review” (not required)

Write in online journal

- Reflect on: “In your experience as a teacher (and as a student), have you witnessed changes in classroom technology similar to those written about by Maureen Brown Yoder? Be specific as to changes in software, hardware, and pedagogy.”

Final project

- Create a plan that incorporates the computer in your classroom.

Participate in an online discussion

- Share final project and peer review the projects of two other learners.

Session 6: Implementing Your Plan: Using the Computer in a Way that is New to You

Learners will implement their plan during this session. To complete their final project, they will reflect upon their experience and look ahead to future teaching with technology.

By the end of this session, learners will be able to:

- Discuss and provide advice for working in a one-computer classroom.
- Implement their plan for using technology in a way that is new to them.
- Analyze their plans by writing about changes they would make and how they plan to integrate the computer into their teaching in the future.



- Assess their learning in this course by comparing their prior knowledge and acquired knowledge in a journal activity.
- Analyze the learning experience in this course by reflecting on professional goals and expectations in their online journal.

Read

- “Rubrics, Portfolios, and Tests, Oh My!”
- “How to Thrive—Not Just Survive—in a One-Computer Classroom
- “Change the Curriculum; Not the Technology” (not required)

Participate in an online discussion

- Post the rubric and peer review the rubrics created by other learners.
- Respond to the following: “What do you think is the best advice that Glori Chaika gives in the article? What advice would you add?”
- Share experiences of implementing plan.

Final project

- Implement the plan.
- Write a reflection paper on using the computer in a new way and on plans for the future integration of the computer in the classroom.

Write in online journal

- Reflect on acquired knowledge.
- Reflect on professional goals.

Schedule

This course is scheduled to take approximately 30 hours to complete readings, activities, video, assignments, reflections and a final project.

Requirements

Learners are expected to:

- Complete all assignments.
- Maintain an online journal.
- Participate and actively engage in discussions with fellow learners while contributing to the social construction of knowledge.
- Be self-directed and self-motivated.
- Ask for assistance when they need it.

Materials (hardware, software, plug-ins)

Technical Requirements

- Word processor
- Internet service provider
- E-mail

Academic Dishonesty Policy



To be inserted by university institution only

Evaluation

This course is evaluated on a letter grade basis, and may be available for graduate credit. See graduate credit details pertaining to specific graduate credit institutions.

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