

Course Title: 21st Century Technology Teams

Instructors' Names:

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Tuttle Middle School

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Location: South Burlington High School, various rooms

Course Description:

In this course teams of two or more educators will explore how to use information technology to help students master [21st century skills](#)ⁱ, such as communication, collaboration, critical thinking, and problem solving. Participants will work in collaborative teams as they use Understanding by Design techniques to develop standards-based units or projects to use with their students. Each team will choose two strands to focus on from the list below:

- Digital Publications—We will explore how to use Microsoft Word as a tool for creating a variety of student-generated publications, ranging from research reports to brochures to newsletters to mini-books—all vehicles for students to use to practice and hone their communication skills. This strand will include mini-lessons on topics such as Word tips and tricks, outlining, working with graphics, formatting complex documents, collaboration tools, commenting electronically on student documents, and more.
- Multimedia Presentations with HyperStudio or PowerPoint—The ability to create effective multimedia presentations is a key communication skill. We will explore how to use HyperStudio and PowerPoint as user-friendly, yet powerful multimedia production tools. Participants will develop curricular projects in which their students will create multimedia presentations. These presentations will incorporate text, pictures, recorded voice and other sounds, animations, web resources, and navigation buttons. This strand will include mini-lessons on HyperStudio and PowerPoint tools and techniques.
- Digital Storytelling—Digital stories—“short, personal, multimedia tales... written with feeling and in the first person...” ([Daniel Meadows](#)ⁱⁱ)—enable students to practice communicating in powerful and personal ways. We will explore how to use Photo Story 3 for Windows to create high-quality digital stories from scratch. We will discuss Photo Story tips and techniques, sound recording and editing, and picture selection and editing.
- Web Authoring—Web pages are a great vehicle students can use to practice their communication skills before a worldwide audience. We will explore how to use KompoZer (free web authoring software) to create web pages. We will cover all the basics, such as text editing, pictures, links, tables, web site organization, and more.

- Data Analysis—A spreadsheet is a great tool for helping students practice their data analysis and critical thinking skills. Participants will explore how students can use Microsoft Excel to organize and analyze data. We will discuss data entry and formatting, functions and formulas, filters and pivot tables, graphing, and more!
- Web 2.0 Tools—Interactive “Web 2.0” tools help students master several 21st century skills. In this strand, participants will explore Web 2.0 tools such as blogs, wikis, discussion forums, and collaborative tools such as Google Docs. We will also explore the Moodle classroom management system as a vehicle for creating on-line resources and activities.
- Teaching with an Interactive Whiteboard—Projection systems have revolutionized life in a one-computer classroom. Interactive whiteboards can take learning to the next level by not simply displaying information but by actively engaging students in interacting with and manipulating information. Participants will explore using interactive whiteboards to involve students in a variety of rich learning activities. We will explore tools such as shades, spotlights, notebooks, recorders, etc.

Course Objectives: Participants of this course will:

- explore various information technology tools and how to use them to help students learn 21st century skills and the Vermont Grade Expectations (GEs)
- develop project-based units of study aligned to curricular standards, using the Understanding by Design framework

Required Readings and Materials:

- NETS-S Overview
- 21st Century Skills Overview
- Understanding by Design Overview

Course Schedule: This course is being offered twice during the summer of 2008—June 23 –27 and August 11 – 15, 8:00 – 4:30 each day. Participants will attend a three-hour follow-up session in late summer or fall. The dates will be determined during the summer sessions.

Agenda:

- **Day 1:**
 - *Did You Know?* Video and discussion
 - Overview of the Course
 - Review Course Assessment Rubric
 - 21st Century Skills Discussion
 - Introduction to Each Strand
 - Understanding by Design Basics
 - Project Work
 - Assignment: Daily Reflections/Threaded Discussions, On-Line
- **Day 2:**
 - *A Vision of Students Today* video and discussion
 - Strand-focused Tips & Techniques
 - Project Work
 - Assignment: Daily Reflections/Threaded Discussions, On-Line

- **Day 3:**
 - Check-in and Sharing, by Teams
 - Strand-focused Tips & Techniques
 - Project Work
 - Assignment: Daily Reflections/Threaded Discussions, On-Line
- **Day 4:**
 - Strand-focused Tips & Techniques
 - Project Work
 - Assignment: Daily Reflections/Threaded Discussions, On-Line
- **Day 5:**
 - Project Work
 - Project Sharing and Feedback Session
 - Assignment: Daily Reflections/Threaded Discussions, On-Line

Course Requirements:

- Attend all class sessions.
- Participate in class discussions.
- Participate in daily on-line threaded discussions/reflections.
- Develop a “Technology Integration Project” plan for a student project.
- Present project to class members in the follow-up session and explain how the project will help students master the specified GEs and 21st century skills.

Evaluation:

The project plan will be assessed on the following components:

	The Standard for a Satisfactory Plan	Weight
GEs/21st Century Skills	GEs and 21 st century skills selected are appropriate for the topic(s) being covered.	10%
Teaching Outline and Timeline	Plan is developed using the Understanding by Design framework and includes evidence of best practices, such as project-based learning, differentiated instruction, inquiry-based learning, constructivism, etc. Outline has adequate detail to enable the teacher to use it as the sole guide for classroom instruction in a project that will lead to student attainment of the GEs specified. Timeline clearly identifies what tasks students must complete and by when they must complete them. (The timeline may be, and logically often is, incorporated into the “Teaching Outline.”)	50%
Handouts and Resource List	Handouts for students are clear, accurate, and developmentally appropriate. Resource list includes books, articles, web pages, CD-ROMs, people, etc. that students would use in the project.	20%
Rubric(s) or Other Tool(s) for Student Assessment	Each assessment tool clearly identifies the GEs and 21 st century skills being worked on and what students must do to adequately attain the standards and complete the project.	20%

- Grades will be assigned using an assessment rubric that will be reviewed in class.

ⁱ http://www.21stcenturyskills.org/index.php?option=com_content&task=view&id=254&Itemid=120

ⁱⁱ <http://www.photobus.co.uk/index.php?id=2&gallery=scissors.flv>