This handout with live links can be found at: http://math247.pbwiki.com/NECC2008

Mathcast Spaces: Thinking, Doing, and Sharing Mathematics Out Loud

Wednesday, 7/2/2008, 1:30pm–2:30pm; HGCC 102 A

Today with Tim Fahlberg, Linda Fahlberg-Stojanovska, Robert Fant, and Martha Thornburgh

Goal: Learn why and how students and educators are creating and sharing mathcasts to improve learning and facilitate collaboration.

Audience: Technology Integration Specialists, Technology Facilitators, Technology Coordinators, Teacher Educators, Teachers, Principals, Curriculum Specialists

Follow-up: *Mathcasts – Show and Tell Math Concepts*. August 2008. ISTE's Learning & Leading with Technology.

Purpose & Objectives:

A mathcast is a screen recording of writing plus voice and/or text explaining a mathematical concept or solving a problem. The movie is then produced to Flash movie format and distributed via CD or Internet. Both educators and students can make mathcasts!

With mathcasts both the creator and the viewer get to see and hear the mathematical thinking step by-step. They get the process and not just the result and they can have it when and as many times as they want. Mathcasts are the ultimate in asynchronous learning providing a simple and inexpensive means of interaction at the teacher-student, teacher-teacher, student-teacher and student-student level.

Our particular emphasis is on using this technology and the Internet for virtual, audio-visual-interactivities, which promote a positive attitude towards mathematics and develop ways to harness and inspire the creative ideas of young people to produce and then share mathematical skills and knowledge essential to be competitive in a highly technical employment market.

Participants:

- will understand the learning and collaborative benefits of mathcasts for students & teachers.
- will see how easy it is to create mathcasts and see the engaging nature of creating mathcasts.
- will leave knowing that mathcasts can be created inexpensively, distributed in many ways, and be used in many contexts to address many needs.
- will leave with a vision of mathcast spaces are and why teens will want to participate
- will leave with this outline/glossary and websites to continue learning beyond the session
- will be presented with the opportunity to join a community of learners through a wiki.

Links

- http://math247.pbwiki.com – the wiki home of mathcasting
- http://robertfant.com – link to "VoiceThread" presentation and various other mathcasts
- http://www.techsmith.com – Camtasia Studio, Jing, Screencast.com, SnagIt
- http://ed.voicethread.com – VoiceThread.com's K-12 network

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GlossaryX - The Absolute Basics of Mathcasts and Mathcasting

mathcast	A *mathcast* is a screencast, i.e. a screen recording of writing plus voice and/or text explaining a mathematical concept or solving a problem. See: http://math247.pbwiki.com/What+is+a+mathcast
screencast	A *screencast* is a screen recording of writing plus voice and/or text
Student mathcasts	Mathcasts can be made for and by kids from preK and up. Links to student mathcasts: http://tinyurl.com/2e63rn (On Math247.pbwiki)
annotation software	*Annotation software* is used to write on-screen. May be used to write on its own "notepad" or to write-over other applications. May be used in combination with a graphics tablet for better writing control.
graphics tablet	Input device for onscreen writing/drawing using a pen as a mouse.
audio settings	Settings used for the audio of the mathcasts. The quality of the audio track increases file size more than the quality of the video track! When recording, one uses the default or a "very good" quality audio setting. When producing one uses the best setting with respect to the desired file size, e.g. for Flash files (.swf), we use 22.050kHz,Mono, 32Bits/sec.
video settings	Settings used for the video portion of the mathcasts. When recording, use the default or a "very good" quality video setting. When producing one uses the best setting with respect to the desired file size, e.g. for Flash files (.swf), we use "automatic" - 15fps - frames per second. For smaller files, we use 5fps and reduce to 16-bit color.
Flash	(swf) A *standard* movie format used on the web. Supports SCORM and hotspots (links). Good for short low-motion screen movies like mathcasts.
movie format	The format of the movie. Some standard movie formats are: - Flash Movie Format (.swf and flv), QuickTime Movie Format (.mov), iPod Movie Format (.mp4), DivX (.avi), CS (camrec)
CS	Camtasia Studio by TechSmith. Recording and production software. Extremely versatile for making mathcasts and screencasts. Includes codecs for producing almost a wide variety of movie and audio formats.
Jing	By TechSmith. Currently free. Capture images or record up to 5 minutes of video and share using Flickr, Screencast.com, etc.
SnagIt	By TechSmith. Screen capturing and editing software. Extremely versatile for setting up mathcasts and screencasts.
Screencast.com	TechSmith file hosting that enables seamless sharing of screen images or recordings created with Jing or Camtasia Studio.
VoiceThread	VoiceThread is an online service for recording voice, writing, and typed comments. ed.VoiceThread offers secure classroom environments so teachers and students can build their own portfolio in math and other subjects. See: http://math247.pbwiki.com/K-7+Mathcasts+500+Project

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