

FOSS and ISTE 21st Century Skills

presented by

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Ubuntu Local Community

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FOSS and ISTE 21st Century Skills

- What we will cover
 - What is FOSS (Free and Open Source Software)
 - Who uses FOSS
 - FOSS Projects and 21st Century Skills
 - NETP 2010 Draft
 - How does FOSS help with 21st Century Skills
 - Budget
 - Specific Software and NETS-S standards

FOSS and ISTE 21st Century Skills

A world map with a dark brown, textured background and orange outlines of continents, serving as a background for the text.

Free Software

Open Source Software (OSS)

Free Open Source Software (FOSS)

Free/Libre Open Source Software (FLOSS)

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Freedom

vs.

No Cost

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- IBM Lotus Symphony
- iTunes
- Safari
- Adobe Flash Viewer
- Acrobat Reader
- Media Player
- Virtual PC



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- Firefox
- Thunderbird
- MySQL
- PostgreSQL
- Ingres Database
- Open Office
- VLC Media Player
- Audacity
- TrueCrypt
- Freemind
- GIMP
- Inkscape
- Blender
- Thousands more...

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- cisco.com
- 21stcenturyskills.org
- google.com
- apple.com
- amazon.com
- state.ny.us
- whitehouse.gov
- Linux Apache/2.2
- FreeBSD Apache/2.2
- Linux gws
- Linux Apache/2.2
- Linux Server
- Linux Apache/2.2
- Linux White House

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- 4.3 Leverage open educational resources to promote innovative and creative opportunities for all learners and accelerate the development and adoption of new open technology-based learning tools and courses.

Transforming American Education:

Learning

Powered by Technology

DRAFT

National Educational Technology Plan 2010

Executive Summary

March 5, 2010

Office of Educational Technology
U.S. Department of Education

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A world map with a dark brown, textured background. The map is outlined in a lighter brown color, showing the continents and major landmasses. The map is centered on the Atlantic Ocean, with North and South America on the left and Europe, Africa, and Asia on the right.

1. Creativity and Innovation

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

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Artwork

Put your creativity to best use by improving the look and feel of Ubuntu. Help design graphics and backgrounds, or themes of the next release.

Development

Contribute by writing new software, packaging additional software, or fixing bugs in existing software.

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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.

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Project Based Teams

Learn about the dozens of project teams working on a variety of projects which contribute to Ubuntu, how they work and what they do.

Community Blogs

Planet Ubuntu is your window into the world, work and lives of Ubuntu developers and contributors.

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3. Research and Information Fluency

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

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Support

Access forums, live chat sessions or mailing lists, and benefit from the technical knowledge of others in the Ubuntu community.

Documentation

If you are stumped by a problem, chances are someone has encountered it too. First, review official help documents for everything from how to add new applications to configuring a network.

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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.

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Bug Squad

Help make Ubuntu even better by working with bug reports to ensure they're complete, understandable and if possible, reproducible
Anyone can help!

Support

Share your technical know-how with other users by joining email and discussion lists, or IRC (chat) channels and respond to users requests for help in forums.

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5. Digital Citizenship

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

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Ubuntu is an African concept of 'humanity towards others'. It is 'the belief in a universal bond of sharing that connects all humanity'. The same ideas are central to the way the Ubuntu community collaborates. Members of the Ubuntu community need to work together effectively, and this code of conduct lays down the "ground rules" for our cooperation.

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6. Technology Operations and Concepts

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

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Documentation

Help produce official documentation, share the solution to a problem, or check, proof and test other documents for accuracy.

Support

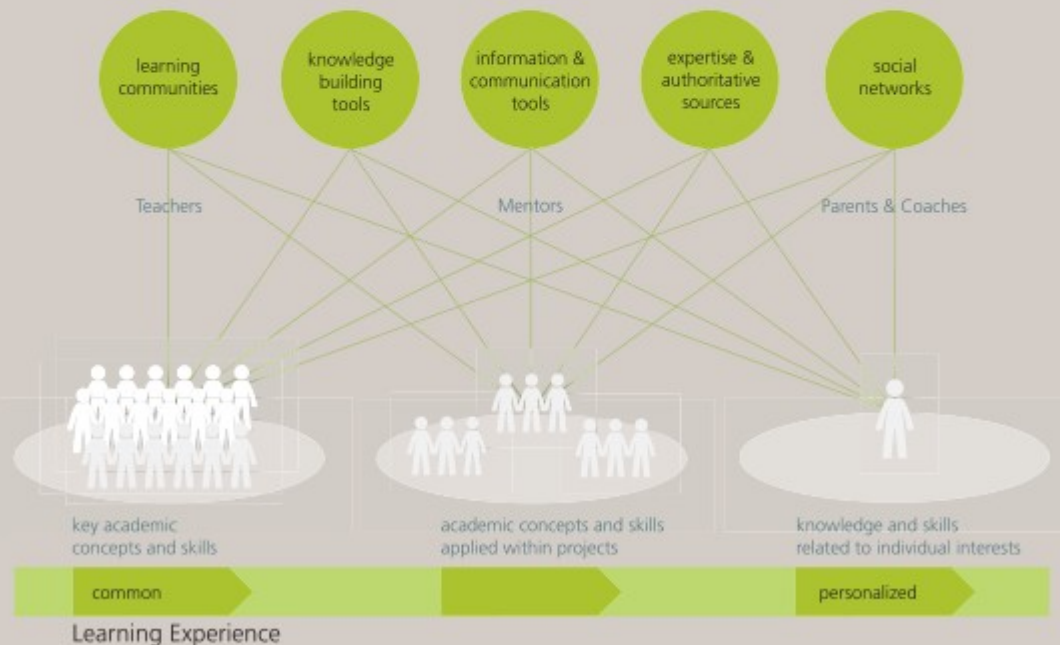
Share your technical know-how with other users by joining email and discussion lists, or IRC (chat) channels and respond to users requests for help in forums.

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Learning no longer has to be one size fits all

All students should have common core discipline-specific learning experiences in preparation for college and careers. In addition, networked technologies offer vast opportunities for group and individual learning experiences that are driven by students' interests.

NATIONAL EDUCATIONAL TECHNOLOGY PLAN



- Individual
- Groups
- Projects
- Teachers
- Mentors
- Parents
- Networks

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“Technology provides access to a much wider and more flexible set of learning resources than is available in classrooms and connections to a wider and more flexible set of “educators,” including teachers, parents, experts, and mentors outside the classroom.”²

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- Intel® 500 Mhz
- 14.1" display
- 64 MB memory
- 4.8 GB HD
- 24x CD
- 65K modem

\$1899

www.dell.com (2000)

- Intel® 2.2 Ghz
- 15.6 inch display
- 2GB memory
- 160 GB HD
- 8x DVD+/- RW DL
- Wireless + Ethernet

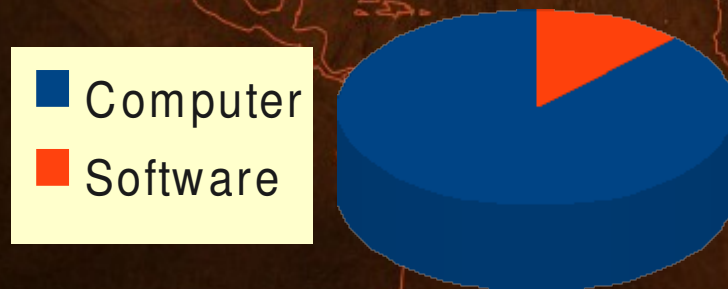
\$399

www.dell.com (2009)

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- Computer
\$1899
- Software
\$265

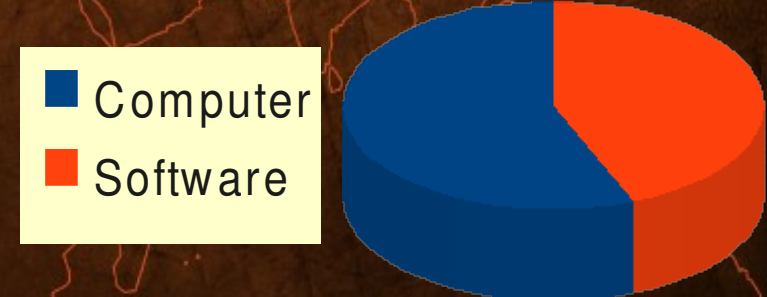
Total: \$2164



12.2 %

- Computer
\$399
- Software
\$310

Total: \$709



44 %

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“4.2 Recommendation: Ensure that every student and educator has at least one Internet access device and software and resources for research, communication, multimedia content creation, and collaboration for use in and out of school.”²

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“This will require improved security systems, more intelligent filtering systems that allow blocking and enabling access at a more granular level, and personnel capable of providing around-the-clock support for student- and educator-owned devices used for learning in addition to complete support for devices owned by the school.”²

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2.c - develop cultural understanding and global awareness by engaging with learners of other cultures



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“The Danish parliament and the Danish minister for Science this morning agreed that the Danish state administrations should use open standards, including the Open Document Format (ODF), starting on 1 April 2011”¹

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“The open standard ODF is recognised by many European member states. Next to Denmark it is also a national standard for public administrations in Belgium, Germany, France, Lithuania, Sweden and the Netherlands. ODF is recommended by Norway and it is one of the document standards at NATO.”¹

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FOSS provides depth of selection

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- 3.b - locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media
- 3.c - evaluate and select information sources and digital tools based on the appropriateness to specific tasks
- 4.d - use multiple processes and diverse perspectives to explore alternative solutions

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

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FOSS supports ethical, safe and legal use of technology

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- 5.a - advocate and practice safe, legal, and responsible use of information and technology
- 5.c - demonstrate personal responsibility for lifelong learning
- 5.d - exhibit leadership for digital citizenship

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FOSS supports communication, collaboration and project based learning and activities

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- 2.a - interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media
- 2.b - communicate information and ideas effectively to multiple audiences using a variety of media and formats
- 2.d - contribute to project teams to produce original works or solve problems
- 4.b - plan and manage activities to develop a solution or complete a project

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FOSS supports global cultural understanding

A world map with orange outlines of continents and countries, set against a dark brown, textured background. The map is centered on the Atlantic Ocean, showing North and South America on the left, and Europe, Africa, and Asia on the right. The text "FOSS supports global cultural understanding" is overlaid in white on the map.

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- 2.c - develop cultural understanding and global awareness by engaging with learners of other cultures
- 4.d - use multiple processes and diverse perspectives to explore alternative solutions.
- 5.d - exhibit leadership for digital citizenship

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Now what?

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F  **SS** **e** **d**

free & open source software in education

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Vermont's
Open Source & Education
Conference



April 9, 2010
Lake Morey Resort



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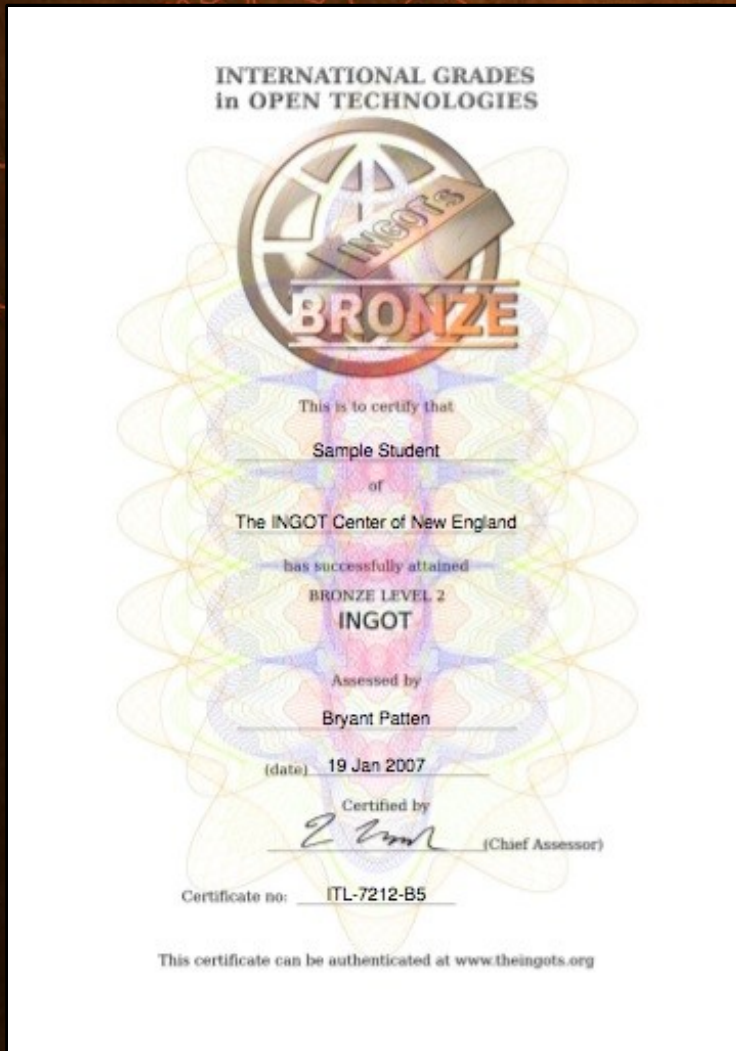


Free Software for Schools

Open Source Victoria
The National Center for Open Source and Education

The Free Software for Schools publication is the result of a combined effort between Open Source Victoria in Australia and The Center. It is a catalog of educationally focussed software. It is available as a free download or at-cost paper version from lulu.com

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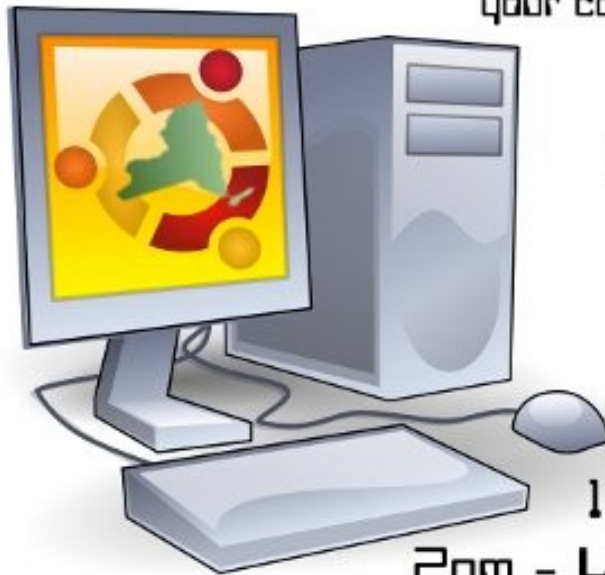


INGOTs are International Grades in Open Technologies. They provide a motivating progression route from complete beginner to professional level expertise in commonly used productivity tools found in the modern workplace such as word processing, presenting and searching for information.

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UBUNTU... COMPUTES BETTER

your complete software solution with freedom



LEARN & CELEBRATE

Sat May 1st 2010

Holiday Inn, Waterloo, NY

10am-2pm *Install* and Support*

2pm - 4pm *Introduction and Exploration*

* No New Installs after 12pm

*** [HTTP://NY.UBUNTU-US.ORG](http://ny.ubuntu-us.org) * [HTTP://WWW.UBUNTU.COM](http://www.ubuntu.com) ***

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Questions ?

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1 <http://www.osor.eu/news/dk-danish-state-administrations-to-use-odf/>

2 NETP page 61

