

# MAKING THE MOST OF FREE, OPEN SOURCE SOFTWARE & EDUCATIONAL RESOURCES

## .Who am I?

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## .Who are you?

Teachers, educators, parents or administrators interested or curious about what is Free Open Source Software (FOSS) and LINUX.

## .What do you know?

Educational software often comes with advertisements or malware. How can you get quality, truly free educational software? Learn more today about FOSS, Edubuntu Linux, F-Droid and California's Free Textbook initiative.

# Toward 21st Century Skills: The Traditional Classroom

- Teacher directed; teacher lecturing
- Rows of desks
- Students working alone on assignments
- Focus of instruction on memorization of facts and concepts
- All students doing the same assignment
- No technology usage
- Focus on getting the right answer
- Textbooks rule
- Paper-and-pencil tests, often multiple choice

# Toward 21st Century Skills: The Transitional Classroom

- Teacher guidance
- Focus of instruction is on understanding concepts
- Students problem-solve, problems are contrived
- Teacher is using technology
- Textbooks still the central resource, but hands-on resources are also used
- Assessments are more problem-solving based, but still summative and mostly paper-and-pencil

# Toward 21st Century Skills: The 21<sup>st</sup> Century Classroom

- Students choose strategies to solve problems
- Students collaborate on projects and assignments
- Both students and teachers use technology
- Focus of instruction on understanding and applying concepts
- Classroom arranged in clusters to facilitate interaction
- Students learn facts and concepts in the context of solving relevant, real-world problems (personal, local, national, global)

# Toward 21st Century Skills: The 21<sub>st</sub> Century Classroom

- Focus on exploring possibilities and testing hypotheses
- Focus on producing quality products
- Focus on communication
- Assessments are ongoing with feedback throughout

# Who are we? What do we know? What do we want to know?

- Tell us who you are & what you do.
- You have 5 votes. Place your votes into the 3 categories below. You can place all 5 in 1 category or divide them any way you wish, ie. 2-2-1, 4-0-1. If you really want to know more about 1 category, and nothing about the rest -- place all your votes there!

(1) Computer Software & Linux -- Free & Open Source

(2) Free online textbooks and other resources

(3) F-Droid for Android phones -- using phones in the classroom

- On a scale of 1-10, how tech-savvy are you? 1= I still use a typewriter; 10= I can program the space shuttle!

“Would you buy a car with the hood welded shut?”





Even if you don't know how the engine works, you still want to be able to open it!





# What is Open Source?

- Open source software (OSS) refers to software programs that are distributed with the source code—hence open source. The open source license allows users the freedom to run the program for any purpose, to study and modify the program, and to freely re-distribute copies of the original or modified program.

# Terminology

- Open-Source Software (OSS) is software for which the source code is freely and publicly available, though the specific licensing agreements vary as to what one is allowed to do with that code. (State of Kansas)
- Free Software Movement is an ethical imperative, because only free software respect the users' freedom. -- “Think of free speech, not free beer.”

# How can FREE be different from FREE?

## • Free as in "BEER"

- You get what comes in the bottle.
- You drink what you get.
- You can't improve it and re-sell it.

### Examples:

- iTunes
- MSN Messenger
- Photoshop (not actually free)
- Internet Explorer

## • Free as in "SPEECH"

- You can hear it, change it and pass it on.
- You can say what you want.
- Improve it, repackage it and market it as your own.

### Examples:

- Songbird
- Miranda
- GIMP
- Mozilla Firefox

# Open Source

another way of building software

- The software evolves more rapidly and organically.
- Users' needs are rapidly met.
- New versions are released very often, tested by a community of users, resulting in superior quality software tested on more platforms.
- Security is enhanced because the code is exposed to the world.

# Is OSS really Free?

- Open source is often thought of as free software. In fact, one of the benefits is that anyone can use, modify, and redistribute the software without a license fee.
- While the code is free, the benefits have much more to do with the freedoms than the cost.

# Moodle



- Course Management System (CMS)
- designed using sound pedagogical principles, to help educators create effective online learning communities
- Use it on any computer you have handy including webhosts
- It can scale from a single-teacher site to a 40,000-student University
- Ohio State, Texas Tech, Mississippi State

<http://moodle.org/>

# Joomla — (Content Management System)

- Portal or content system for hosting websites.
- Plug-in for blogs, wikis, forms, calendars, email...
- 



<http://www.joomla.org>





- Personal blog software hosted or downloaded to host on your server.
- Supports multiple languages:
  - Spanish, Dutch, Portuguese, German
    - French, Italian, and more. . .

<http://wordpress.com>

# Mozilla



- Firefox (Web Browser)
  - has an intuitive interface blocks viruses, spyware, and popup ads.
  - Tabbed Browsing
- Thunderbird (Email Client)
  - Simple to use, powerful, and customizable, full-featured email application.
  - Junk Mail Filters
  - Anti-Phishing Protection
  - Advanced Security

<http://www.mozilla.org/>

# OpenOffice.org or LibreOffice.org



- OpenOffice.org is a multiplatform and multilingual office suite and an open-source project. Compatible with all other major office suites, the product is free to download, use, and distribute.
- [www.libreoffice.org](http://www.libreoffice.org)
- [www.openoffice.org](http://www.openoffice.org)
- [www.learnopenoffice.org/](http://www.learnopenoffice.org/)

# GIMP



- GIMP is the GNU Image Manipulation Program
- Freely distributed piece of software
- Used for such tasks as photo retouching, image composition and image authoring.
- It works on many operating systems, in many languages.

<http://www.gimp.org/>

### GIMP

Datei Xtns Hilfe



### Text Einstellungen

Schrift: **Aa**

Größe: 18 px

Hinting  
 Auto-Hinting erzwingen  
 Kantenglättung


Farbe: 

Ausrichtung: 

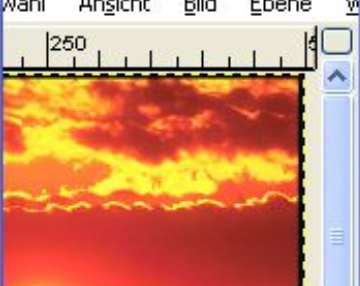
Einzug: 0,0  
Zeilenabstand: 0,0



### corp1804.jpg-6.0 (RGB, 1 Ebene...



corp1804.jpg-6.0 (RGB, 1 Ebene...



### Ebenen, Kanäle, Pfade...

Modus: Normal  
Deckkraft: 100,0

Hintergrund

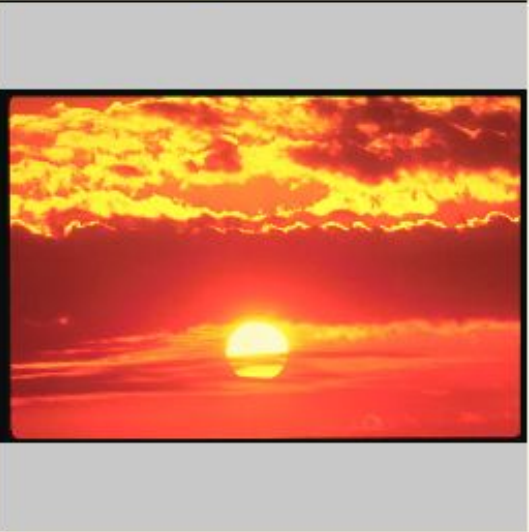



### Ähnlich einfärben

Einstellungen

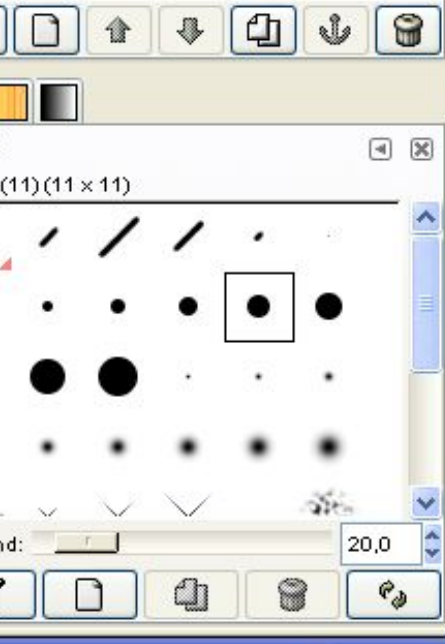
Ziel: corp1804.jpg-6/Hintergrund-12  
Quelle: 10350093.jpg-5/Hintergrund-10

Zeige Auswahl  Zeige Farbe  
 Zeige Auswahl  Zeige Farbe



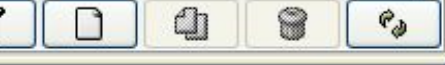
Quellwerte: 0 1,00 255  
Zielwerte: 0 255

Halte Intensität  Urspr. Intensität  
 Zwischenfarben verwenden  Weicher Farbverlauf



el  
e (11) (11 x 11)

and: 20,0



# Nvu (N-view)



- WYSIWYG Web page editor.
- Integrated file management via FTP.
- Reliable HTML code creation that will work with all of today's most popular browsers.
- Jump between WYSIWYG Editing Mode and HTML using tabs.
- Tabbed editing to make working on multiple pages a snap.
- Powerful support for forms, tables, and templates.

<http://www.nvu.com>

# Audacity



- A free, easy-to-use audio editor and recorder.
- Record live audio.
- Convert tapes and records into digital recordings or CDs.
- Edit Ogg, MP3, and WAV sound files.
- Cut, copy, splice, and mix sounds. Change speed or pitch of a recording.

<http://audacity.sourceforge.net>



# Hidden Dangers

- Generally no one to hold financially responsible should problems arise.
- Changing an “official” version will void warranty.
- If customizing OSS, the total cost could be as much as off the shelf software.
- Required applications do not work/run on an open-source operating system.
- Specialty programs are no longer being actively developed.

# What's Next?

Activity: Loads of Links -- let's explore online resources.

Activity: Just how do you install Linux on an old computer? What does that look like?

Activity: F-Droid on Android phones. How to share apps without the internet & no data plan!