

## Web Browser and Search Content Filtering

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There are two aspects to web content filtering:

A. Web browser parental / supervisor control, where a parent or supervisor restricts a supervised user as to which website, ostensibly containing offensive or sexually explicit material, they can visit.

B. Search result filtering, where selective materials normally deemed offensive or of sexual nature are purposefully removed from the results list.

### Part A. Web browser parental / supervisor control

According to W3Counter.com, the most popular desktop web browsers are<sup>1</sup>:

1. Google Chrome (34.1%)
2. Microsoft Internet Explorer (20.3%)
3. Mozilla Firefox (18.3%)

Both Chrome and Internet Explorer (IE) are proprietary web browsers and have parental / supervisor control already built in. Firefox, on the other hand, is Open Source and does not have parental control built in; it has to be implemented as an extension<sup>2</sup>. No parental control is 100% effective, but Firefox is particularly poor in that respect because it can be bypassed easily.

#### A.1. Chrome

Parental control on the Chrome browser / Chromebook is implemented using Supervised Users. The way this service works is by allowing a parent to setup multiple supervised user profiles on his/her computer. Supervised users then launch Chrome from the desktop using their assigned profile. The parent can go to the Supervised Users Dashboard to define which websites to block and to view activity reports. In addition, this service turns on SafeSearch by default. SafeSearch filters help prevent adult content from appearing in the supervised user's search results. But unlike Microsoft's Family Safety, there is no pre-defined list of blocked websites.

Google Supervised Users help page

<https://support.google.com/chrome/answer/3463947?hl=en>

## A.2. Internet Explorer

Parental control on the Windows / IE platform is now implemented using Family Safety. It is a program that is part of Windows Live, and can be installed on the parent's computer as well as on children's computers. It is a comprehensive set of tools for parents to restrict website access and to view activity reports. Family Safety has a Windows Filtering Platform driver to filter web browsing. It filters in 18 different languages and works on the following browsers and search engines:

Internet Explorer 6 or later, Chrome 2 or later, Firefox 2.0 or later, Opera 10 or later, and Safari 3.0 or later.

Bing, Google, Yahoo, Ask, Yandex, Virgin Media, and Mail.ru

Microsoft Family Safety help page

<http://windows.microsoft.com/en-us/windows/set-up-family-safety#set-up-family-safety=windows-7>

## A.3. Firefox

Firefox does not have built-in parental control. It relies on third party extensions, making it less desirable. There are many extensions that can do the job and FoxFilter seems to be a popular choice<sup>3</sup> (there is no Chinese help for this). Installation is simple:

1. Go to the FoxFilter extension webpage

<https://addons.mozilla.org/en-US/firefox/addon/foxfilter/?src=search>

2. Click + Add to Firefox.

3. Click Install Now from the Software Installation dialog.

4. After Firefox restarts, a new item will appear under the Tools menu.

5. Select FoxFilter Settings if you wish to change settings, otherwise it is ready for use.

## Part B. Search result filtering

According to ComScore.com, the most popular search engines are<sup>4</sup>:

1. Google (66.9%)

2. Microsoft Bing (18%)

3. Yahoo (11.3%)

### B.1. Google

Being the world's biggest search engine, Google Search has a remarkably simple search results filter control called SafeSearch. All that is required is to turn it on and that's it; Google

does the rest. SafeSearch has the ability to lock the setting across all Google domains including YouTube. Locking requires a Google account. It also supports reporting of explicit search results.

Google SafeSearch setting help page

[https://support.google.com/websearch/topic/3037065?hl=en&ref\\_topic=3036131](https://support.google.com/websearch/topic/3037065?hl=en&ref_topic=3036131)

## B.2. Bing

The Bing search engine is part of the Microsoft ecosystem. Search results filter control is also called SafeSearch, and is easily accessible from the Bing search results page. You can also report concerned search results but unlike Google Search, you cannot lock the setting. If you want to lock SafeSearch, you need to install and setup Family Safety.

Bing SafeSearch setting help page

<http://onlinehelp.microsoft.com/en-ww/bing/ff808441.aspx>

## B.3. Yahoo

Not surprisingly, Yahoo's search result filter control is also called SafeSearch. And like Google, you can lock the setting with a Yahoo account.

Yahoo SafeSearch setting help page

<https://help.yahoo.com/kb/search/yahoo-safe-search-sln2247.html>

## Concluding remarks

Like most things in Information Technology, there is no one solution that fits all. From the findings above, it seems that a combination of Microsoft Family Safety and Google Search offers the best solution. For preschool and primary school settings, this is probably sufficient. But for a secondary school setting, it will be a challenge to implement anything that is 100% safe.

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<sup>1</sup> January 2014 Market Share

<http://www.w3counter.com/globalstats.php?year=2014&month=1>

<sup>2</sup> Block and unblock websites with parental controls

<http://support.mozilla.org/en-US/kb/block-and-unblock-websites-with-parental-controls>

<sup>3</sup> FoxFilter <https://addons.mozilla.org/en-US/firefox/addon/foxfilter/?src=search>

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<sup>4</sup> comScore Releases September 2013 U.S. Search Engine Rankings  
[http://www.comscore.com/Insights/Press\\_Releases/2013/10/comScore\\_Releases\\_September\\_2013\\_US\\_Search\\_Engine\\_Rankings](http://www.comscore.com/Insights/Press_Releases/2013/10/comScore_Releases_September_2013_US_Search_Engine_Rankings)