beta version for PLOP

Developed by Diego Rates Marmentini

18.Oct.2015

Welcome

Billions of people use internet to accede to information they need in professional, personal and social levels. The problem is, *how to accede to the information I need?*

gsearch is a solution to this problem, in the specific conditions, of preparing a group presentation/dissertation. In this case, a modified version, for the *Pixel Learning Open Project*.

Using this search programme

Working in a computer with -in functioning- web browser and internet connection, follow, in order and systematically, the instructions presented in the next page.

Adding and Using Video Search

This search instructions are consistent with a web and images search. They are also useful for Video search. If you prefer a Video explaining than reading it by yourself, or just feel that is a compatible learning resource for you, use Video search for terms that you need to learn. Remember, when selecting videos it is critical to assess which sources are relevant, in the same way as with a web or images search. That will help you to go directly where is better, saving time and work, facilitating your studies.

'' Now, prepare yourself for a navigation through the *Internet Sea of Knowledge*...''

PLOP ***gsearch*** **:** systematic web research methodology

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Follow the the next instructions:

a. In a web browser, open the website of a web search engine (*e.g.*, google.com; bing.com; yahoo.com, etc.)

b. In the text bar of the web search engine, enter the group' s subject title (*e.g.*, CCD Pixel) and click/press on search button.

c. Enter each key term of your group subject in a different tab.

d. Check the list of results from your group subject search.

e. Select at least two websites with relevant information (text + images + media) explaining what happens to light in your subject? (*e.g.*, Microscope, CCD Pixel, LCD Pixel, and Human Eye).

f. With the help of the relevant results from: 1.- your subjects, 2.- subject key terms, 3.- systematically adding web search for the new needed words which you do not understand them enough; that way all group members develop a general understanding of what happens to light in your subject (key components/parts of the optical system, which properties of them interact with light and which properties of light interacts with them: what is a CCD Pixel AND How does it work?).

G. Make a synthesis of the information of your theme (text + images + media)

h. When your group already obtained the relevant information, have it studied and generally understand, change the web search to image search

i. Check and select quality images that facilitate an audience to understand

j. Through this systematic search, your groups should have obtained:

- ✔ Synthesized text to define, describe and explain, what happens to light in your subject part of the Yoshinok's microscope.

- ✔ Illustrative images + media to compose a high quality dissertation.

- ✔ Extra information which complement and enrich your subject (prepare the best class for the audience).

Table 1. **PLOP** Subjects and respective key terms.

Subjects	**Key terms**
Optical Microscope	Optical microscope components – Light Refraction - Objective Lens – Eyepiece (ocular lens) – Image magnification – Field of View – Minimum Resolution
CCD pixel	Pixel – Photoelectric effect – Photons – Photo-diode - RGB – Bayer Mask (Filter) – Image Resolution
LCD pixel	Pixel – Liquid Crystal – Electromagnetic Waves - Polarization (of light) – Polarization filter – RGB – Electrodes
Human Eye (w/o Retina)	Cornea – Iris – Pupil – Lens (eye anatomy) – Aqueous Humour – Vitreous Body (Humour) – Myopia – Hypermetropia - Astigmatism – Presbyopia – Light Refraction
Human Retina	Human eye – Retina – Photons – Electromagnetic Waves – Visible Spectre – Colours - Photoreceptor – Rods – Cones – Pigments – Photoelectric effect – Optic Nerve

Closing

With given **Subjects**, **Key terms** and **Instructions for systematic web research methodology**, groups should have found info and media, to create a document and participate exposing in the peer-dissertation of the project.

To help you do it easier and faster, a **Templapte for Presentation document template** and **Assesment Rubric for Peer-Dissertation** have been created. You may find booth in **PLOP**'s Documents page:
http://pl-op.blogspot.cl/p/documents.html

If you want to **suggest any improvement** (from typo to methodologies) to this open document, you can **send us specific information and references**. Also, you can **create your own open variants**. You also can **publish them** in **PLOP Contributions Repository**. You will receive your corresponding attribution, in doing this educational resource more generous.
Helps Us help You improve this educational project open for all secondary school students in the world. Nobody is asking you money! Just a lit of bit of time ;).

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