

Search Engines: Finding Information

Journal:

How many searches do you think are done on google each day?

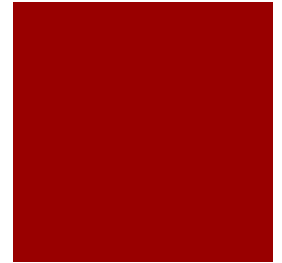
What is the most searched for item?

Objectives:

- Students will understand the many processes that are required for an effective search engine.
- Students will create diagrams and concept maps, do some investigations and discuss how search engines work, and then will individually use a computational tool to create an online diagram illustrating their understanding.



Google Searches



□ <https://trends.google.com/trends/?geo=US>

Explore what the world
is searching

Enter a search term or a topic

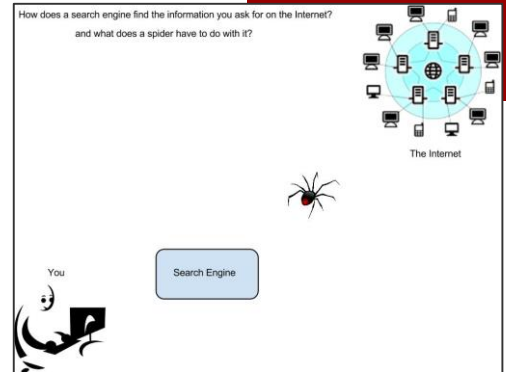


Everyone Knows What Google is....

■ Right?

■ *So how does it work?*

- How does a search engine find what you're looking for?
(... and how is a spider involved?)
- Draw a diagram to describe the steps that happen
(you have 3 minutes, if you have no clue, make an educated guess)



*

What's so great about searching?

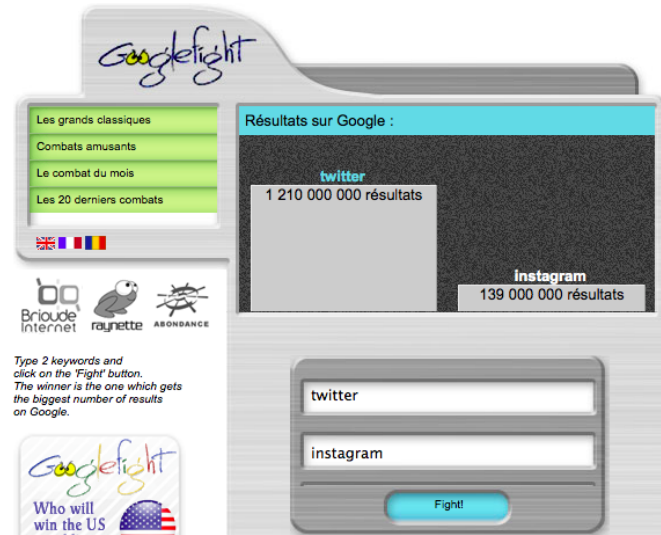
- Matching and ranking
 - **Matching** = find all the pages
 - **Ranking** = choose the best
- Watch the Google video , put a star next to each feature of search that you got right on your diagram.
<https://www.youtube.com/watch?v=BNHR6IQJZs#t=14> or
- Here's a graphic on what happens when you search, how many features did you get? <http://ignitionedu.com/ed/wp-content/uploads/2015/06/searchInfographic.png>

Add to your own diagram until it is an accurate picture of how search engines work.



Let's Try It

- *Google demo/activity:*
 - *GoogleFight.com*
 - Pick 2 popular topics, like Twitter vs. Instagram
 - How many results are returned?
 - How fast?
 - Who wins?



Discuss: What is happening here? *

A quick look at 2 URLs

<http://www.bing.com/images/search?>

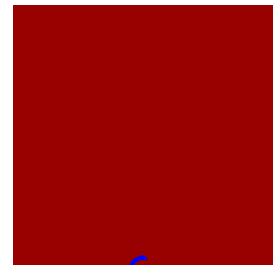
[q=what+is+computer+science](http://www.bing.com/images/search?q=what+is+computer+science)

[FORM=HDRSC2](http://www.bing.com/images/search?q=what+is+computer+science&FORM=HDRSC2)

.mil
k12
fr
co

.com
.edu
gov
.org
net

.hub
.life



<https://www.google.com/search?>

[q=what+is+computer+science&safe=off&espv=2&source=lnms&tbm=isch&sa=X&ei=36PCU4jhKceYyATUrYLQDg&sqi=2&ved=0CAcQ_AUoAg&biw=1178&bih=639&dpr=2](https://www.google.com/search?q=what+is+computer+science&safe=off&espv=2&source=lnms&tbm=isch&sa=X&ei=36PCU4jhKceYyATUrYLQDg&sqi=2&ved=0CAcQ_AUoAg&biw=1178&bih=639&dpr=2)

- What is a URL?
 - What information can be encoded in a URL? Why?
 - What is role of ampersand (&)?
 - What is role of the question mark?
 - Do you see differences between services?



Treasure Hunt

Each individual will draw a different search engine.
Write your names and your search engine on the board.
Number a paper from 1 - 4

When everybody has selected a search engine
start the treasure hunt

When you write down the name of a website
only write the site name → like pixabay.com →
not the whole URL



http://pixabay.com/static/uploads/photo/2013/07/13/11742rgoid-158496_640.png

Treasure Hunt

One person on each team do the search, the other person write down the answer and the name of the website it was found on.

1. How old is the Internet? *10858 days. 68 years, 10851 days, 25 yrs. 11 mo.*
2. Who is the most famous person in the world?
3. Where is the best lemonade made?
4. What is the average weight of a hippo? *3210 lbs, 1500 kg*



http://pixabay.com/static/uploads/photo/2013/07/12/14/53/award-148961_640.png

Who is the first team to finish?

Compare answers, are they all the same?

Were the answers all equally easy to find using each search engine?

What criteria would you use to decide which search engine is the best?

Activity

Use your notes to create an infographic about how Searching works on the Internet.

Do research to add detail to your topics.

Work in pairs, choose a focus for your infographic:

- How search engines have changed over time
- How a search engine works

