

# Background Research

How to start...

# Why do background research?

So that you can design an experiment

To help you understand the science  
theory behind your experiment

So you can make a prediction about what  
will happen

So you will be able to understand what

**you observe** (regardless of whether your prediction was  
right or wrong)



# Why do background research?

*In other words,*

Science fair judges want to see that you  
understand why your experiment turns out  
the way it does.



# Background Research

Use a 5 step plan

Determine your science fair question

Brainstorm related keywords

Generate questions to using the  
“Question Words” table

Throw out irrelevant questions

Start your looking up background info



# Research Plan

## Step 1:

Start with the question you have chosen to investigate for your science fair project

Ex 1. How does flow rate affect plant growth in streams and rivers?

Ex 2. Does storing your orange juice at different temperatures affects its acidity?



# Research Plan

## Step 2:

Brainstorm all words that may be helpful when searching for information about your topic

Ex 1. Flow rate, stream/river, plant growth, etc.

Ex 2. Acidity, temperature, cooling liquid, etc.



# Research Plan

## Step 3:

Generate questions using the question words table. Substitute your keywords (or variations of your keywords) for the blanks. *\*see next slide\**

Ex 1. How do you measure flow rate? Who invented plant growth? What is the relationship between plant growth and flow rate?

# Question Word Table

Question Word	Possible Questions (you can think of others)
<b>WHY?</b>	Why does _____ happen? Why does _____? Why _____?
<b>HOW?</b>	How does _____ happen? How does _____ work? How does _____ detect _____? How do you measure _____? How do we use _____? How _____?
<b>WHO?</b>	Who needs _____? Who discovered _____? Who invented _____? Who _____?

Question Word	Possible Questions (you can think of others)
<b>WHAT?</b>	What causes _____ to increase/decrease? What is _____ made of? What are the characteristics of _____? What is the relationship between _____ and _____? What do we use _____ for? What _____?
<b>WHEN?</b>	When does _____ cause _____? When was _____ discovered? When _____?
<b>WHERE?</b>	Where does _____ occur? Where does _____ get used? Where _____?



# Research Plan

Step 4:

Throw out irrelevant questions

Ex 1. How do you measure flow rate? ~~Who invented plant growth~~? What is the relationship between plant growth and flow rate?

# Research Plan

## Step 4 (cont):

Sometimes you won't be sure whether a question is relevant or not, and that's always a good time to get the opinion of more experienced people like your mentors, parents, and teachers (two or three heads are always better than one)!



# Research Plan

## Step 5:

Start looking up your background info

Also plan to do background research on the history of similar experiments. That way you will know if someone has already found the answer to your question. *If they have, then change or tweak your experiment so you can find new answers!*



Don't forget

**USE OTHER PEOPLE'S BRAINS!**

Talk to people with more experience than you: your mentors, parents, and teachers.

Ask them:

"What other questions can I ask to find out more information about my project?"

"What science concepts should I study to better understand my science fair project?"



# Where to find good information

Textbooks

Books in the KLO (or public) library

World Book online

EasyBib (research section)

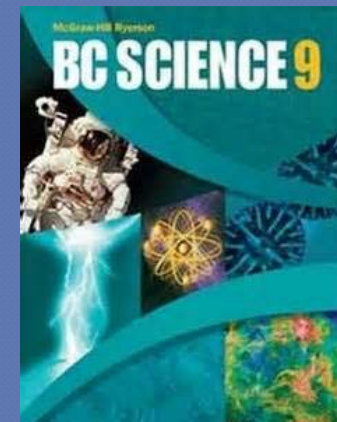
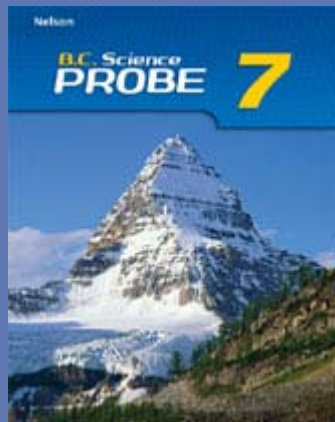
Internet (from website you have  
evaluated as credible)



# Textbooks

Your textbook OR other textbooks used in the school

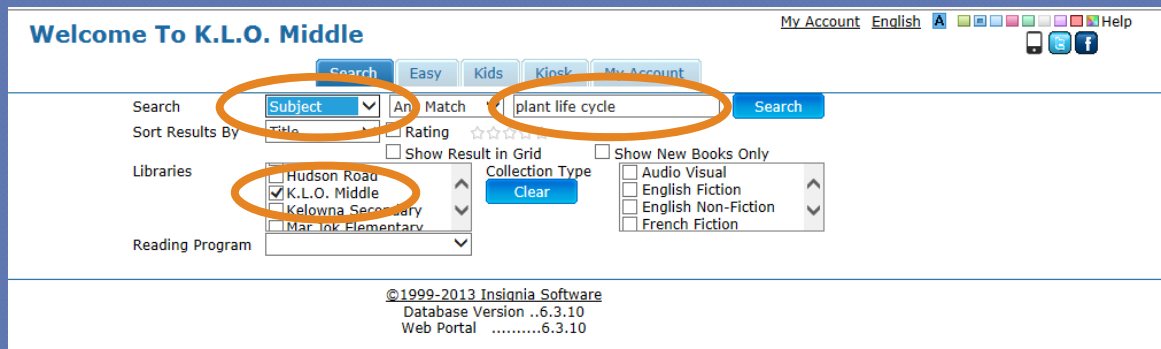
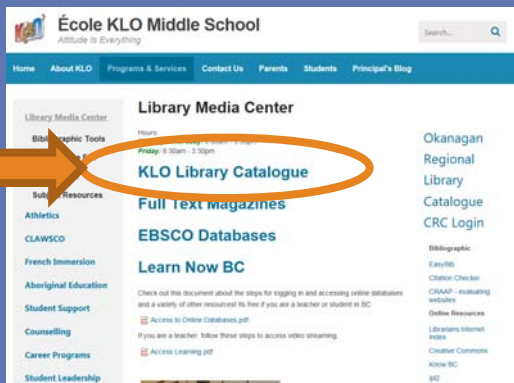
Ask your teacher or the teacher-librarian to look at different science textbooks to see if there is information on your topic in any of them





# Books in the library

Look on the KLO Library webpage to search the catalogue to see if there are any books on your topic



Once you have the **title** (ex. The Plant Cycle) of the book(s) and **Call No.** (ex. ENF 580 MOR) you can come to the library to find them on the shelf.  
*Ask the teacher librarian if you need help!*

# World Book Online

[worldbookonline.com](http://worldbookonline.com)

When at school you don't need a password.

See your teacher or ask the teacher librarian for the password if you will be using logging in from home

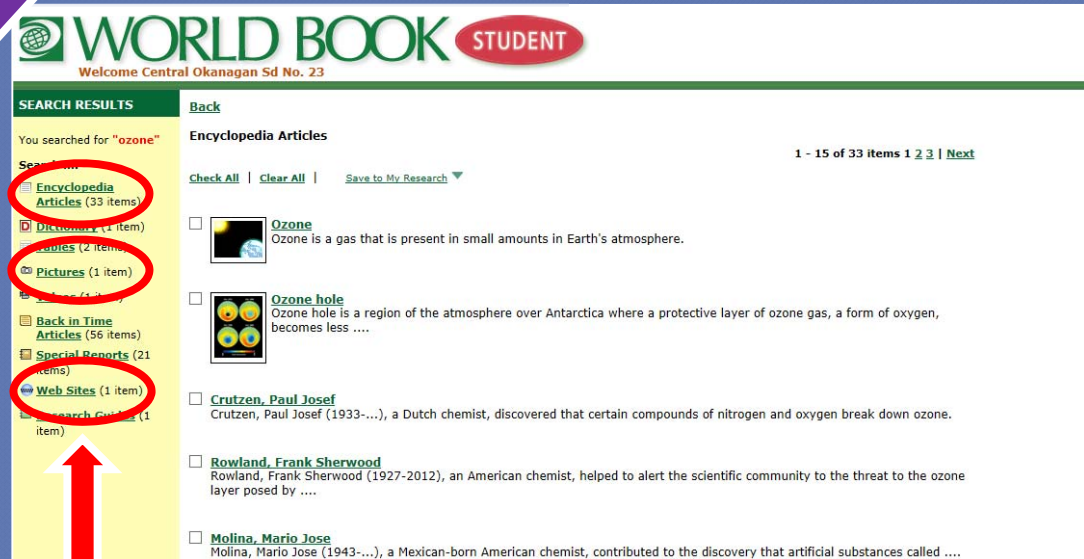


# World Book Online



1-pick student

2-type in keyword



3-any of this information can be trusted as credible information. Be sure to look at the encyclopedia articles, websites and pictures!

# EasyBib Research

[research.easybib.com](https://research.easybib.com)

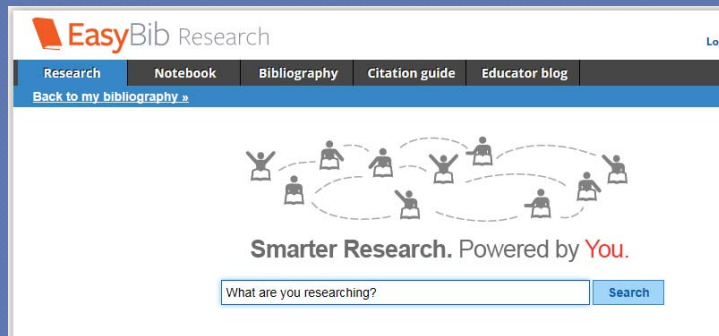
Use the research section to find articles

Use the bibliography section for  
correctly formatting your sources

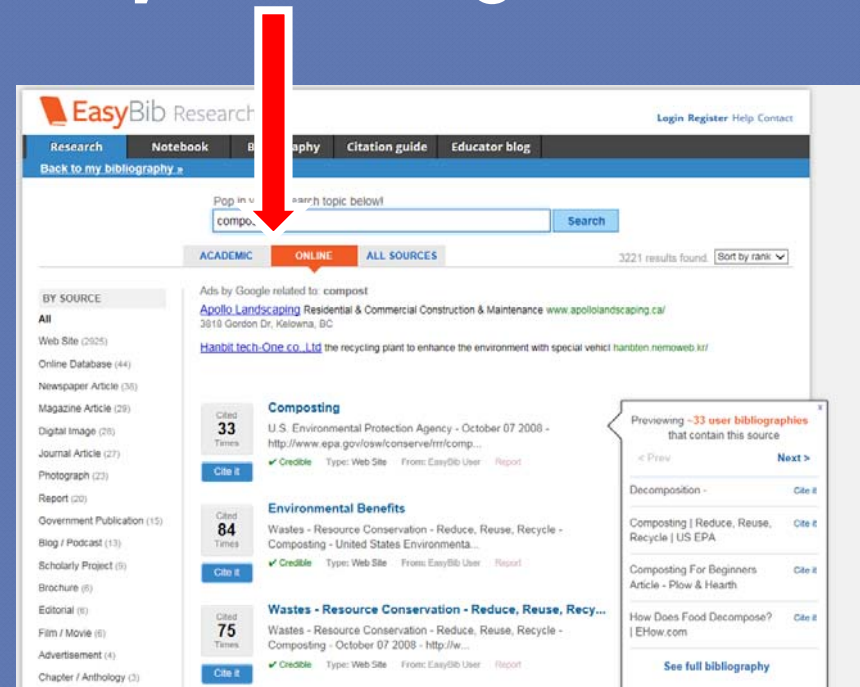


# EasyBib Research

Type in your keyword



Look at “Online” info  
or “Academic” info  
by switching tabs



# Use Credible Sources

Be sure to use credible sources

One way is by checking the “rating”



Cited <b>7</b> Times	<b>Composting</b> City of Minneapolis, Minnesota - Official Web Site - <a href="http://www.ci.minneapolis.mn.us/solid-waste/...">http://www.ci.minneapolis.mn.us/solid-waste/...</a> ✓ Credible Type: Web Site From: EasyBib User Report
Cited <b>30</b> Times	<b>Environmental Benefits</b> Environmental Benfits Composting US EPA - United States Environmental Protection Agency - <a href="http://...">http://...</a> ✓ Credible Type: Web Site From: EasyBib User Report
Cited <b>25</b> Times	<b>Composting -</b> Wikipedia, the free encyclopedia - <a href="http://en.wikipedia.org/wiki/compos">http://en.wikipedia.org/wiki/compos</a> Maybe Credible Type: Web Site From: EasyBib User Report
Cited <b>110</b> Times	<b>Greywater Recycling</b> Composting Toilets - <a href="http://www.letsogogreen.com/greywater-recycling.html">http://www.letsogogreen.com/greywater-recycling.html</a> Type: Web Site From: EasyBib User Report
Cited <b>39</b> Times	<b>Composting</b> earth easy - Earth easy © - 2000 - <a href="http://www.eartheasy.com/grow_compost.html">http://www.eartheasy.com/grow_compost.html</a> Type: Web Site From: EasyBib User Report



## But Remember

Wherever you find your info be sure you understand it!

If you don't know some of the vocabulary either look it up OR find a different source of information at YOUR GRADE LEVEL

# Another Good Place to Look

## KLO Library Website

The screenshot shows the website for École KLO Middle School. The header includes the school logo, name, and tagline 'Attitude Is Everything', along with a search bar. A navigation menu lists 'Home', 'About KLO', 'Programs & Services', 'Contact Us', 'Parents', 'Students', and 'Principal's Blog'. The main content area is titled 'Library Media Center' and lists hours, a catalogue, full-text magazines, EBSCO databases, and a 'Learn Now BC' section. A left sidebar contains links to 'Bibliographic Tools', 'KLO Science Fair', 'Love 2 Read', 'Subject Resources', 'Athletics', 'CLAWSCO', 'French Immersion', 'Aboriginal Education', and 'Student Support'. A right sidebar lists 'Okanagan Regional Library Catalogue', 'CRC Login', 'Bibliographic EasyBib', 'Citation Checker', 'CRAAP - evaluating websites', and 'Online Resources'. Two red arrows highlight 'Bibliographic Tools' in the left sidebar and 'EasyBib' in the right sidebar.

**École KLO Middle School**  
*Attitude Is Everything*

Search...

Home About KLO **Programs & Services** Contact Us Parents Students Principal's Blog

Library Media Center

**Bibliographic Tools**

KLO Science Fair

Love 2 Read

Subject Resources

Athletics

CLAWSCO

French Immersion

Aboriginal Education

Student Support

**Library Media Center**

Hours:  
**Monday - Thursday:** 8:00am - 3:30pm  
**Friday:** 8:30am - 3:30pm

**KLO Library Catalogue**

**Full Text Magazines**

**EBSCO Databases**

**Learn Now BC**

Check out this document about the steps for logging in and accessing online databases and a variety of other resources! Its free if you are a teacher or student in BC

Okanagan Regional Library Catalogue

CRC Login

Bibliographic **EasyBib**

Citation Checker

CRAAP - evaluating websites

Online Resources



# EasyBib Bibliography

The screenshot shows the EasyBib website interface. At the top, the logo "EasyBib by imagine easy" is on the left, and social media icons for Facebook and Twitter are on the right. Below the logo, navigation links include "My Projects", "Research", "Products v", "Citation Guide & Educator Blog", and "Support". On the far right, there are links for "Login" and "Sign up". The main heading reads "Generate citations in MLA, APA & Chicago formats for your bibliography", followed by the subtext "Save time by making a Works Cited page automatically!". Below this, there are tabs for "MLA", "APA", "Chicago", and "More v". The "Website" tab is selected and circled in green. Below the tabs, there are buttons for "Website", "Book", "Newspaper", "Journal", "Database", and "All 59 options". The "Book" button is circled in green. To the left of the input field is a blue button labeled "Cite Source". The input field contains the text "Cite a website by entering its URL or by searching for it." and is circled in purple. To the right of the input field is an orange button labeled "Cite It", which is circled in red. At the bottom left of the input field, there are links for "Manual cite" and "Help".

EasyBib  
by imagine easy

My Projects Research Products v Citation Guide & Educator Blog Support

Login Sign up

Generate citations in MLA, APA & Chicago formats for your bibliography  
Save time by making a Works Cited page automatically!

MLA APA Chicago More v

Website Book Newspaper Journal Database All 59 options

Cite Source

Cite a website by entering its URL or by searching for it.

Manual cite Help

Cite It

**1-pick correct information source, is it a website, book, etc.**

**2-copy/paste website URL or type in book title**

**3-click "Cite It"**

# KLO Science Fair



**École KLO Middle School**  
*Attitude Is Everything*

Search...



[Home](#)

[About KLO](#)

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[Contact Us](#)

[Parents](#)

[Students](#)

[Principal's Blog](#)

[Bibliographic Tools](#)

[KLO Science Fair](#)

[Love 2 Read](#)

[Subject Resources](#)

## KLO Science Fair

Are you interested in completing a science fair project? Check out the information below or see Mrs. Horton.

### Videos

Check out these videos!

[Google Science Fair](#)

[Central Okanagan Science Fair 2013](#)

[Compost Tea Project](#)

[Shooting for Science Project](#)

### Project Ideas

Find ideas for you project here.

[Science Buddies Project Ideas](#)

[Education.com Science Fair Project Ideas](#)

[Science Bob's Science Fair Ideas](#)

### Ethics

### Helpful Links

[Science Fairs](#)

[SD23](#)

[Central Okanagan](#)

[Canada Wide](#)

[Student Resources](#)

[Youth Science Canada](#)

[Science Buddies](#)

[Create A Graph](#)