

IC4

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Research for Newbies

By Dr. Helen Teague, Pepperdine University, 4/2018

Welcome to the IC4 Research Portal! You will learn about research basics, talk to researchers, and start your own research investigation.

Before we begin, watch this video:







Ever felt like these two avatars?



Ready to go?

It's as easy as 1 - 2 - 3! Follow the numbered activities on the page!



 IC4 Research Team	Research Then	Research Now	It All Starts with the Questions We Have
<p>Research for Newbies and Emerging Student Researchers</p>	 <p>Some people think research means libraries, quiet voices, and dusty books...that was then...</p>	 <p>Technology moves research out to the field of experience. Research occurs anywhere that you have a question. If you wonder about it, you can research it!</p>	 <p>What do I already know? What do I need to know? Where can I find out?</p> <p>How does a car engine work? How many gallons of gas do I need for my Spring Break trip?</p> <p>Which colleges offer scholarships in tennis? theater? work study oops?</p>

Read this first: Research begins with asking questions, then suggesting ways to find the answer. The answer you think you will get is your hypothesis. Let's practice using the mind map below.

Instructions:
Add to this mindmap! Click on the blue rectangle and then click on the second icon from the left (called "Insert child mode" on the toolbar above to add your answer.

I need to research how to get student loans so I can afford college. What steps do I need to take to find the answer?

- I can ask my brother or sister
- I can call the financial aid department at the college I want to attend.

After you have thought about and talked about your hypothesis with others, research continues by checking out and trying out various possible answers to your question. One of the best ways to try out possible answers to your question is to see what other people have done: consult print, electronic, digital resources in a meta-analysis. Another good way to test your hypothesis is to talk to other people. Return to the IC4 site to learn more—click on the link to return.

ACTIVITY: Your turn!

Now it's your turn to participate in a research brainstorm session.

Go to the Mindmap on Research Question Brainstorming here:

https://app.mindmup.com/map/_free/2018/03/db941b00316311e8a0c0e9295b27156c

Add at least one of your own questions and add your initials (so we know it was you!).



Bookmark these 10 gems of scholarly search treasures for your research backpack:

- **Wolfram Alpha** <https://www.wolframalpha.com/> *computational intelligence and AI*
- **Refdesk** <http://www.refdesk.com/> *fact checker for the internet*

- **Refseek** <https://www.refseek.com/> *academic search engine*
- **iTools** <http://itools.com/> *collection of search tools*
- **Google Books** <https://books.google.com/> *online library of free books, book chapters*
- **Microsoft Academic** <https://academic.microsoft.com/> *relaunched in 2016*
- **WorldWideScience** <https://worldwidescience.org/>
- **Science.gov** <https://www.science.gov/>
- **Google Scholar** <https://scholar.google.com/> *Google Scholar was created as a tool to index scholarly research online*
- **Educational Resources Information Center (ERIC)** <https://eric.ed.gov/>

ACTIVITY: Your turn!

It's your turn to build your research skills.

Just as gemstones can shine when they catch the light, these internet gems also shine with interesting features and resources!

List each of the 10 gems above on a Word file or notebook paper (check with your teacher first as to his/her preference).

Visit each of the 10 gems and list at least one interesting feature.

Submit your findings to your teacher.



Just like cars, research has several models. Watch these videos to learn more.

Research Models

- **Super3** *for younger students*
- **The Big 6** *for middle school and high school*
- **The Research Question Model 1** *it all starts with the right question*
- **The Research Question Model 2** *working with big ideas*
- **The Research Cycle Model** *high school and college*
- **Quantitative/Qualitative** *considerations for intense research*

ACTIVITY: Your turn!

Watch the videos above and write a 5-word summary of each one. Which research model do you like best?

Write your summary in a Word file or notebook paper (check with your teacher first as to his/her preference)

Remember only 5 words for each one! Submit your summaries to your teacher.

Congratulations! We hope you feel equipped to do research :)

Still have questions? Don't hesitate to talk to your sponsoring IC4 teacher, or email the Pepperdine Research team at info@ic4.site

On Your Own:

There is information about different types of researchers and the interesting work they do on the PBS LearningMedia website. Go to the PBS Learning Media site <https://www.pbslearningmedia.org/> and type the word "Researchers" in the search field to discover more about the interesting work of researchers, what they do, the questions they ask, and the problems they solve.

References for Teachers:

"Library Skills, Information Skills, and Information Literacy: Implications for Teaching and Learning," by James O. Carey. Retrieved from: http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslpubsandjournals/slr/vol1/SLMR_LibrarySkills_V1.pdf

"Grazing the Net: Raising a Generation of Free Range Students," by Jamie McKenzie. Retrieved from: http://istnet.atspace.com/Grazing_the_Net.pdf

"The 6 Online Research Skills Your Students Need," by Hannah Trierweiler Hudson Retrieved from: <https://www.scholastic.com/teachers/articles/teaching-content/6-online-research-skills-your-students-need/>

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Maintained by the IC4 Research Team.