Investigating *Laser Eye Surgery* using different *Research Methodologies*

What do we mean by the term "*laser eye surgery*"? According to the Public Health Agency of Canada:

Laser eye surgery is the most commonly practiced procedure to correct vision problems caused by refractive errors, including myopia (near-sightedness), hyperopia (far-sightedness) and astigmatism (distorted vision when looking at objects at any distance).

More recently, laser eye surgery has also been used to correct presbyopia (the inability to focus on nearby objects), which is part of normal aging and can be corrected by using reading glasses.

All of these conditions are caused by problems with the way the eye focuses an image on the retina, which is the light-sensitive layer at the back of the eye. A large part of the eye's ability to focus depends on the shape of the cornea, the clear front surface of the eye.

During laser eye surgery, a surgeon uses a laser device to make permanent changes to the shape of the cornea. The laser used most often is the Excimer laser, which produces a beam of ultraviolet light to vaporize tissue. Surgically altering the shape of the cornea can correct mild to moderate refractive errors in most people.

What do we mean by the term "*Research Methodology?*"

Research Methodology refers to the way you collect data or information through the course of your research. What sources will you use, how will you access them, and what kinds of data will you collect. Importantly, your research choices will effect your final outcome.

In this project, you will learn how important your research methodology can be with respect to your research. You will look for information using *Google*, a search engine, and *Canadian Reference Centre*, an online database of journal and magazine articles, newspaper articles, news transcripts and more.

Part I

1. ***Google***.... ***"Laser Eye Surgery"***
2. Look at your results. What do you notice about the first ten hits? Consider the source, purpose and intended audience of each site.

Name	Purpose	Intended Audience

3. Based on your observations, is using Google a useful way to learn about Laser Eye Surgery? Why?

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Part II

An **online database** is a comprehensive collection of information in electronic form and organized for quick retrieval. The Surrey School District subscribes to (pays for) a number of databases for student research. They are typically comprised of journal (magazine) and newspaper articles, reference articles and news transcripts, although they may include much more. They require a login and password when accessed outside the school library.

We use databases for several important reasons. Through databases, we gain access to a huge volume of publications we would otherwise never be able to afford. They are current and comprehensive, often reflecting a variety of points of view. Importantly, the information they contain has gone through an editing process. The publishing of information in journal form demands credibility as the reputation of the publication is dependent on the quality of the information it presents. Any publication that presents incorrect or unreliable information would quickly develop a poor reputation and would likely cease to publish.

1. Go to the NSS website, then click on **Library** on the left.
2. Click on **Online Resources**
3. Click on **Consumer Health Complete** and in the search box type in **"laser eye surgery"**
4. Look at your results. What do you notice about the first ten hits? Consider the source, purpose and intended audience of each article.

Source	Purpose	Intended Audience

5. Compare these results to the results you obtained through your Google search. Which tool will provide you with the most objective and accurate information on the subject? Why?

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Part III

Your vision is failing and you have to make a decision. Should you have laser eye surgery? What is your decision and why did you make that choice.

Please note that to use the Online databases at home, you need a login and password.

Login: SD36-BC

Password: SD36