

DNA Research Project

The goal of this assignment is to learn how to research a question through evaluating credible sources as well as to communicate those findings through a written report with proper citations (2.3.1 and 2.3.4). You will be working with an assigned partner - likely the person to your right or left to search for and answer the question that you are being assigned. You will be picking out a question to investigate; these questions may look familiar as your peers and teachers generated them! You will be required to use a minimum of 3 credible sources to support your answer(s) to your question(s). These sources will need to be properly cited. There are many sites online to help you with your citation, such as one hosted by local Calvin College - Knightcite (<http://www.calvin.edu/library/knightcite/>) or Easy Bib (easybib.com).

- Name: _____ Partner's Name: _____

- Question Number: _____ Question: _____

- Resource 1:
 - Notes:

 - Citation:

- Resource 2:
 - Notes:

 - Citation:

- Resource 3:
 - Notes:

 - Citation:

Now that you've gathered some notes on your topic, its time to communicate those notes in an easy to follow manner. This can be done in any number of ways - you could make a poster, comic, presentation, or write a paper detailing your findings. Its up to you! You could even come up with another way if you get your teacher's permission! Below, you will find some key features of the various methods of communicating your results.

Posters - Large and easy to follow graphical/picture representations of your information. Posters should be more pictures than words. Words should only be used to explain the graphical information. Balance, neatness, and flow are also important to consider.

Comics - Much of what can be said of posters is true of comics, with one added detail - they ought to be funny and flow becomes an even more important factor. While fun to make, it can be difficult to naturally fit all of the information you're trying to convey into a story.

Presentations - These are the sort of things you see at TED conferences, business meetings, and you'll likely see throughout college. Software is often used to add visuals to this primarily verbal method of conveying information. As with the other forms above - one should avoid large blocks of text and rely primarily on graphics. Recommended software: Prezi, PowerPoint, OpenOffice Impress.

Paper - Unlike the others, papers rely primarily on text and usually use few graphics. If this is the route you and your partner chose, I would introduce your audience to the question in the first paragraph and give them your main points through a thesis statement (e.g. "People often wonder if McDonalds is linked to obesity... I contend that McDonalds is linked to obesity due to the facts that..."). Once that intro is made, take one point from the end of your introduction and turn it into a paragraph where you go deeper into that point of data or argument, explaining how it relates to your question. Then once you've gone into detail about all your points, be sure to wrap it up in a nice little conclusion paragraph that briefly connects all your points.

Teacher Directions and Supplies:

The following is a possible list of questions generated that can be cut into strip and assigned to students. Also,

<https://www.med.wright.edu/sites/default/files/aa/facdev/Files/PDFfiles/QuestionTemplates.pdf> is a good resource to get higher level thinking questions that spur inquiry rather than simple answer and stop questions.

1. How does DNA determine a person's traits? (i.e. how does genotype determine phenotype?)
2. How is DNA used in making proteins?
3. How are the genes that we get from our parents determined? What is the process like?
4. Does DNA play a role in _____? (e.g personality, intelligence, appetite, etc.)
5. What is a mutation? What are some ways that mutations are caused?
6. How much of a person is determined genetically? How much is determined by their surroundings? (Nature vs. Nurture)
7. Is what is written in your DNA set in stone (permanent)? Or can it be somehow changed or modified? (e.g. is a person with tall genes destined to be tall?)
8. How do scientists analyze DNA for particular genes and markers for disease?
9. Is it possible to alter or change our DNA? What are some avenues that researchers are pursuing?
10. If all cells have the same DNA, why are some different from others?
11. Is there a genetic basis for race?
12. Any other questions? Get them approved by your teacher!