

MIND MAP INSTRUCTIONS AND BRAINSTORMING DOCUMENT

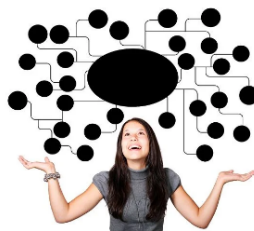
IMPORTANT: Before presenting this assignment to students, choose whether you will have students use the **table** or the **Venn diagram**. Then, edit the bold text below and delete this note.

Overview

To help you construct a Mind Map on natural selection, you will participate in three activities: completing a lab, reading an article, and watching a video. As you go through each activity, brainstorm the major ideas and place them in your **[table/Venn diagram]** for your Mind Map. Once you have completed all three activities, compare your notes from each section and look for similarities and differences in your writing.

Terms to Look for in Each Activity

- Evolution (define)
- Adaptation (define)
- Genetic drift (define and provide an example)
- Asexual reproduction (define, provide an example, and explain how they get variation)
- Sexual reproduction (define, provide an example, and explain how they get variation)
- Genetics (genotype and phenotype) and their role in natural selection
- Darwin's points of natural selection (provide an example of each)
- Examples of positive effects
- Examples of negative effects
- Environmental or human-induced impact on populations



Metivier, A. (2021). What is mind mapping? The ultimate guide to using this powerful tool [Image]. Magnetic Memory Method. <https://www.magneticmemorymethod.com/what-is-mind-mapping/>

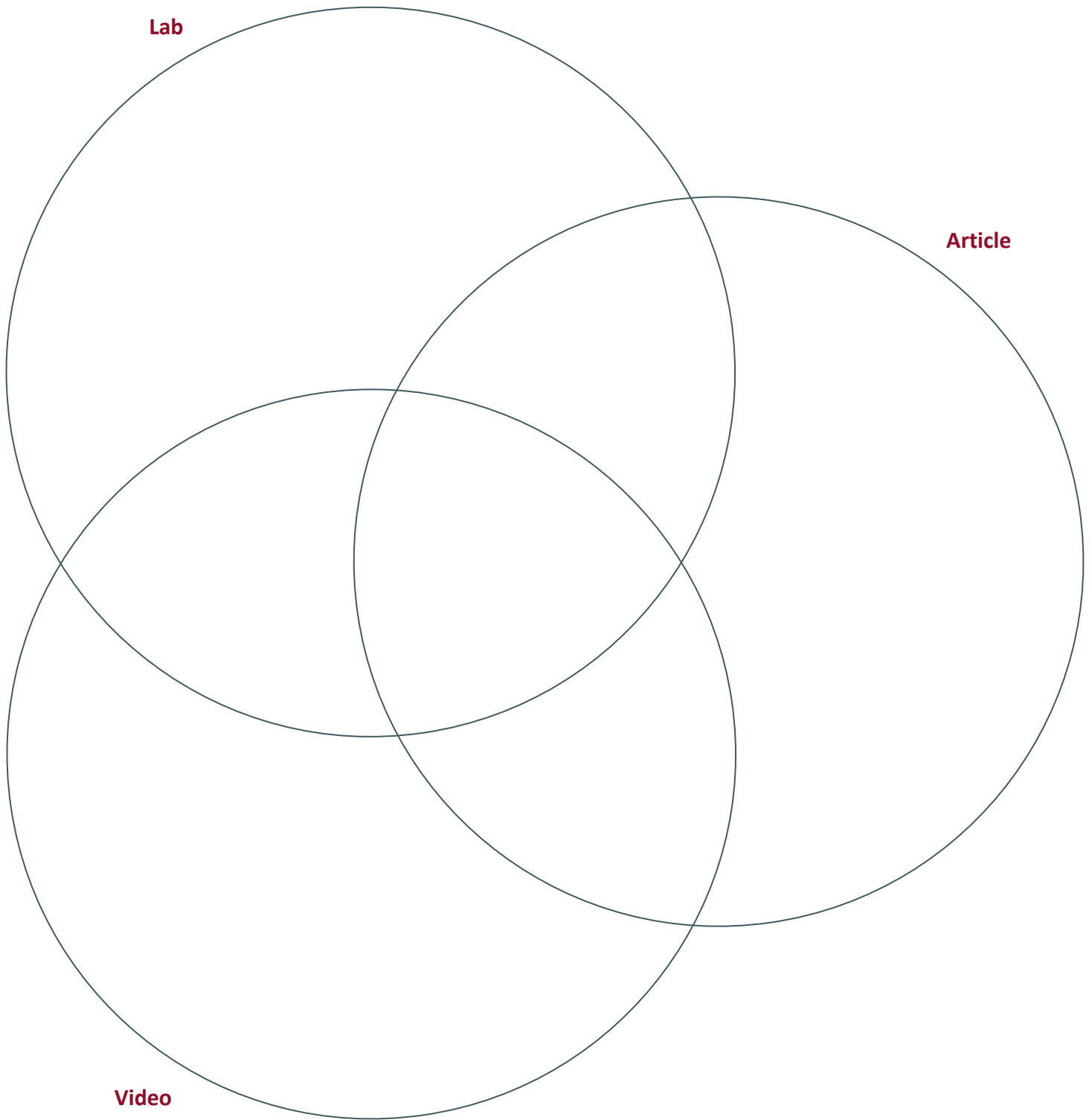
Mind Map Brainstorming

Create a Natural Selection Mind Map using the words and concepts listed above. Show any connections that may exist among the ideas you include and provide justification for your connections along the way. Add drawings to *at least three (3)* different parts of your Mind Map that help you understand the main points you have learned about natural selection.

Natural Selection Mind Map Brainstorming

	Lab	Article	Video
Main Idea			
Differences			
Similarities			

Natural Selection Mind Map Brainstorming



Natural Selection Mind Map Rubric					
Description of Criterion	Exceeds	Meets	Approaching	Needs Improvement	No Mark
Facts	Facts were accurate for all events reported on the map and included additional facts beyond the requirement.	Facts were accurate for all events reported on the map.	Facts were accurate for at least 80% of the events reported on the map.	Facts were accurate for at least 60% of the events reported on the map.	Incomplete /Missing
Depth of Coverage/ Knowledge	Student shows a solid grasp of all content covered. Extensions of the key ideas show a deep understanding of content.	Student shows a solid grasp of most of the content. Shows extensions of most key ideas.	Student shows a basic level of coverage of key ideas only. Attempts extension of a few ideas.	Student shows the bare minimum of content covered. No extension of ideas evident.	Incomplete /Missing
Learning of Content	Student depicts connections of 100% accuracy between the main idea and key words and goes beyond, with drawings correctly included on their map.	Student depicts connections of 100% accuracy between the main idea and key words on their map.	Student depicts connections of 75% accuracy or more between the main idea and key words on their map.	Student depicts connections of 50% accuracy or more between the main idea and key words on their map.	Incomplete /Missing
Resources	The map contains additional information beyond the required terms related to the topic.	The map contains the required information from all three activities related to the topic.	The map contains information from two of the activities related to the topic.	The map contains one or more activities with little information related to the topic.	Incomplete /Missing

Adapted from Swestyani, S., et al. (2018). An analysis of logical thinking using mind mapping [Figure 1]. *Journal of Physics Conference Series*. <https://iopscience.iop.org/article/10.1088/1742-6596/1022/1/012020/pdf>