Teacher: \_\_ N. Adamse \_\_\_\_\_\_\_\_\_\_

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| Subject | Class | Date | Duration |
| Biology | Bio CPI (B3) | 4/2/21-4/16/21 | 3 x 70 min |

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| Topic | The History of DNA Timeline  Part of the unit Cell and their Organelles: The nucleus |
| Grade level | 10th grade |
| Setting | This assignment is done partly at home and partly in the (art) classroom |
| Standard(s) | [State/National Academic Standard(s):](https://sites.google.com/a/wgu.edu/state-specific-information/)  **Life Science Standard, level 9-12: LS 1: From molecules to Organisms: Structures and Processes**  -*Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells*   - *Understand the underlying nature and essence of scientific inquiry* |
| Lesson Objective(s) | **Explain the development of scientific knowledge about DNA**  **Condition**: *Students are provided with information (article) about how several scientists throughout history have worked and contributed on the present knowledge of DNA*  **Behavior:** *Students make a presentation in which they show the timeline of the history of DNA knowledge.*  **Criterion:** *Students understand and show in their presentation that the development of knowledge about DNA is an ongoing process and that each scientific discovery adds to a more precise understanding what DNA is and how it operates in living organisms.* |

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| Links to previous lesson and prerequisite skills | **Students have already finished a range of topics such as:**  -The characteristics of Life,  -Scientific methods  -Introduction to Ecology,  -Introduction to Evolution,  -Cells and their organelles,  -Photosynthesis and Chloroplasts,  -Cell membrane and  -Biomolecules  -DNA molecules and constructing a model of DNA |
| Links to future lesson | Genetics and Scientific inquiry |

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| Lesson 1-3 | Time | Teacher’s activities Students’ activities | | Resources |
| Introduction  Main Activity  Closing | 10 min  180 min  20 min | Teacher:  -Explains the assignment  - Answers questions  - Shows an example presentation  -Guides and helps students at home over Zoom and students in the classroom in person  - Provides feedback  -Discusses the article and some excellent presentations with all students on Zoom  -Grades the presentations with a rubric | Students:  -Listen to the explanation  -Ask questions  -Watch example presentation  -Read the article  -Make the presentation  -Ask questions  -Revise their work  -Submit their presentation  - Listen and participate in discussing the article and presentations  -Revise their presentation after rubric feedback | *-Lap top*  *-Internet access*  *- Google Classroom*  *-Interactive activity schedule with link to assignment*  *-Written assignment with link to article*  *-Google slides or other presentation tool*  *-Example presentation* |

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| Differentiation Strategies | -Students receive an article with all the information that is needed on their presentation  - Students illustrate their writing with diagrams and photos found on the Internet  -Students are using a spell check and grammar check program  -Students are allowed to revise their work  -Students who need it have extra time to submit their work  -Students receive in person guidance from teacher if needed  - Students received a rubric with all grading criteria and requirements before starting the assignment. |
| Formative assessments | This presentation is a formative assessment meant for learning about scientific strategies to build understanding of a concept. Students are allowed to revise and improve their understanding. assignment. |
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