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

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| Subject | Class | Date | Duration |
| Biology | Bio CPI (B3) | 3/22/21-4/2/21 | 3 x 70 min. |

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| Topic | **DNA** Remote Learning ActivitiesPart of the unit: **Cells and their organelles:** Nucleus |
| Grade level | 10th grade  |
| Setting | Students are at home and learn remotely over Zoom |
| 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* |
| Lesson Objective(s) | **Explain how DNA can act as a blueprint for living organisms****Condition**: *Students are provided with information (video, review and lecture) about how DNA bases form the code for amino acids***Behavior:** *Students answer questions on the accompanying questionnaire* **Criterion:** *Students understand that DNA codes for different amino acids by three bases (codons), they need to explain this knowledge in their answers.* |

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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-Students have done a pre assessment on this topic (DNA, RNA and proteins) |
| Links to future lesson | In the next class, or the in-school class, students need to make a 3D model of a DNA molecule |

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| Lesson | Time | Teacher’s activities Students’ activities  | Resources |
| 1: IntroductionMain Activity2: IntroductionMain activityClosing | 5 min65 min5 min65 min30 min40 min | Teacher:-Explains the assignment on Zoom-Stays connected on Zoom to help and guide students-Explains the assignment on Zoom-Stays connected on Zoom to help and guide students-Gives immediate (written) feedback when students submit their work-Discusses the answers to both assignments with all students remotely.-Gives students time to revise their answers and resubmit their work-Stays on Zoom to help with their revisions-Posts the answers (after all students have revised their work) on Google Classroom | Students:-Listen and read the assignment with the teacher-Watch the video clip and answer the accompanying questions-Draw illustrative diagrams with paper and pencil or with Sketchbook or Google Drawing (digital drawing programs)-Submit the assignment on the due date (last day of the week at 2 pm) on Google ClassroomListen and read the assignment with the teacher-Watch the video clip and answer the accompanying questions-Draw illustrative diagrams with paper and pencil or with Sketchbook or Google Drawing (digital drawing programs)-Submit the assignment on the due date (last day of the week at 2 pm) on Google Classroom-Listen to the discussion-Participate in the discussion-Revise their work and -Re-submit it on Google Classroom | *-Lap top**-Internet connection**-Zoom meet**-Google Classroom**- Weekly schedule with interactive links to assignments**- Assignments with interactive link to video clips**-Paper and pencil**-or digital drawing programs**-Photo-Booth (for submitting hand-drawn diagrams)* |

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| Differentiation Strategies | -Written information as well as visual (and animated) information is given- Students work with a writing program that enables them to check their writing and grammar- Students illustrate their writing with drawings-Students have one week per assignment, they can take more time if needed-Students receive help over Zoom when needed |
| Formative assessments | The assignments with the questions are the formative assessments.Students are allowed and encouraged to revise their answers after the teacher’s timely feedback and discussion |
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