

NAME: _____ DATE: _____ BLOCK: AM OR PM

Instructions: Please fill in the table as much as you can before the video begins and again as you watch the video.

Adapted from: <file:///G:/Oak%20Farm/Teaching%20OFMS/2017-2018/Science/Tri%203/bill-nye-greatest-discoveries-genetics%20wks2.pdf>

| Video Questions | Before the video | After watching the video |
|---|------------------|--------------------------|
| <u>LAWS OF INHERITANCE</u> | | |
| What plants did Mendel work with? | | |
| What are the biological phenomenon that Mendel observed? | | |
| What is a “factor”? | | |
| What is a Mendelian trait? | | |
| <u>GENES ARE LOCATED ON CHROMOSOMES</u> | | |
| What organisms were used by Thomas Hunt Morgan? | | |
| What mutation in these organisms did Morgan first notice? | | |
| Which 2 sex chromosomes do females have? | | |
| Which 2 sex chromosomes do males have? | | |

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| What did Morgan and his students show that is still important to modern genetics? | | |
| DNA CARRIES GENETIC MATERIAL | | |
| How does a bacteriophage attack a bacteria cell? | | |
| Which 2 chemicals are present in a virus? | | |
| Which of these chemicals did Hershey and Chase discover inside the bacteria after they were infected by the virus? | | |
| THE DOUBLE HELIX | | |
| Which scientists were involved in the discovery of the structure of the DNA molecule (HINT: there are four mentioned in this section)? | | |
| How many base chemicals are in a DNA molecule? | | |
| What is the name for the shape of a DNA molecule? | | |

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| What has to happen to a DNA molecule for it to make a copy of itself? | | |
| MESSENGER RNA | | |
| Cells that produce lots of proteins may contain lots of what special chemical? | | |
| How many strands is an RNA molecule? A DNA molecule? | | |
| THE GENETIC CODE | | |
| How many total amino acids are in your body that can be used in the production of a protein? | | |
| What do you inherit from your parents that determines the proteins your body makes? | | |
| RESTRICTION ENZYMES | | |
| How did some bacteria fight against bacteriophages? | | |
| Where did the restriction enzymes cut? | | |