

Name _____

Date _____ Period _____

Genetics eDay Assignment

- ❖ Go to this website: <http://learn.genetics.utah.edu>
- ❖ Click: BASIC GENETICS (under GENETICS on left of screen)
- ❖ Under *TOUR OF BASIC GENETICS*, click on the three questions listed below.

QUESTION 1 - WHAT ARE TRAITS?

Play the video and answer the following questions:

1. Name two traits that are inherited and controlled by genes.
2. Language is shaped by our _____.
3. Explain how height is influenced by genes and the environment.

Read *Identical twins: same DNA, different environment* and explain how two people with identical DNA can be different:

Click green bar: **Next Stop: What are DNA and Genes?**

QUESTION 2 – WHAT ARE DNA AND GENES?

Play the video and answer the following questions:

1. What 4 nitrogen bases make up DNA and how are they paired?
2. What is a gene?
3. What is a genome?
4. What makes each person unique?

Read *DNA is all the same chemical*:

1. True or False: All living things have DNA.
2. Explain what makes each organism different.

Read ***The human genome:***

1. What makes up a sequence in a DNA molecule?
2. Approximately how many genes are in the human genome?

Read ***Your DNA makes you unique*** and explain how each human is unique or different if all humans have the same genes arranged in the same order.

Click green bar: **Next Stop: What Is Inheritance?**

QUESTION 3 – WHAT IS INHERITANCE?

Play the video and answer the following questions:

1. How is DNA passed to offspring?
2. Explain the difference between asexual and sexual reproduction.
3. We have how many copies of each gene?
4. Each parent passes _____ copy of each gene to his/her offspring.
5. Why do children resemble their parents and each other?

Read ***Sources of variation:***

1. Why do species change over time?
2. Define mutation.

Read ***Patterns of inheritance:***

1. Traits are influenced by _____ and _____.
2. True or False: Some traits are influenced by a single gene.

Read ***Sex chromosomes:***

1. Females have two _____ chromosomes.
2. Males have one _____ chromosome and one _____ chromosome.
3. True or False: Females and males always inherit two copies of every gene.