**Analysis of a Snork**

* **Monitored Homework**
* **Assign after reviewing the codon chart**
* **Next class, post drawing up on board, discuss what characteristics the DNA coded for.**
	+ **Do you notice anything difference about each snork?**
	+ **What happened?**
	+ **Show a picture of the Snork for the correct DNA sequence**
	+ **Start a conversion about errors in DNA? Good or bad?**
	+ **PPT on Mutations**

**How Does DNA Determine the Traits of an Organism? Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Introduction:** In the simulation, you will examine the DNA sequence of a fictitious organism: the Snork. Snorks were discovered on the planet Haa Hig in a distant solar system. They are a small creature who flies at night. Snorks only have one chromosome with 6 genes on it. Your job is to analyze the genes of the Snork’s DNA and determine what traits the organism has.

|  |  |
| --- | --- |
| **mRNA sequence** | **Amino Acid #** |
| UGG | 20 |
| UCG | 16 |
| UCU | 2 |
| UUG | 4 |
| GCG | 3 |
| CCC | 5 |
| UCC | 7 |
| UUU | 8 |
| AAA | 9 |
| CCA | 12 |
| AUA | 13 |
| AAU | 1 |
| UAC | 6 |
| GAU | 10 |
| CCU | 11 |

|  |  |
| --- | --- |
| **Amino Acid Sequence** | **Trait** |
| 20-11-13 | Hairless |
| 20-12-13 | Hairy |
| 20-21-21 | Plump (Fat) |
| 13-14-15 | Skinny |
| 16-2-5 | 4 legged |
| 16-4-5 | 2 legged |
| 12-7-8 | Round Head |
| 5-7-8 | Block Head |
| 9-8-8 | Curly Tail |
| 9-4-8 | Straight Tail |
| 11-3-2 | Narrow Slanted eyes |
| 11-3-3 | Wide Big round eyes |
| 6-6-10 | Wings |
| 6-6-1 | No Wings |

**­Observations and Analysis of Snork DNA – V1 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

You are given a chromosome from a Snork with the following sequence. Each gene has only 3 amino acids. Your job is to determine the sequence of amino acids for your specimen. **Transcribe the DNA code into a** **complimentary mRNA sequence** in the chart below. Use the table on the previous page to translate each 3 base mRNA code into an **Amino Acid number, then into a trait.**

|  |  |
| --- | --- |
| **DNA** | A C C G G T T A T A G C A A C G G G T T T A A C A A A G G A C G C A G A G G G A G G A A A A T G A T G T T A |
| **mRNA** |  |
| **Amino Acid #** |  |
| **Trait** |  |

**Draw your Snork in the space below**. Be creative, but be sure to depict the traits you discovered above.

**Observations and Analysis of Snork DNA – V2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

You are given a chromosome from a Snork with the following sequence. Each gene has only 3 amino acids. Your job is to determine the sequence of amino acids for your specimen. **Transcribe the DNA code into a** **complimentary mRNA sequence** in the chart below. Use the table on the previous page to translate each 3 base mRNA code into an **Amino Acid number, then into a trait.**

|  |  |
| --- | --- |
| **DNA** | A C C G G A T A T A G C A A C G G G T T T A A A A A G G A C G C A G A G G G A G G A A A A T G A T G C T A |
| **mRNA** |  |
| **Amino Acid #** |  |
| **Trait** |  |

**Draw your Snork in the space below**. Be creative, but be sure to depict the traits you discovered above.

**Observations and Analysis of Snork DNA –V3 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

You are given a chromosome from a Snork with the following sequence. Each gene has only 3 amino acids. Your job is to determine the sequence of amino acids for your specimen. **Transcribe the DNA code into a** **complimentary mRNA sequence** in the chart below. Use the table on the previous page to translate each 3 base mRNA code into an **Amino Acid number, then into a trait.**

|  |  |
| --- | --- |
| **DNA** | A C C G G A T A T A G C A G A G G G T T T A A A A A G G A C G C C GC G G T A G G A A A A T G A T G C T A |
| **mRNA** |  |
| **Amino Acid #** |  |
| **Trait** |  |

**Draw your Snork in the space below**. Be creative, but be sure to depict the traits you discovered above.