**Monster Genetics Worksheet**

Complete this FIRST, to determine your monster’s genes and traits!

## Hair color Gene

DNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

mRNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

Amino Acid Sequence:

Trait:

## Leg Gene

DNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

mRNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

Amino Acid Sequence:

Trait:

## Skin Gene

DNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

mRNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

Amino Acid Sequence:

Trait:

## Eyes Gene

DNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

mRNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

Amino Acid Sequence:

Trait:

## Hair Texture Gene

DNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

mRNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

Amino Acid Sequence:

Trait:

## Special Feature Gene

DNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

mRNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_

Amino Acid Sequence:

Trait:

## Arms Gene

DNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ -\_ \_ \_ - \_ \_ \_

mRNA: \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ - \_ \_ \_ -\_ \_ \_ - \_ \_ \_

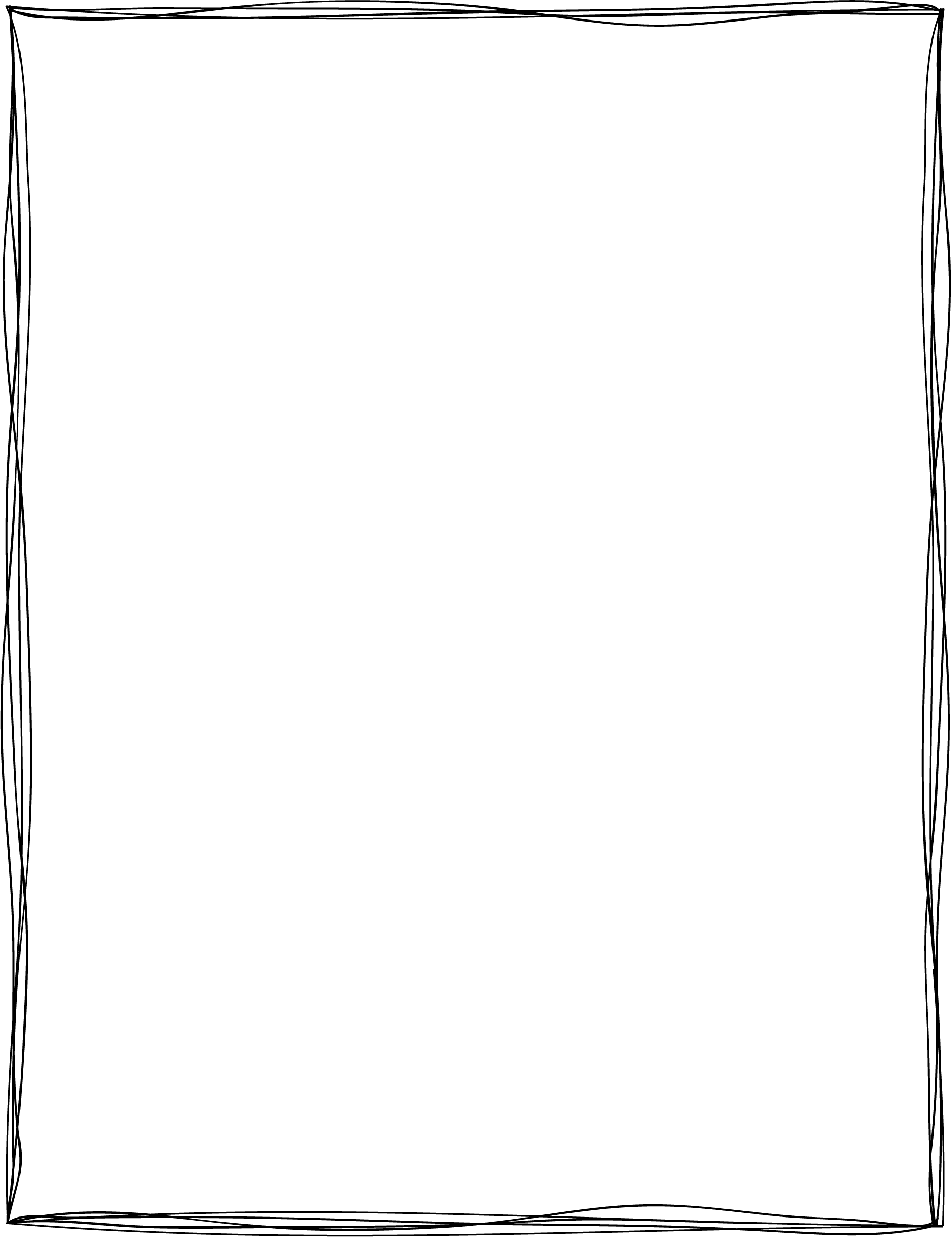
Amino Acid Sequence:

Trait:

Answer the problem questions and draw your monster based on what you determined above!

**Problem Questions:**

1. What does the DNA sequence of a chromosome determine?
2. Explain how the amino acid sequence determines the characteristics of an organism.
3. If there is a change in the DNA sequence, what are the possible outcomes? Explain and justify your answer.
4. Explain how the DNA sequence in your monster is similar to your DNA sequences. Justify your answer.
5. If the monster has a mutation and a base is inserted after the third base in the hair gene, predict the result



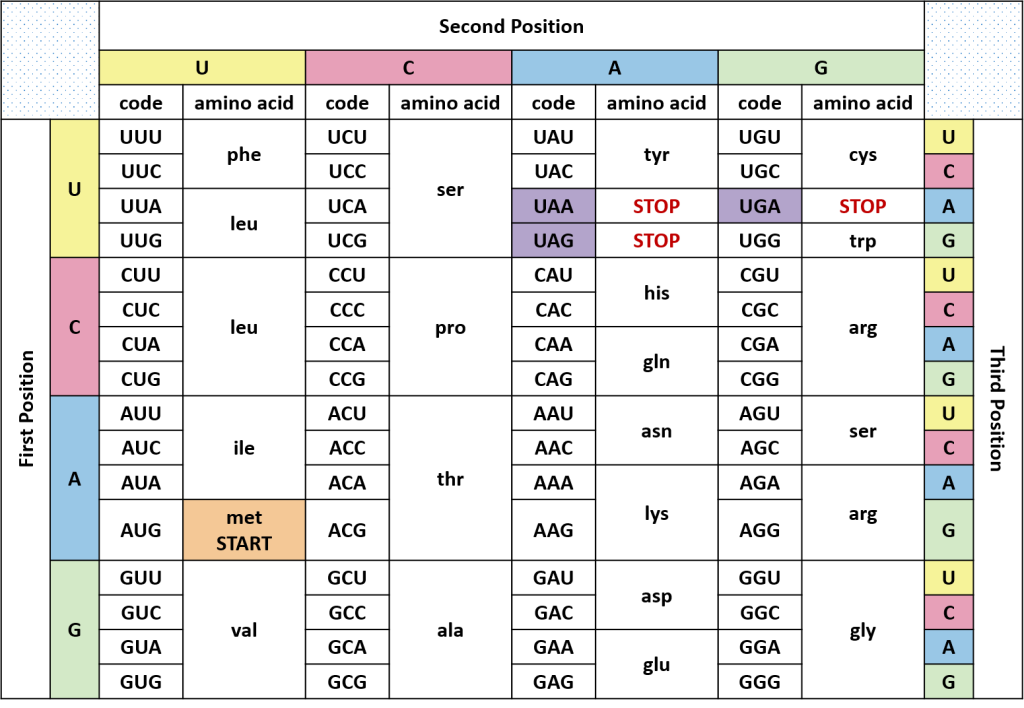
**Draw your Monster IN COLOR**

As a reminder, I am posting a slide show of these! *(unless you abstain, and ask me not to)*

**Monster’s Name:**

**Your name:**

**Permission to post?**

**Codon Chart: Read the mRNA Codon (1st letter, 2nd letter, 3rd letter) to find the Amino Acid**