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LG #13: How Does a DNA Sequence Become a Physical Feature?

Snork DNA

Worksheet

## How Does DNA Determine the Traits of a SNORK?



### Introduction:

In this simulation, you will examine the DNA sequence of an imaginary organism known as the Snork. Snorks were discovered on the planet Dee Enae in a distant solar system. Snorks only have one chromosome with 6 genes on it. Your job is to analyze the genes of its DNA and determine what traits the organism has.

### SNORK DNA AND TRAITS

RNA triplet	Amino Acid Number
UGG	20
UCG	16
GCU	2
UUG	4
GCG	3
CCC	5
UCC	7
UUU	8
AAA	9
CCA	12
AUA	13
GGG	1
UAG	6
GAU	10
CCU	11

Amino Acid Sequence	Trait
20-11-13	hairless
20-12-13	hairy
20-21-21	plump
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	no tail
9-4 - 8	tail
11-3-2	slanted eyes
11-3-3	wide round eyes
6-6-10	male
6-6-14	female

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### Observations and Analysis of Snork DNA

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. Write the complimentary mRNA, tRNA, the amino acid (A.A.) sequence it codes for and the related trait in the chart below.

<b>DNA</b>	<b>A C C G G T T A T   A G C C G A G G G   T T T A A C A A A   G G A C G C C G A   G G G A G G A A A   A T C A T C C T A</b>
<b>mRNA</b>	
<b>A.A.</b>	
<b>Trait</b>	

Draw your Snork in the space below. Be creative!

