

Name: \_\_\_\_\_



# Decoding DNA

You have a short DNA sequence of a turkey. Using this information, find out if it has white feathers or brown feathers.

Each group of three nitrogenous bases is a **codon**. It codes for one amino acid. Match the codons up with the amino acid and compare the amino acid sequence to the key below to determine the color of your turkey.

A turkey with white feathers has the amino acid sequence **arginine, threonine, leucine, STOP**.

A turkey with brown feathers has the amino acid sequence **arginine, threonine, phenylalanine, STOP**.

Your turkey:  
**CGC ACC CTT TAG**

Amino Acid	Possible DNA Codons
Leucine	CTT, CTC, CTA, CTG, TTA, TTG
Phenylalanine	TTT, TTC
Alanine	GCT, GCC, GCA, GCG
Threonine	ACT, ACC, ACA, ACG
Arginine	CGT, CGC, CGA, CGG, AGA, AGG
Glutamine	CAA, CAG
STOP	TAA, TAG, TGA

1. What is the amino acid sequence of your turkey?
2. Does your turkey have white or brown feathers?
3. Design a sequence of DNA different from the one above. Give your designer turkey white feathers.