

Decode Music Artists and Films

DNA is made of four bases: a (adenine), t (thymine), g (guanine) and c (cytosine). The combination of three of these bases codes for an amino acid. Each amino acid can be shorthanded by a letter of the alphabet such as A for alanine. Our systems have evolved to be rather smart. As there are three bases per amino acid there are 64 different combinations but only 20 main amino acids. Our systems have evolved to be rather smart, there is more than one code for amino acid.

In this activity, try to decode the music artists names and film titles. Below is a list of names of amino acids and their three base codes. These are referred to as codons.

Alanine – A – GCU, GCC, GCA, GCG
Arginine - R – AGA, AGG
Asparagine - N – AAU, AAC
Aspartic acid - D - GAU, GAC
Cysteine - C - UGU, UGC
Glutamine - Q – CAA, CAG
Glutamate - E – GAA, GAG
Glycine - G – GGU, GGC, GGA, GGG
Histidine - H – CAU, CAC
Isoleucine - I – AUU, AUC
Leucine - L – UUA, UUG, CUU, CUC, CUA, CUG
Lysine - K – AAA, AAG
Methionine -M - AUG
Phenylalanine - F – UUU, UUC
Proline - P – CCU, CCC, CCA, CCG
Serine - S – UCU, UCC, UCA, UCG
Threonine - T – ACU, ACC, ACA, ACG
Tryptophan - W - UGG
Tyrosine - Y – UAU, UAC
Valine - V – GUU, GUC, GUA, GUG

Example

GCU, AUG, GAG, AGG, AUC, AAU, GCA, ACC

GAU, GCA, GAC

American Dad

1) UCA, CCA, GAG, GAA, GAC

2) AGG, AUU, CAC, GCU, AAU, AAC, GCC

3) GCA, GUG, GCA, ACG, GCC, AGA

4) ACU, AUC, ACG, GCA, AAU, AUC, UGC

5) UCU, CAC, GCU, AAC, AUC, GCA
ACU, UGG, GCU, AUU, AAU (2 WORDS)

6) GCU, AAC, GCU, UCA, ACU, GCG, UCU, AUC, GCC

7) GAA, UUG, GUC, AUC, UCA
CCC, AGG, GAG, UCA, CUA, GAG, UAC