

Name:

Beth Sampher

Job:

Bioinformatics apprentice – Wellcome Sanger Institute

What do I do?

Bioinformatics is a combination of biology and computing. As an apprentice, I study part-time as well as having a job at the Sanger Institute, where I work on computer tools that help scientists with their experiments.

Me in 3 (three words to describe me)

- Conscientious
- Friendly
- Reliable

Fascinating facts about me

I am a keen swimmer and have been swimming regularly as part of a club for over 10 years now! My favourite food is Italian food and I would love to visit Italy one day. I am also a dog-lover, although I don't own one (yet!)



Skills I use in my job:



Problem solving – When my code isn't working properly I have to use problem solving skills to get to the bottom of it (sometimes it turns out to be a really silly mistake!)



Organisation – I have to be very organised to manage studying and working at the same time



Communication – I use both written and verbal communication skills to communicate with a variety of people



Teamwork – In my team, we often work on our own tasks, but we still need to help and support each other in order to be as effective as possible



Decode the sequence to reveal the surname of a scientist, who helped to discover the structure of DNA.

Sequence: **TTTCGGCTAACAAAGCTTATAAAT**

Letter	Codes in DNA
A	GCT, GCC, GCA, GCG
R	CGT, CGC, CGA, CCG, AGA, AGG
N	AAT, AAC
D	GAT, GAC
C	TGT, TGC
E	GAA, GAG
Q	CAA, CAG
G	GGT, GGC, GGA, GGG
H	CAT, CAC
I	ATT, ATC, ATA
L	TTA, TTG, CTT, CTC, CTA, CTG
K	AAA, AAG
M	ATG
F	TTT, TTC
P	CCT, CCC, CCA, CCG
S	AGT, AGC
T	ACT, ACC, ACA, ACG
W	TGG
Y	TAT, TAC
V	GTT, GTC, GTA, GTG

Can you crack the code?

A genome is a set of DNA instructions found in all living things- it is like a code made up of 4 letters- A, T, C and G. There are 3 billion DNA letters in our genome! Every three letters in the DNA sequence codes for 1 amino acid. Each Amino Acid is represented by a letter (shown in the table opposite).

Can you use your problem solving skills to decode the DNA sequence ? Use the table to help you.