Cells and DNA Worksheet

1) Below is a single strand of DNA.

Below each letter write the complementary strand of DNA.

-- A – T – G – C – G – G – C – G – A – T – T – T – A – A – G – C --

_____

2) We have many different types of cells in our body. In the nucleus of every cell,

we find our DNA which stands for _____ _____.

The molecule's shape is called a _____ _____.

It is made up of 4 different _____, a sugar and _____

backbone. DNA is like a _____ ladder.

The rungs are made up of the _____ _____.

The 4 bases are _____ and _____ and

_____ and _____.

_____ matches up with _____ and

_____ matches up with _____. The sequence of

the base pairs in the DNA determines which _____ the ribosomes

in the _____ will make. Some of my proteins are different than

yours because _____.

3)   Draw and label a cell and include--in the space provided--go big or go home!!

- the nucleus
- the DNA
- the ribosomes

4)   Every one of us has different strands of DNA -- the different sequences result in different characteristics. So I am short and green eyed and incredibly muscular!!

Your task is to make a person's strand of DNA. Unfortunately, you are going to use colouring pencils instead of gumdrops.

gumdrop color	DNA base
purple	A
yellow	C
green	G
red	T

These are the triple base pairs and what the characteristic they code for:

Eyes:	blue	AGG
	green	AGC
	brown	TGG
	hazel	TGC
Hair:	brown	GCC
	black	GTG
	blonde	GCT
	red	GTC
Dominant hand:	right	TAA
	left	TTA
Height:	short	GAA
	medium	GGG
	tall	GTT
Nose shape:	round	ATA
	long	GTA
	pointy	CAT

Person #1 is:

- short
- green eyed
- black haired
- round nosed
- right handed

Create a strand of DNA with the sequence that codes for Person #1:

_____

_____

Person #2 is:

- brown eyed
- tall
- pointy nosed
- left handed
- red haired

Construct the DNA sequence that codes for this person:

_____

_____

Explain why we do not look like each other but you look similar to your biological parents?