Structure of DNA

1 DNA is likened to a twisted ladder:

a What is this shape called

b What two chemicals make up its uprights **c** What chemicals make up its rungs?

2 When discussing DNA, what do the letters A, T, C and G stand for?

3 What are the complementary bases for:

a G

b T?

Genetic code

5 How much of a human's genetic make-up is the same as that of a chimpanzee?

6 What is a codon and what does it form?

7 Rerrange the following in order from smallest to largest:

nitrogen base DNA strand cell codon

Mutations

9 What is a mutation?

11 Give an example of a disease caused by a single gene mutation.

12 Identify a condition caused by having one extra chromosome.

Thinking questions

13 A base sequence in a particular DNA strand is CGGATAAGCTA.

a Write the complementary base sequence.

b Introduce a single mutation into the copying of this sequence.

c What effect does that mutation have on the chemicals it codes for?

15 Excessive exposure to UV radiation from sunlight changes your skin. Suggest how.

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