

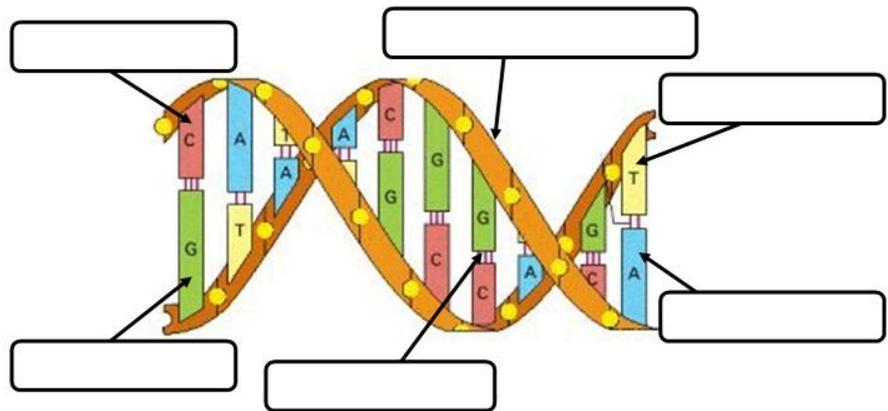
1. What is DNA?

- ☛ DNA stands for _____ and contains _____ information.
- ☛ It is found on _____ located in the nucleus of our cells.

2. What makes up a DNA molecule?

- ☛ The sides or _____ of the DNA molecule are made up of _____ (deoxyribose) and _____ molecules.
- ☛ The rungs that form the middle of the molecule are made up of pairs of _____ or nitrogen bases. _____ (A) pairs with _____ (T), while _____ (G) always pairs with _____ (C).
- ☛ The _____ of the bases determines the genetic _____.
- ☛ Label the diagram using the words listed below.

Backbone
Nitrogen Bonds
Adenine
Thymine
Cytosine
Guanine



3. How can DNA be used as evidence?

- ☛ Each person's DNA is _____ from other people (except identical twins).
- ☛ DNA collected from a crime scene can either link a _____ to the evidence or _____ a suspect, similar to the use of fingerprints.
- ☛ DNA can identify a victim through DNA from _____, even when no body can be found.
- ☛ DNA can _____ crime scenes together by linking the same perpetrator to different scenes.
- ☛ DNA can place an _____ at a crime scene, in a home, or in a room where the suspect claimed not to have been.
- ☛ DNA can _____ a claim of self-defense and put a _____ in the suspect's hand.
- ☛ It can change a story from an _____ to one of _____.

4. What factors can affect DNA evidence?

Environmental factors (e.g., _____, sunlight, _____, _____, and mold) can affect DNA. Therefore, not all DNA evidence will result in a usable DNA profile. Further, DNA testing cannot identify _____ the suspect was at the crime scene or for _____.

5. What is CODIS?

CODIS stands for _____, which is an electronic _____ of DNA profiles that can identify suspects.

6. DNA Matching

A. Who done it? _____ B. Whose your daddy? _____ C. Identical or not? _____

7. Which three statements below are true?

- _____ 1. The DNA in a man's blood is the same as the DNA in his skin cells and saliva.
- _____ 2. Each person's DNA is different from every other individual's.
- _____ 3. DNA can be found in all the cells in our bodies except the blood cells.
- _____ 4. DNA can have forensic value even if it is decades old.
- _____ 5. DNA evidence was first used to get a conviction in a trial in 1987.

8. The Killer's Trail – Watch the video and then choose the best answer for each question.

1. Who was the victim?
A. Marilyn Sheppard B. Sam Sheppard C. Sam Sheppard, Jr.
2. What are the keys to DNA fingerprinting?
A. Chromosomes B. Alleles C. Nitrogen bases
3. Where did the scientist get the sample of DNA for Marilyn Sheppard?
A. Hair B. Skin C. Fingernail
4. Whose blood was found in the blood trail?
A. Marilyn Sheppard B. Sam Sheppard C. Neither