

[Redacted]

Genes & Blood Type

1. [Redacted] Use **P** for plasma, **RBC** for red blood cell, **WBC** for white blood cell, and **PLT** for platelet.

- _____ A mixture of water, sugar, fat, protein, and potassium and calcium salts.
- _____ Contains a special protein called hemoglobin, which carries oxygen and causes these cells to be red
- _____ More than 92% of this substance is water.
- _____ Produce proteins called antibodies that help our bodies fight infection
- _____ Contains chemicals that helps blood form clots
- _____ Fragments of cells that gather at a cut or other wound and stick to the edges
- _____ Makes up 55% of the blood
- _____ Makes up 45% of the blood
- _____ Makes up 0.1% of the blood
- _____ Makes up 0.17% of the blood

[Redacted]

- The two genes you receive from your parents determine your blood type by causing proteins called _____ to exist on the surface of all of your _____ blood cells.
- What are the six genotypes (combinations) for blood types? _____
- Other genes make proteins called _____ that circulate in your blood plasma. These are responsible for ensuring that only the _____ of your blood type exist in your _____.
- List the genotypes (letters) that would belong to each blood group below.

Type A = _____ Type B = _____ Type AB = _____ Type O = _____

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.



7. Which 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.

- In order for a transfusion to work, the agglutinogens on the surface of the _____ blood cells match the agglutinogens on the surface of the _____ blood cells.
- This means that the blood type of the _____ and the blood type of the person receiving the transfusion must be _____.
- If the blood types don't match, special antibodies in the recipient's blood, called _____, will attack the donated blood causing blood clots to form in a reaction called _____.
- People with Type O blood are said to be universal _____, because they can donate blood to everyone. However, they can only receive blood that is Type _____.
- People with Type AB blood are said to be universal _____, because they can receive blood from everyone.
- Fill in the chart below using the information on the page.

Blood Type	Can receive blood from ...	Can give blood to ...
OO		
AB		
AA, AO		
BB, BO		

BLOOD SPATTER

Bloodstains – Angle of impact i

Measure the width and length of each bloodstain.

Make sure you do not include any tails or satellites when in your measurements.



W =

W =

W =

W =

L =

L =

L =

L =

W/L =

W/L =

W/L =

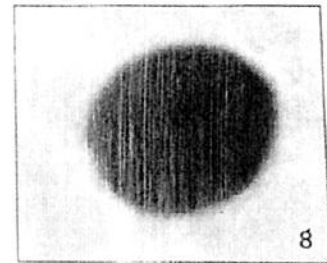
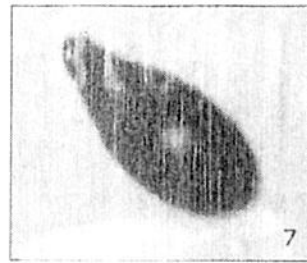
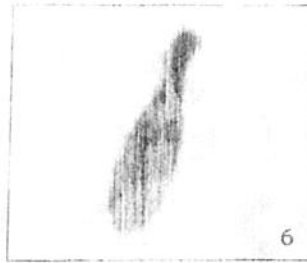
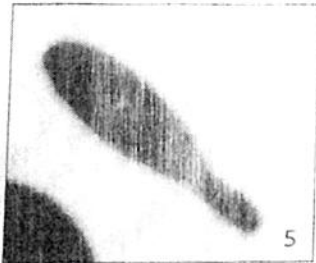
W/L =

$i =$ _____

$i =$ _____

$i =$ _____

$i =$ _____



W =

W =

W =

W =

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W/L =

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W/L =

W/L =

$i =$ _____

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