

Name _____

Date _____

DNA NET

Student Investigator Page

The Crime

Tom lives in a community surrounded by a security gate. Jim and his employees monitor the gate 24 hours a day. Only residents and guests with special passes are allowed through the gate.

Saturday night Tom waved to Jim as he entered the gate at 10:00 P.M.

Sunday morning Tom was enjoying a quiet breakfast at home when the police knocked on his door. A police officer reported that Tom's vehicle had been found several miles away. The car was a total wreck and blood was found on the steering wheel.

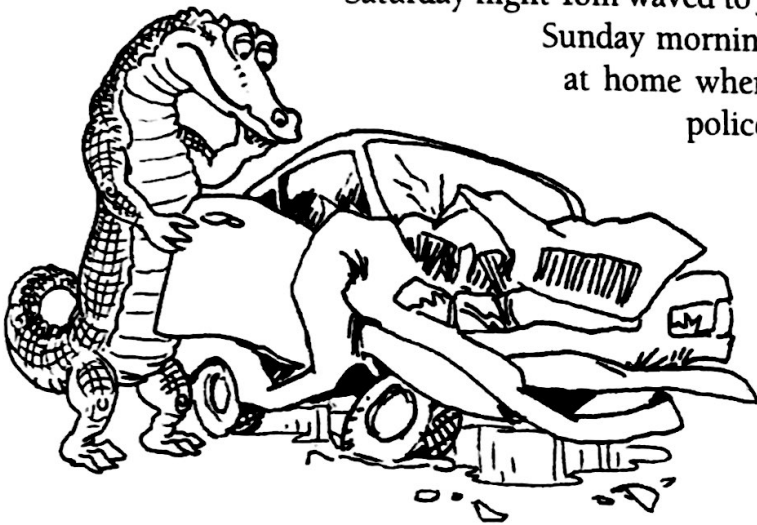
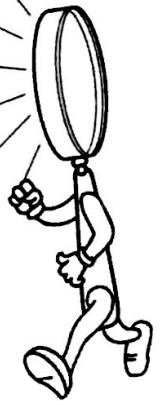
After talking with Jim at the gate, the police realized that no visitors had passed through the gate after 10:00 P.M. Saturday night. Therefore, it was decided that a resident of the apartment complex was responsible for the theft.

Police carried out a DNA search. This means that the police took samples of DNA from all residents of Tom's apartment complex. They also took DNA from the blood found on Tom's steering wheel. Once the tests were completed, they compared the DNA from the steering wheel with the DNA samples from the residents.

Procedure






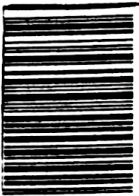







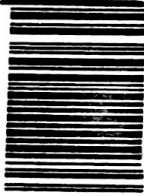

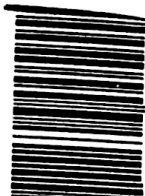
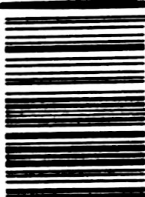



1. Use scissors to cut out the bar code that represents the DNA sample from the crime scene.
2. Compare this crime scene sample with the bar codes of residents from Tom's apartment complex.
3. Determine which resident's bar code matches the crime scene bar code.

Except for identical twins, everyone's DNA is unique.



The Bar Code Worksheet

These bar codes represent DNA evidence from the crime scene and from each resident of Tom's apartment building.

			
Crime Scene	Jane Jalopy	Stanley Saturn	Cynthia Corvette
			
Carl Cadillac	Pat Porsche	Roger Ranger	Edwin Explorer
			
Otis Oldsmobile	Pete Pontiac	Florence Ford	Paul Plymouth
			
Humphrey Honda	Nancy Nissan	Curly Chrysler	Craig Chevrolet
			
Tony Toyota	Jean Jeep	Ima Isuzu	Delta Dodge

Conclusion Questions

1. How many residents of Tom's apartment complex matched the crime scene bar code? _____
List the names of all matches.

2. What do the bar codes in this activity represent?

3. Jane and Julie are identical twins. If police found that one of these two girls had committed a crime, could they determine which one is guilty based on their DNA samples?

_____ Why or why not? _____

4. Police officers obtained DNA samples from Tom's vehicle. What evidence left by the criminal provided the DNA sample?

5. Besides the answer given to question 4, suggest other sources of DNA that might be left at a crime scene.

6. Write a one-paragraph story that describes a crime in which DNA was collected and used as evidence.
