NO PREP

Forensic Science

The 9/11 Investigation

Includes: Student reading, case study, differentiated questions, teacher key

Name: Period: Date:

Forensic Science: The 9/11 Investigation

The Largest Crime Scene in American History

Within hours of the September 11 attacks, the FBI opened the investigation code-named PENTTBOM — the largest in the bureau's history. More than half of all FBI agents worked the case at its peak, following more than half a million leads. The challenge was unlike any prior crime: four crash sites in three states, nineteen dead perpetrators, thousands of victims, and evidence scattered from Florida flight schools to bank records in the Persian Gulf. Investigators had to answer

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Names From Fragments

Identifying the hijackers began with the flight manifests, but proof required physical evidence. At the crash sites, forensic teams recovered remains that DNA analysis matched against reference samples, distinguishing hijackers from victims — at the Pentagon and Shanksville sites, examiners identified nearly every person aboard. Document evidence surfaced with surprising force: several hijackers' passports and identification cards were recovered, including one found blocks from the towers, and luggage belonging to ringleader Mohamed Atta that missed his connecting flight contained flight manuals, planning notes, and identity documents that read like an index of the plot. Rental cars abandoned at airports yielded receipts, maps, and flight-school paperwork. Within days, the FBI published nineteen names with photographs — an identification built from overlapping physical, documentary, and biometric proof rather than any single source. The trail extended backward from the airports into the hijackers' American lives. Searches of apartments in New Jersey, Florida, and San Diego produced flight-training materials, prepaid phone cards, and witnesses who could place the men at specific tables on specific days. Airport surveillance cameras at Dulles captured hijackers passing through security screening on the morning of the attacks; a Maine ATM camera recorded ringleader Mohamed Atta withdrawing cash the night before. Flight instructors recalled students indifferent to takeoffs and landings — details that had troubled at least one Minnesota flight school enough to alert the FBI weeks before the attacks, a warning whose mishandling later became a central exhibit in the study of pre-9/11 intelligence failure.

Following the Money

Financial forensics turned the hijackers' ordinary transactions into a map of the conspiracy. The plot cost an estimated $400,000 to $500,000, and the money left tracks: wire transfers from facilitators in the Gulf, deposits into Florida bank accounts, debit card purchases for flight lessons, gym memberships, and one-way tickets bought in the final days. Investigators traced transfers back to al-Qaeda's

financial network and identified the paymasters who moved funds to the cells. Curiously, the plot's bookkeeping was disciplined — in the last week, the hijackers wired unspent money back to their handlers, a detail that helped prosecutors demonstrate central coordination. The financial reconstruction reshaped global policy: banking laws were rewritten to detect terrorist financing, and 'follow the money' became a core counterterrorism doctrine alongside surveillance and interrogation. The financial reconstruction also delivered a strategic insight that reshaped policy: the plot was cheap. Half a million dollars had purchased flight training, travel, and living expenses for a conspiracy that inflicted tens of billions in direct damage — an asymmetry that meant terrorism could not be priced out of existence, only detected earlier. Treasury's financial intelligence unit gained new authority; banks worldwide began filing suspicious-activity reports under expanded rules; and investigators learned to watch the informal transfer networks that move money outside banking entirely. The 9/11 Commission's financing monograph drew the sober conclusion: following money is among the best tools for mapping a network after the fact, and among the weakest for stopping a cheap plot in advance.

The Digital and Paper Trails

The hijackers lived quietly, but modern life is a recording device. Surveillance cameras captured them passing airport checkpoints on the morning of the attacks. Flight schools held enrollment applications, simulator logs, and instructors' memories of students uninterested in landings. Internet cafés and library computers yielded e-mail accounts and reservation records; phone records connected cells in different cities to each other and to planners abroad. Forensic document examiners authenticated visas and spotted patterns in how the group obtained state ID cards. Each individual record was mundane; assembled, they produced a timeline of the plot accurate nearly to the hour. The investigation demonstrated a principle now central to forensic science: in a documented society, the absence of a confession matters little when receipts, cameras, servers, and

databases can be made to testify. The reconstruction achieved a precision that still startles: the 9/11 Commission's final report narrates the hijackers' last days nearly minute by minute — the Walmart stop in Maine, the highway toll records, the 6:45 a.m. check-in, the final phone call between Atta and his co-conspirator at another airport. Passengers' phone calls from the hijacked planes became real-time evidence, preserving seat numbers, weapons descriptions, and the hijackers' methods in the words of the people watching them. Cockpit voice and flight data recorders recovered from the Pentagon and Shanksville filled in the final minutes. Assembled, these fragments did something prosecution alone could not: they fixed the historical record so firmly that two decades of revisionism have failed to dislodge it.

What PENTTBOM Changed

The investigation's findings — confirmed by the bipartisan 9/11 Commission — established that al-Qaeda planned and financed the attacks, and the reconstruction stood up to two decades of scrutiny. Its methods transformed counterterrorism. Agencies that had failed to share fragments of the plot before the attacks were reorganized around fusing intelligence with forensic evidence; DNA identification protocols developed for the victims advanced disaster forensics worldwide; and financial tracking units became permanent fixtures of law enforcement. PENTTBOM also set a legal standard: terrorism would be proven with science and documents, not assertion — a foundation for prosecutions that continue today. For forensic science students, the case remains the defining demonstration that patient evidence work can reconstruct even a conspiracy designed to die with its perpetrators. The institutional legacy is everywhere in modern law enforcement. The FBI remade itself from a crime-solving agency into an intelligence-driven one, and Joint Terrorism Task Forces — teams pairing federal agents with state and local police — expanded from thirty-five before the attacks to more than a hundred after. The DNA identification effort for victims pushed forensic science itself forward, driving new kinship-matching software and

re-testing protocols; the medical examiner's office still returns newly identified remains to families decades later as technology improves. And when Zacarias Moussaoui faced trial in 2006 as a 9/11 conspirator, the case against him was built from the same financial records, flight-school files, and digital trails — forensic method standing in court exactly as PENTTBOM had designed it to.

Key Information: The 9/11 Forensic Investigation

Detail	Information
Code name	PENTTBOM — largest FBI investigation in history
Scale	Majority of FBI agents; 500,000+ leads pursued
Crash sites	Four sites across New York, Virginia, Pennsylvania
DNA work	Distinguished hijackers from victims among remains
Atta's luggage	Missed Flight 11; held manuals and planning notes
Plot cost	Estimated $400,000-$500,000, traced by wire transfers
Final transfers	Unspent funds wired back to handlers before attacks
Verification	Findings confirmed by the bipartisan 9/11 Commission

Case Study: Analyst Reyes and the Receipt

Dana Reyes, 34, was a financial analyst assigned to PENTTBOM's money team in a windowless office stacked with subpoenaed bank records. Her job was small on purpose: reconstruct ninety days of spending for two hijackers, purchase by purchase. "People imagine investigations as car chases," she told a training class years later. "Mine was a shoebox of ATM slips." One debit card record kept bothering her — a $23 charge at a Florida print shop eight days before the attacks. She subpoenaed the shop's records: the purchase was color copies of a flight-school certificate, duplicated for two men whose names appeared on different manifests. The receipt tied the pair to the same document, the same morning, the same plan — a link the wire transfers alone could not prove. Her finding became one line in a chart of hundreds connecting the cells. "No single record convicted anyone," she said. "But there is no alibi against four hundred receipts that all agree."

1. Why was Dana's $23 print-shop receipt investigatively valuable despite its tiny dollar amount?

_____

_____

2. What does Dana's work suggest about how forensic conclusions achieve certainty?

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Multiple Choice

1. What was PENTTBOM?
    a) The FBI's investigation of the 9/11 attacks
    b) A hijacked flight's operational code name and designation
    c) A Pentagon reconstruction and rebuilding project
    d) An al-Qaeda training camp and operational base

2. Why did investigators consider Atta's missing luggage so valuable?

a) It contained explosives residue and detonation materials

b) It proved he never boarded his assigned flight

c) It held flight manuals, planning notes, and identity documents

d) It carried the remaining cash for the entire plot

3. What did tracing the plot's $400,000-$500,000 in funding accomplish?

a) It recovered the exact amount of money for victims

b) It identified al-Qaeda's financial network and paymasters

c) It showed the plot had no outside financial support

d) It made DNA evidence unnecessary for prosecution

Matching

Write the letter of the correct definition on the line next to each term.

Term	Definition
1. ___ PENTTBOM	A) Tracing wire transfers, deposits, and purchases to map a plot
2. ___ Corroboration	B) Recovering evidence from computers, e-mail, and phone records
3. ___ Financial forensics	C) Bipartisan body that confirmed the investigation's findings
4. ___ Digital forensics	D) Independent evidence strands confirming the same conclusion
5. ___ 9/11 Commission	E) Code name of the FBI's investigation into the attacks

Fill-in-the-Blank

1. The FBI's 9/11 investigation was code-named _____.

2. The plot cost an estimated $400,000 to $_____.

3. Ringleader Mohamed _____ left luggage full of planning documents.

Short Answer

Answer each question in 2-4 complete sentences.

1. Why did the 9/11 investigation rely on corroboration across evidence types instead of one decisive proof?

_____

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_____

2. How did 'follow the money' become counterterrorism doctrine after 9/11?

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3. In a heavily documented society, can a large conspiracy stay hidden? Argue from the case's evidence.

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