



OHIO CSI FORENSIC DIVISION

UNIT 1 · MEDICAL INVESTIGATION · CASE STATIC

Period 1-2 · Statik Sound, a neighborhood recording studio

FORM NO. CSI-1-D16-S
CASE NO. JH-26-0831-A
REV. 2026-27
PAGE ____ OF ____

FOR EDUCATIONAL USE

OHIO CSI FORENSIC DIVISION

DO NOT DISTRIBUTE ANSWER KEYS

DAILY EVIDENCE SHEET

Oct 5 · Investigation Day 16 of 18 · The Tree Resolves

OFFICIAL

WEBXAM · DOMAIN 2 BIOTECHNOLOGY RESEARCH AND EXPERIMENTS · OHIO OUTCOME 5.8

VOCABULARY IN BOLD IS DEFINED WHERE IT FIRST APPEARS

INVESTIGATOR CODE (PERIOD + CODE, NOT YOUR NAME)	TEAM	DATE
		Oct 5, 2026

WHY TODAY MATTERS, IN PLAIN ENGLISH

SEC 00

Bring the evidence categories to one table. Compare what each record supports, where records depend on the same sample or assumption, and what remains uncertain. No fixed count proves a conclusion.

Today you will: bring every thread to one table, close the last open questions with the records exhibits you already hold, resolve the logic tree, and draft your manner-and-cause claim.

The ten-year idea: Corroboration means evidence supports the same explanation. Check quality, dependencies and limits; no fixed number of lines makes a conclusion certain.

CORROBORATE: when independent evidence lines agree. Analogy to hold onto: two witnesses who never met telling the same story.

EXONERATE: to clear a suspect with evidence. Analogy to hold onto: the alibi that checks out.

PART A · READ THE BRIEFING, THEN ANSWER FROM THE TEXT

SEC 01

Synthesis has a method, and it is the day-12 method scaled up: lay every evidence line side by side, ask what each supports INDEPENDENTLY, and watch where independent lines converge. Scene, trace, serology and DNA, chemistry, medical findings, records: six threads. Assess each record for quality, relevance and dependence on other records. Agreement can strengthen a hypothesis, but counting categories does not establish independence or certify a finding.

Today the final records exhibits release and close the open threads. Records are evidence with a special power: they are time-stamped by machines and third parties, which makes them the skeleton the soft estimates hang on.

A door log records detected events. Its clock, coverage, access routes and possible missing events must be checked before drawing an occupancy conclusion.

Exoneration discipline, one last time: every suspect leaves this case in one of three states: cleared by evidence, implicated by evidence, or not established by evidence. 'We could not prove it was them' and 'the evidence shows it was not them' are different sentences, and your matrix must say which one you mean, suspect by suspect.

Then the tree: walk each manner branch and ask what the assembled evidence does to it. Prune with reasons, out loud, in writing. Compare the hypotheses and state the best-supported draft with its limitations. Cite four exhibits across three categories to organize the assignment; that citation requirement does not prove a hypothesis or eliminate alternatives.

Answer from the reading above. Cite the sentence you used by copying its first three words in quotation marks.

PBS-U1-
D16-A1

The reading says records are the skeleton the soft estimates hang on. What gives records that power? Copy the first three words of the sentence you used.

PBS-U1-
D16-A2

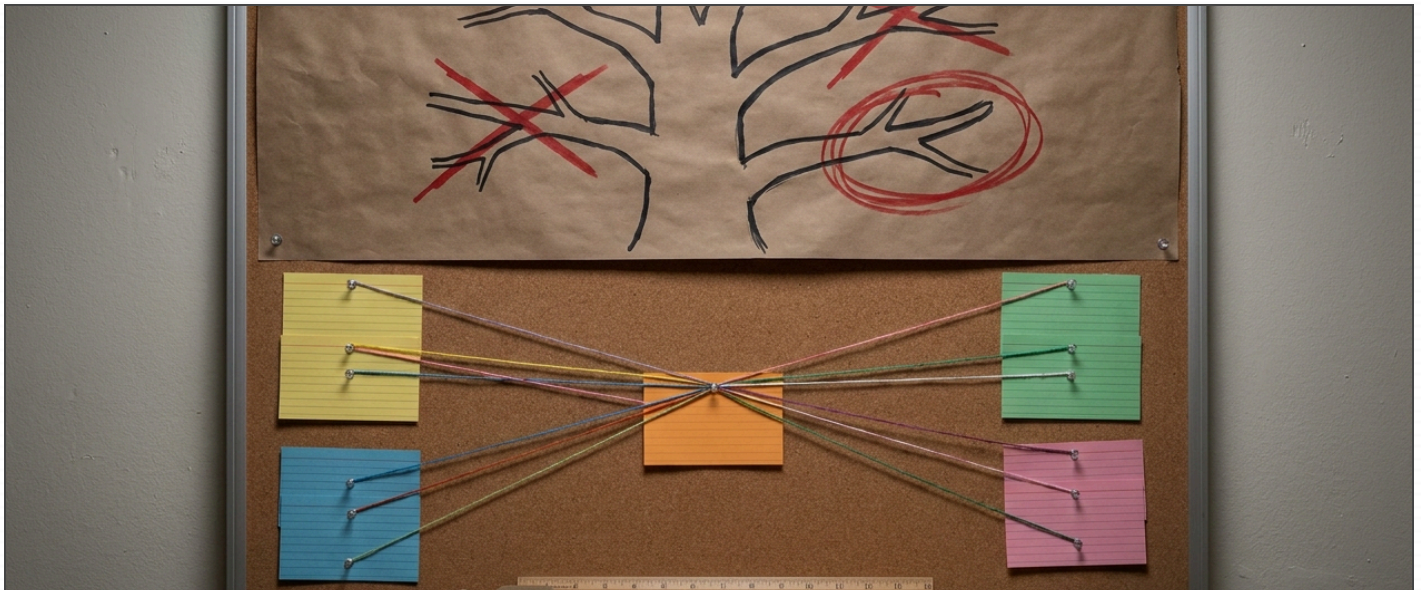
What are the three states a person of interest can leave this case in, according to the reading, and why are cleared and not established not the same sentence?

WORKED EXAMPLE, STEP BY STEP (A PRACTICE CASE, NOT OURS)

SEC 01A

Closing a logic tree on a practice case: the Larkspur greenhouse (made up)

A groundskeeper, 58, was found dead at 6:00 PM on the floor of a closed glass greenhouse on a 34 C July afternoon, and seven practice exhibits (P1 to P7) are used to assess the tree: natural, accident, self-harm, homicide, undetermined.



What to notice: Use the pictured board as an example layout. A crossed-out branch is not evidence: explain what each record supports and keep unsupported exclusions open.

1. Lay the threads side by side with their exhibits. Scene: P1 (door latched from the inside, no forced entry, no signs of struggle, body face down between the benches) and P6 (the vent fan motor burned out, the vent shutters jammed shut). Chemistry: P2 (drug and poison screens negative; blood sodium very high and blood concentrated, the pattern of severe dehydration). Medical: P3 (no injuries; old scar tissue in the heart muscle from a heart attack years earlier; no fresh heart damage). Records: P4 (thermostat log: 46 C inside from 1:00 PM to 4:30 PM), P5 (last text at 12:50 PM to a coworker: 'fixing the vent fan, out by 3'), P7 (site badge log: the coworker who argued with him that morning badged out at 11:30 AM and never returned). Result: four threads present; no trace or serology thread in this case.
2. Assess homicide. P1 records a latched door, no forced entry and no signs of struggle; P3 records no injuries; P7 records the coworker leaving at 11:30 AM. These observations weaken some violent scenarios but do not exclude every homicide mechanism or every possible earlier action. State the limits instead of pruning by a thread count.
3. Assess self-harm. No supplied exhibit establishes intent, and P5 records a plan to leave by 3. That plan supplies context, not proof that self-harm is impossible. Record that this hypothesis is not established by the supplied evidence.
4. Assess poisoning under both accident and homicide. P2 reports negative screens. These findings concern substances detectable by those tests under their conditions; they do not exclude every poison. The tested substances and detection limits would be needed for a stronger conclusion.
5. Assess natural disease. P3 documents old heart scarring and no fresh damage. Old disease is a possible contributor, not an established cause. Absence of fresh damage does not exclude a fatal cardiac event. Do not reject a hypothesis because only one evidence category addresses it.
6. Assess heat exposure. P4 records 46 C from 1:00 PM to 4:30 PM; P2 reports findings compatible with severe dehydration; P6 records ventilation failure. P5 records the 12:50 PM plan to repair the fan, before the logged hot interval; continuous occupancy during that interval is unverified. Four exhibits across three categories meet the citation exercise, but do not certify accidental manner.

7. Assess the coworker. P7 records departure at 11:30 AM with no recorded return, and P1 records the door state at discovery. These findings do not establish involvement, but they do not exclude every earlier action or unrecorded access. State the supported proposition and its limits before drafting the claim.

Finished product: Draft claim: heat exposure is a leading hypothesis, supported by P4 (temperature log), P6 (ventilation failure), and P2 (findings compatible with dehydration). P5 records a 12:50 PM intention to repair the fan, not continuous occupancy during 1:00 PM to 4:30 PM. P3 documents old cardiac scarring whose contribution remains uncertain. Accident is a working manner hypothesis. P7 and P1 do not establish coworker involvement, but do not exclude every possible involvement. Limits include the single temperature log, unverified exposure duration, and no witnessed collapse.

Now do the same steps on today's real data in Part B. If you were in class, use your team's data. If you were absent or are new, use the canned data set below.

IF YOU WERE NOT IN CLASS: THE DATA YOU NEED

SEC 01B

ABSENT OR NEW TO THE CLASS? START HERE

The last two records exhibits released (E14, E15), Team F logged them, each team gave a two-minute summary of what its thread supports on its own, and the class pruned the logic tree branch by branch with cited reasons. Below is the evidence log as it read at the end of the period. The draft claim itself is your Part C to write.

E1 (Scene)	Body prone (face down) behind the console; speaker cabinet across the legs; acoustic blanket half-covering the lower body; no drag marks.
E3 (Scene)	Spatter card: passive drops (blood that fell straight down) and one contact smear at the console corner; no cast-off pattern and no impact spatter (patterns that can occur in some forceful bloodshed events; their absence does not exclude every blow or struggle).
E7 (Trace)	Three blanket hairs: H1 and H2 consistent with the victim; H3 consistent with Cole with no root tag (consistent with a shed hair; absence of a root tag does not establish when or how it arrived), in a shared workspace.
E8 (Trace)	Console fader panel: victim (12-point match); one partial consistent with Cole, described by the card as aged (its deposition time is not independently established); one print matching the cleaner's elimination card. Can print: victim only.
E2 and E2b (Serology and DNA)	Console-corner and floor stains: Kastle-Meyer presumptive positive; ABO type B, the victim's record type, and all four persons of interest carry other types; STR lanes L1 and L2 match the victim's reference (L4) at every band.

E4 and E-STR (Serology and DNA)	Three energy-drink cans: prints victim only; rim DNA (lane L3) matches the victim; Cole (L5) and Vasquez (L6) excluded; Okoye and Tran reference cards available on request; no other profile appears in any lane.
E5 (Chemistry)	Glucose meter memory: Sat 11:02 AM 412 mg/dL; Sat 9:47 PM HI (above the meter's 600 mg/dL ceiling); fasting range about 70 to 100.
E10 (Chemistry)	Simulated panel: drug screen negative in every class; ethanol negative; vitreous (eye-fluid) glucose 612 mg/dL (ref 70 to 100); beta-hydroxybutyrate, a ketone, an acid the body makes when it burns fat for fuel, 8.2 mmol/L (ref below 0.6); potassium 6.4 mmol/L (ref 3.5 to 5.0); bicarbonate, the blood's acid buffer, 9 mmol/L (ref 22 to 28). These are the card's supplied values and reference ranges. Postmortem results require specimen-specific interpretation; vitreous glucose is not a fasting blood measurement, and the unspecified potassium and bicarbonate samples do not independently establish the living blood levels or a fatal mechanism.
E6 (Chemistry)	Insulin pen from the desk drawer: seal intact, never used, expired five months before the weekend; matches the lapsed prescription on the Day 4 background card. This pen does not establish all insulin access or use during the weekend.
E11 (Medical)	Autopsy: right temporal scalp laceration 3.1 cm with console-corner paint transfer and bleeding into the tissue (vital response); no skull fracture; no bleeding inside the skull; no defensive wounds; mild brain swelling and lung congestion, both logged as nonspecific (seen in many kinds of death).
E12 (Medical)	Histology: pancreatic islet crowded by immune cells (the autoimmune attack of type 1 diabetes; the diagnosis date is on DOC-2); kidney tubule cells swollen from osmotic stress; scalp wound margin shows vital response.
E13 (Medical)	Time of death: body at room temperature (21.8 C in a 21 C room), rigor fully passed, livor fixed on the front surfaces matching the prone position (consistent with the found position, but movement is not excluded); the classroom interpretation places death well over a day before Monday discovery, broadly consistent with late Saturday into early Sunday; these findings do not independently fix that narrow window.
DOC-6 (Records)	Door log: Fri 9:02 PM Cole OUT; Sat 2:15 PM Bell IN; Sun 3:00 AM DOOR HELD alarm with no fob; Mon 7:38 AM Cole IN; no other entries all weekend.
E9 and E9b (Records)	Threatening DMs from the Vasquez account: platform metadata dates every message 11 months ago, during a lease dispute that ended when she leased elsewhere; nothing from that account in the last 10 months.

E14 (Records, released today)	Venue post, geotagged and time-stamped Sat 10:14 PM: Okoye on stage across town, mid-set; set list and payment record attached. It covers one moment, not the whole night.
E15 (Records, released today)	Maintenance ticket: an HVAC pressure fault has caused intermittent DOOR HELD alarms on the studio door since July, including overnight instances with no entry; work order still open. This supplies a documented alternative explanation for the Sun 3:00 AM row; it does not independently prove the cause of that particular alarm.
Mechanism chain (from Day 14)	Insufficient insulin can increase blood glucose and fat breakdown; ketone accumulation can produce acidosis, dehydration, confusion and collapse. The combined findings support diabetic ketoacidosis in a person with long-diagnosed type 1 diabetes. The precise treatment history, including whether no insulin was taken, remains an inference.
Branches pruned at today's tree session, with the exhibits that pruned them	Poisoning or overdose: E10 reports negative results for the tested classes and ethanol; untested substances and test limitations remain. Fatal head injury: E11 reports no fracture, no bleeding inside the skull and no defensive wounds; E3 reports no impact or cast-off spatter. These findings weaken a fatal traumatic explanation without excluding every assault. E12 supports injury while alive, not who caused it. Movement or staging: E13 livor and E1 scene findings are consistent with the found position but do not rule out all movement. Another person present after Sat 2:15 PM: DOC-6 records no additional entry, and E15 supplies an alternative explanation for the 3:00 AM alarm; conclusions depend on log coverage and reliability. E7, E8 and E-STR do not establish a newly deposited trace from another person. Self-harm: no provided exhibit establishes intent. Compare these limits with the positive support for DKA; no fixed thread count proves or eliminates a manner.
Per person of interest, what sits in the columns (for item B2)	Cole: DOC-6 records OUT Fri 9:02 PM and IN Mon 7:38 AM. E7 (no root tag, shared space) and E8 (partial described as aged, normal use) are compatible with prior contact but do not date it. E2 and E-STR identify the sampled stains as the victim's; that does not prove no transfer to Cole. Vasquez: E9b dates the messages to 11 months ago, with none in the last 10 months, weakening a current-threat inference from these messages. E7 and E8 report no attributed trace; E2b excludes her type for the tested stain and E-STR excludes L6 for the compared sample. Okoye: DOC-6 reports no recorded entry after Sat 2:15 PM; this concerns logged door events, not every possible occupancy. E14 places him on stage at 10:14 PM, one moment; E7 and E8 report no attributed trace. Tran: DOC-6 reports the master key unused; he never claimed presence, and no attributed trace is reported. The supplied evidence does not establish that any of these people caused the death; sample exclusions and recorded movements do not exclude every possible involvement.

Use these values exactly as your team's data for Part B and Part E. Write "canned data set" at the top of Part B so Mr. Mendoza scores it as make-up work. Where the case file does not fix a number (room measurements, clock times, hair features), the value here is a classroom placeholder; your room's real numbers replace it.

PART B · WORK THE EVIDENCE

SEC 02

Lay the six threads side by side. For each, write what it supports on its own. Then count the evidence categories represented and describe dependencies that limit the support for your leading hypothesis.

THREAD: one team's lane of evidence: scene, trace, serology and DNA, chemistry, medical findings, records.

INDEPENDENT: evidence lines are independent only to the extent that they do not share relevant samples, sources, methods, events or assumptions. A shared category or different color does not determine independence.

THREAD	EXHIBITS FROM IT THAT MATTER FOR THE SURVIVING BRANCH (E-NUMBERS)	WHAT THIS THREAD SUPPORTS ON ITS OWN, IN ONE SENTENCE	DOES IT ALSO WEAKEN ANY OTHER BRANCH? WHICH?
Scene			
Trace			
Serology and DNA			
Chemistry			
Medical findings			
Records			

PBS-U1-D16-B1

☐

Convergence table complete: six threads, E-numbers, a one-sentence contribution and dependency limit for each. (Scored on the table.)

PBS-U1-D16-B2

☐

For each person of interest, write which closing sentence applies (the evidence shows it was not them; the evidence does not establish it was them; or the evidence implicates them) and the E-number that decides it.

PBS-U1-
D16-B3

☐

Count the evidence categories represented by your cited records. Then identify shared samples, sources, events or assumptions that limit independence. Check the assignment requirement of at least four exhibits across at least three categories. Show the count, but do not treat it as a measure of certainty.

PART C · WRITE THE CALL

SEC 03

Draft the manner-and-cause claim as one paragraph: the claim as the evidence supports it, at least four exhibits by E-number across at least three threads, the pruning reason for the branches that fell, and the strongest limitation. Stop there. Nothing is final tonight.

Claim ceiling. Your claim names manner and cause as the evidence supports them, states its strongest limitation, and stops there. The board and the report refine it; nothing is final tonight.

PBS-U1-
D16-C1

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Your writing:

PART D · VOCABULARY IN USE

SEC 04

PBS-U1-
D16-D1

☐

Use **corroborate** and **exonerate** correctly in one or two sentences about today's work. A definition alone does not count; use the words about something real.

One line each. These come from today's pack; answer from memory first, then check.

PBS-U1-
D16-E1

☐

Why do records anchor the timeline more firmly than the time-of-death window?

PBS-U1-
D16-E2

☐

Write the two different suspect-closing sentences.

PBS-U1-
D16-E3

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What does a claim need before you may write it?

TURN IN

SLIP

Draft manner-and-cause claim: One-paragraph claim; Four exhibits cited across three threads; Strongest limitation stated; Matrix resolution sentences per suspect.

Hand this sheet to Mr. Mendoza before you leave. The notebook pages named on today's pack stay in your Investigative Notebook.

STANDARDS CITED ON THIS SHEET, AND HOW IT IS USED IN DATA-DRIVEN INSTRUCTION

REF

WebXam alignment. Principles and Practice of Biomedical Technology (code 072110), Biotechnology Research and Experiments (46.07 percent of the test), Ohio outcome 5.8 Biotechnology Research and Experiments.

Ohio Health Science	5.8.11	Draw conclusions and propose next steps based on observations and data analysis, recognizing that experimental results must be open to the scrutiny of others.
Ohio Health Science	5.8.9	Describe the relationships between variables using correlations and draw conclusions.
Ohio Health Science	1.2.7	Use problem-solving and consensus-building techniques to draw conclusions and determine next steps.
PLTW PBS framework	EXD-B.4	Draw logical conclusions from experimental data.
PLTW PBS framework	CCP-A.1	Synthesize information from multiple credible sources, such as literature, databases, policy documents, and diverse perspectives from multiple disciplines, to explore causes and solutions to problems.
PLTW PBS framework	CCP-B.2	Conduct research using credible resources to craft explanations and draw conclusions while acknowledging the limitations, opposing views, and biases.

Common Core	RST.9-10.8	Assess the extent to which the reasoning and evidence in a text support the author's claim or recommendation.
Common Core	WHST.9-10.1	Write arguments focused on discipline-specific content: precise claims, relevant evidence, and reasoning that connects them.
Common Core	WHST.9-10.9	Draw evidence from informational texts to support analysis, reflection, and research.
Common Core	HSN-Q.A.1	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently, and choose and interpret the scale and the origin in graphs and data displays.
NGSS	SEP-7	Engaging in argument from evidence: evaluate the claims, evidence, and reasoning behind currently accepted explanations.

How this sheet is used in DDI. Each item carries a code (for example PBS-U1-D16-B2). Mr. Mendoza scores every item 0, 1, or 2 (2 = complete and correct, 1 = partly, 0 = missing or wrong) and records the scores by period and investigator code, never by name. The scores roll up into these skills:

PBS.S.16a	Lay evidence lines side by side and find where independent lines converge	items B1, B3, E3
PBS.S.16b	Use records as the timeline's skeleton and explain why	items A1, E1
PBS.S.16c	Close every person of interest by evidence, in the right sentence	items A2, B2, E2, D1
PBS.S.16d	Draft a claim with four exhibits across three threads and a stated limitation	items C1

Mastery rule. A skill is on track when at least two of its items score 2 (or its single item scores 2). A skill below that routes you to today's pack, SEC 02 (Background and briefing), and to the matching page on the portal, and it comes back as a warm-up question next week. These scores are Mr. Mendoza's instructional record for deciding what to reteach. They are not the report-card grade, which lives in Schoology.