



OHIO CSI FORENSIC DIVISION

UNIT 1 · MEDICAL INVESTIGATION · CASE STATIC

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

FORM NO. CSI-1-D13-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

Sep 28 · Investigation Day 13 of 18 · Autopsy Day

OFFICIAL

WEBXAM · DOMAIN 2 BIOTECHNOLOGY RESEARCH AND EXPERIMENTS · OHIO OUTCOMES 2.1 AND 2.3

VOCABULARY IN BOLD IS DEFINED WHERE IT FIRST APPEARS

INVESTIGATOR CODE (PERIOD + CODE, NOT YOUR NAME)	TEAM	DATE
		Sep 28, 2026

WHY TODAY MATTERS, IN PLAIN ENGLISH

SEC 00

Real autopsies work from the outside in, describe every finding before interpreting it, and read a wound for '**vital response**' to tell whether it happened while the person was alive. Today you work the same stations and make the same careful calls.

Today you will: run the autopsy stations: document findings on the body diagram, read the organ findings, and put your hands (virtually) on the heart's real anatomy.

The ten-year idea: A wound that bled tells you the person was alive when it happened. Vital response is the body time-stamping its own injuries.

VITAL RESPONSE: signs a wound happened while the person was alive: swelling, bleeding into tissue. Analogy to hold onto: only a running engine leaks oil.

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

SEC 01

An autopsy runs outside-in: external documentation (done yesterday), then systematic internal examination, organ by organ, with every finding described before it is interpreted. Today's packet is the examination record: your job is to read findings the way you read every exhibit: what does it SAY, then what does it MEAN, then what can it NOT mean.

The concept that unlocks today: **VITAL RESPONSE**. A living body responds to injury: it bleeds into tissue, swells, sends inflammatory cells. A wound inflicted after death shows little bleeding and no tissue reaction. Analogy: only a running engine leaks oil when punctured. So the wound margins carry a time stamp: with vital

response, the injury happened in life; without, after death. That one distinction separates 'injured and then died' from 'died and then damaged,' which can separate accident from staging.

The heart station: you cannot judge findings in an organ you have never navigated. The sheep heart simulation walks the real anatomy: four chambers (right atrium, right ventricle, left atrium, left ventricle), the valves between them, the great vessels (the aorta leaving the left ventricle, the pulmonary artery leaving the right), the coronary arteries on the surface that feed the muscle itself. On the glasses station, the Cleveland Clinic anatomy model shows the same structures in three dimensions at the teacher station. What you need for this case is orientation: enough anatomy to read the examiner's findings and know which findings matter.

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

PBS-U1-
D13-A1

The reading says a living body responds to injury in three ways. Name them and copy the first three words of the sentence you used.

PBS-U1-
D13-A2

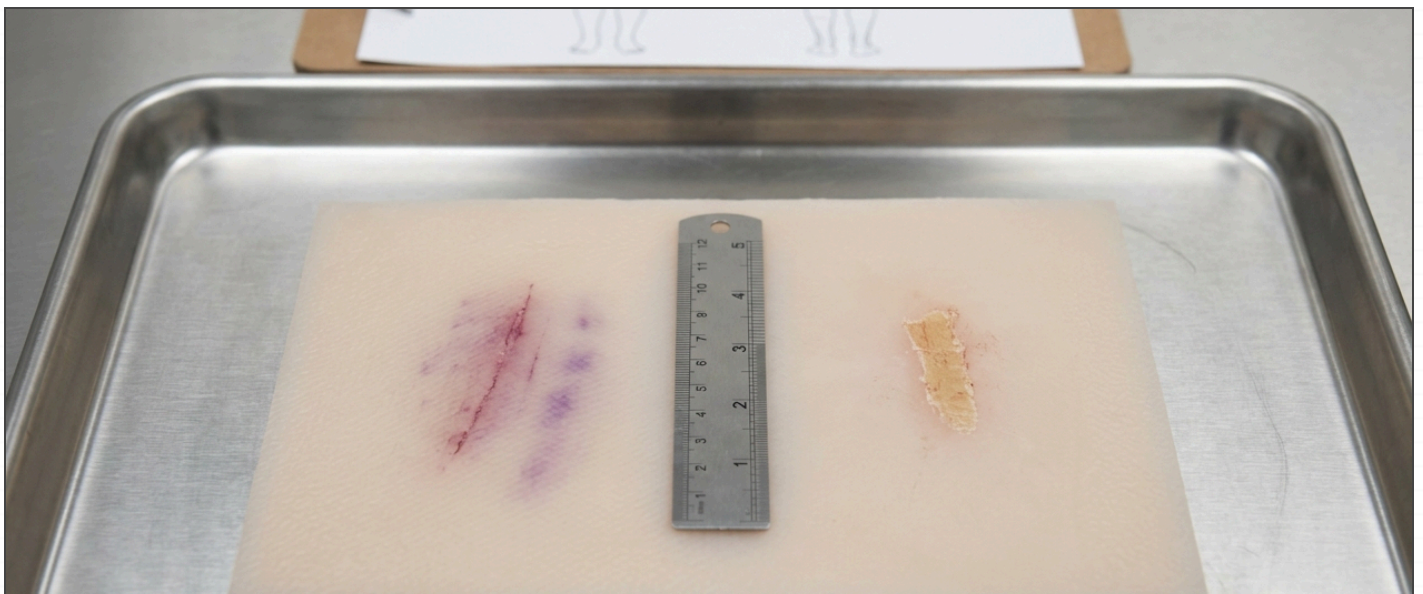
Why does the reading say you cannot judge findings in an organ you have never navigated?

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

SEC 01A

Transcribing a finding, calling vital response, and keeping interpretation in its own column (practice card, not the case)

A training findings card describes a person found at the foot of a stepladder in a garage, with two skin injuries and a heart mass listed.



What to notice: Notice the purple under the left scrape: that is blood that leaked into living tissue, a vital response. A scrape made after death shows no such color change beneath it.

1. Step 1. Region in the diagram's terms, not everyday words. The card says 'left forearm, palm side': write 'left forearm, anterior (front) surface'. The card says 'right shin': write 'right lower leg, anterior surface'.
2. Step 2. Copy each finding word for word into the finding column, no additions. Finding 1: 'Abrasion (a scrape that removes the top skin layer), 4 cm, with bruising in the tissue beneath.' Finding 2: 'Abrasion, 2 cm, pale, with no bleeding into the tissue beneath.'
3. Step 3. Vital response call, with the sign. Finding 1: YES, sign: bruising means blood leaked into living tissue. Finding 2: NO, sign: pale with no bleeding into tissue, the way a scrape looks when the circulation had already stopped.
4. Step 4. Interpretation, in its own column, citing the finding it rests on. For Finding 1: 'Consistent with an injury in life (cites the bruising); does not say how long before death, and does not say it caused death.' For Finding 2: 'Consistent with an injury after death, for example during moving by responders (cites the pale, bloodless margin); does not say who or how.'
5. Step 5. The heart line on the card: heart mass 330 g in a 55 kg person. Convert kilograms to grams first: 55 times 1,000 = 55,000 g. Then 330 divided by 55,000 = 0.006 = 0.6 percent of body mass. Write it in the finding column as a number, not as 'normal' or 'enlarged'; that judgment needs a reference range you were not given.
6. Step 6. Read the columns back: every finding is verbatim, every call has a sign, every interpretation names its finding, and nothing in the table says how the person died. That last check is the ceiling.

Finished product: Finding 1 (left forearm abrasion with bruising) shows vital response, so it happened in life; Finding 2 (pale right lower leg abrasion, no bleeding) does not, so it is consistent with an injury after death. The 330 g heart in a 55 kg person is 0.6 percent of body mass, a number logged without a judgment.

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

In class, the autopsy findings packet (E11) opened and teams rotated through four stations: transcribing findings onto the body diagram, the sheep heart simulation, the anatomy glasses station, and vital-response calls. During office inventory an insulin pen (E6) also turned up. Copy findings exactly as written; interpretations go in their own column.

BODY REGION (DIAGRAM TERM)	FINDING, EXACTLY AS WRITTEN IN THE PACKET	VITAL RESPONSE? (SIGN)	INTERPRETATION A TEAM WROTE, CITING THE FINDING
Scalp, right temporal region (the side of the head above and in front of the ear)	Right temporal scalp laceration, 3.1 cm, with paint transfer consistent with the console- corner finish; bleeding into surrounding tissue at the wound margin.	Yes (bleeding into surrounding tissue)	Consistent with striking the console corner while alive (paint transfer plus vital response). Does not say how long before death, or whether it caused death.
Skull and brain (inside the head)	No skull fracture, no bleeding inside the skull.	Not applicable (no injury found)	Weakens any idea that the head wound was a deep or fatal blow; the wound is a surface injury.
Hands and forearms	No defensive wounds on hands or forearms.	Not applicable (no injury found)	No evidence of fending off a person; cannot prove nobody was present.
Brain	Mild generalized brain swelling (edema), noted as nonspecific and NOT from the surface head wound.	Cannot tell (not a wound)	Nonspecific: many kinds of death show it. Logged as nonspecific, points nowhere on its own.
Lungs	Lungs congested (heavy with fluid), a nonspecific finding.	Cannot tell (not a wound)	Nonspecific; logged as such.
Pancreas	Grossly unremarkable, histology pending.	Cannot tell	Nothing to interpret until the slides (tomorrow).

Words in the packet, defined	Laceration: a tear in the skin from a blunt edge. Paint transfer: flecks of the console's finish left in the wound, tying the wound to that object. Edema: swelling from fluid where it should not be. Congested: heavy with blood or fluid. Grossly unremarkable: normal to the naked eye, before the microscope. Nonspecific: a finding many different deaths share, so it points to none of them by itself. Defensive wounds: cuts or bruises on the hands and forearms from blocking a blow.
Exhibit E6 (exhibit a06), found at inventory	An insulin pen in the studio desk drawer: seal intact, never used, expiration date five months before the weekend. It matches the Day 4 background card's lapsed prescription. Team D's job today was to write the question this raises next to the Day 9 meter readings and the Day 10 panel, not to answer it.
Heart checkpoint (sheet Part B3, same for both cases)	Path of blood: right atrium, right ventricle, lungs, left atrium, left ventricle, aorta. Practice mass: $70 \text{ kg} = 70,000 \text{ g}$; $350 \text{ divided by } 70,000 = 0.005 = 0.5 \text{ percent of body mass}$.
Three findings a team picked for Part C	The temporal laceration (vital response yes), the absence of skull fracture or bleeding inside the skull, and the absence of defensive wounds; each interpretation cites its finding; the manner is left open.

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

Work from the autopsy findings packet and the heart simulation. Findings go in the finding column exactly as written; anything you add goes in the interpretation column and cites the finding it rests on.

FINDING: what the examiner saw, measured, or weighed, written before any meaning is attached.

INTERPRETATION: what a finding might mean. It lives in its own column and always names the finding it rests on.

BODY REGION (USE THE DIAGRAM'S TERMS)	FINDING, EXACTLY AS WRITTEN IN THE PACKET	VITAL RESPONSE PRESENT? (YES, NO, CANNOT TELL) AND THE SIGN	INTERPRETATION, CITING THE FINDING

PBS-U1-
D13-B1

☐

Findings table complete: regions named with anatomical terms, findings verbatim, vital-response calls with a sign, interpretations citing findings. (Scored on the table.)

PBS-U1-
D13-B2

☐

Pick one finding with vital response present. What does that time-stamp, and what does it still not tell you?

PBS-U1-
D13-B3

☐

Heart checkpoint. In order, list the path of blood from the body back to the body through the heart: the two chambers on the right, the lungs, the two chambers on the left, and the vessel that leaves the heart. Then the practice number: a heart of 350 grams in a person of 70 kilograms is what percent of body mass? (Convert kilograms to grams first.)

PART C · WRITE THE CALL

SEC 03

Write the examination summary for the case conference: the three findings that matter most today, each with its vital-response call, one interpretation per finding that cites it, and the sentence that keeps the manner open. Plain words; anatomical terms where the diagram uses them.

Claim ceiling. Findings support or weaken causes of death; the manner still waits for the full picture. One organ's finding is a voice, not a verdict.

PBS-U1-
D13-C1

☐

Your writing:

PART D · VOCABULARY IN USE

SEC 04

PBS-U1-
D13-D1

☐

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

PART E · SELF-CHECK AND EXIT

SEC 05

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

PBS-U1-
D13-E1

☐

A laceration shows bleeding into surrounding tissue. What does that time-stamp?

PBS-U1-
D13-E2

☐

Why learn heart anatomy to read an autopsy report?

PBS-U1-
D13-E3

☐

Findings column vs interpretation column: why keep them apart?

TURN IN

SLIP

Autopsy findings sheet: Body diagram annotated; Organ findings logged; Vital-response calls with reasons; Heart checkpoint answers.

Hand this sheet to Mr. Mendoza before you leave. The notebook pages named on today's pack stay in your Investigative Notebook. Pre-lab gate: Sheep Heart Dissection simulation at mendozabiomed.org/learn/lab-sim/pbs-sheep-heart-dissection.

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	2.1.1	Identify body planes, directions, cavities, quadrants, and regions.
Ohio Health Science	2.1.3	Describe the structures and functions of the cardiovascular system and trace the path of blood and identify factors affecting blood flow
Ohio Health Science	2.1.14	Describe the difference between pathology and physiology and the conditions typically observed during a disease state.
Ohio Health Science	2.3.1	Build and decipher medical term meanings by identifying and using word elements (e.g., word roots, prefixes, suffixes, combining forms).
PLTW PBS framework	ANP-A.3	Explain how organ anatomy (such as that of the heart or brain) is related to function.
PLTW PBS framework	ANP-A.4	Demonstrate how a change in structure in the body impacts function.
PLTW PBS framework	EXD-A.4	Maintain a detailed repeatable account of an experiment in a physical or digital laboratory notebook.
Common Core	RST.9-10.4	Determine the meaning of symbols, key terms, and domain-specific words as used in a scientific or technical context.
Common Core	WHST.9-10.2	Write informative or explanatory texts, including scientific procedures and technical processes, with precise language and domain-specific vocabulary.
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-6	Constructing explanations: construct an explanation based on valid and reliable evidence.

How this sheet is used in DDI. Each item carries a code (for example PBS-U1-D13-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.13a	Explain vital response and use it to time-stamp an injury	items A1, B2, E1, D1
PBS.S.13b	Transcribe findings to the body diagram and keep interpretations in their own column	items B1, E3
PBS.S.13c	Name the heart's chambers, valves, and vessels and trace the path of blood	items A2, B3, E2
PBS.S.13d	Write a finding that cites its evidence and stays inside the ceiling	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.