



## OVERVIEW

Participants take a written test of basic forensic science theory to qualify as semifinalists. Semifinalists demonstrate their ability to use forensic technology and skills to collect from and analyze a mock crime scene.

## ELIGIBILITY

One (1) team of two (2) individuals per chapter may participate.

## TIME LIMITS

1. Preliminary Round: One (1) hour to complete the written test is allotted.
2. Semifinal Round:
  - a. Twenty (20) minutes is allowed to review the crime scene and gather evidence. Time commences when all participants are in the crime scene room and concludes after twenty (20) minutes.
  - b. An additional fifteen (15) minutes is allowed for teams to write their analysis. Time begins when a team enters the analysis room and concludes at the end of fifteen (15) minutes.

## LEAP

A team LEAP Response is required for this event and must be submitted at event check-in (see LEAP Program).

## ATTIRE

TSA competition attire is required.

## PROCEDURE

### Preliminary Round

1. Team members report for the written test at the time and place stated in the conference program, and submit their team LEAP Response.
2. A written forensic science test is administered to all team members at the same time.
3. Twelve (12) teams with the highest averaged scores are selected as semifinalists for the on-site problem.
4. A list of semifinalists in random order is posted.

### Semifinal Round

1. Semifinalist teams report to sign up for a time slot for the on-site problem at the time and place stated in the conference program.
2. Each team will be given a copy of the on-site problem to solve and is required to:
  - a. Demonstrate one to two (1-2) techniques/procedures for evidence collection using their toolkits
  - b. Write an analysis of the crime scene (see Mock Crime Scene Analysis form)
3. Semifinalists will be judged on their LEAP Response requirements.
4. Ten (10) finalists will be announced during the conference award ceremony.



## REGULATIONS

### Preliminary Round

- A. Team members take the written test individually.
- B. These same two (2) team members will compete in the semifinalist round, should the team qualify.

### Semifinal Round

- A. No reference may be made concerning the name of the team, the team members, or their school.
- B. Team members are to write their team identification number in the top right corner of the written analysis.
- C. Each written analysis must be the result of the team's own effort.
- D. No reference materials may be used during this event.
- E. No observers are allowed in the event or preparation rooms during the event.
- F. Teams are required to bring their own kit containing the following forensic tools:

Required forensic tools:

- 1. roll of string
- 2. safety glasses (2 pairs)
- 3. tape measure (10 m)
- 4. lift backing cards (with scale)
- 5. tweezers
- 6. scissors
- 7. crime scene template
- 8. flashlight
- 9. pen or fine point marker (for labeling)
- 10. pencils
- 11. duster and dust (for fingerprinting)
- 12. fingerprint lifting tape (or clear packing tape, NOT Scotch tape)

Optional tools:

- 1. Clipboard(s)
  - 2. Blank sheets of paper (for note taking)
- C. In order to provide a written report/analysis for the on-site problem, participants must be able to complete (at a minimum) the following:
    - 1. Collection of fingerprints
    - 2. Collection of trace evidence
    - 3. Creation of a proportional drawing that accurately represents the crime scene. Note: The crime scene template in the toolkit may be used to create the drawing, but the drawing does not need to be to scale.
    - 4. Blood spatter pattern analysis



E. The LEAP Response:

1. Participants document the leadership skills they have developed and demonstrated while working on this event, and on a non-competitive event leadership experience.
2. Find specific LEAP Response regulations in the LEAP Program section of this guide, and on the [TSA website](#).

## EVALUATION

Evaluation is based on

1. Preliminary Round: A team's written test score
  - a. The written test scores of the individual team members will be averaged and recorded as a single team score on the rubric.
  - b. Twelve (12) teams with the highest scores will be selected as the semifinalists for the on-site problem.
2. Semifinal Round: A team's performance on the on-site problem, and the content and quality of the LEAP Response.

Refer to the official rating form for more information.

## STEM INTEGRATION

This event has connections to the STEM areas of Science, Technology, Engineering, and Mathematics.

## CAREERS RELATED TO THIS EVENT

This competition connects to one or more of the careers below:

- Crime scene investigator
- Forensic anthropologist
- Forensic pathologist
- Forensic engineering scientist



Team ID number \_\_\_\_\_

## MIDDLE SCHOOL FORENSIC TECHNOLOGY MOCK CRIME SCENE ANALYSIS

Use the space below to record/describe the processes/techniques used to collect evidence from the mock crime scene and any applicable conclusions.

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Submitted by:

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# FORENSIC TECHNOLOGY

## EVENT COORDINATOR INSTRUCTIONS

### PERSONNEL

- A. Event coordinator
- B. Judges:
  - 1. Preliminary round, two (2) or more
  - 2. Semifinal round, two (2) or more
- C. Timekeepers for recording start/stop times, one (1) per event room
- D. Monitors, one (1) per event room

### MATERIALS

- A. Coordinator's packet containing:
  - 1. Event guidelines, one (1) copy for the coordinator and each judge
  - 2. TSA Event Coordinator Report
  - 3. List of judges/assistants
  - 4. Results envelope with coordinator forms
- B. Stopwatches for timekeepers, one (1) per room
- C. Blank Mock Crime Scene Analysis forms
- D. Tables and chairs in the analysis room
- E. Copies of the semifinalist problem, (1) one per team and (1) per judge
- F. Required evidence for the mock crime scene (based on the semifinalist problem)

### RESPONSIBILITIES

- A. At the conference:
  - 1. Attend the mandatory coordinator's meeting at the designated time and location.
  - 2. Report to the CRC room and check the contents of the coordinator's packet.
  - 3. Review the event guidelines and check to see that enough judges/assistants have been scheduled.
  - 4. Inspect the area(s) in which the event is being held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.
  - 5. At least one (1) hour before the event is scheduled to begin, meet with judges/assistants to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.
- B. Preliminary round:
  - 1. Begin the event at the scheduled time by closing the doors and checking the entry list.
  - 2. All participants and judges should be in the room at this time.
  - 3. In order to compete, participants must be on the list or must have approval of the CRC.
  - 4. Monitor the one (1)-hour written test.



5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either
    - to deduct twenty percent (20%) of the total possible points in this round or
    - to disqualify the entry
    - The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.
  6. Judges determine the twelve (12) semifinalists.
  7. Submit semifinalist results to the CRC for posting.
- C. Semifinal Round:
1. Set up the mock crime scene in the designated room one (1) hour prior to the semifinalist sign-up time.
  2. Facilitate semifinalist sign-up times at the designated location.
    - a. This may be the same room used for teams to write their analysis.
    - b. Sign-ups should not take place in the same room that is prepared for the crime scene.
  3. When each team enters the crime scene room, distribute the problem.
  4. Time begins when the problem is handed to each team.
  5. Allow twenty (20) minutes for each team to review the crime scene in order to collect items, data, and/or other information necessary for preparing an analysis.
  6. At the end of the twenty (20)-minute period, escort each team to the room designated for writing the analysis.
  7. Provide fifteen (15) minutes for each team to complete the written crime scene analysis.
  8. Collect all materials, including any notes, prior to dismissing the participants.
  9. Judges determine the ten (10) finalists. Any ties should be broken by using the highest average team score on the written test.
  10. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and CRC manager to determine either
    - to deduct twenty percent (20%) of the total possible points in this round or
    - to disqualify the entry
    - The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.
- D. Submit the finalist results and all related forms in the results envelope to the CRC room.
- E. Manage security and removal of all materials from the crime scene area.



Participant/Team ID# \_\_\_\_\_

# FORENSIC TECHNOLOGY

2018 & 2019 OFFICIAL RATING FORM

MIDDLE SCHOOL

## Go/No Go Specifications

Before judging an entry, ensure that all items are present; indicate presence with an "X" in the box. If an item is missing, leave the box blank and place an "X" in the box labeled ENTRY NOT EVALUATED; this disqualifies the entry and it is not to be judged.

- Tool kit is present
- Completed LEAP document is present
- ENTRY NOT EVALUATED

## Criterion Performance Levels

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points
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Evaluators: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

## Written Test Score (50 points)

**SUBTOTAL (50 points)**

## Analysis of Crime Scene (70 points)

<b>Primary survey/ walkthrough</b> (X1)	No initial survey is conducted; no verbal or written attempt is made to document/record the crime scene; furniture or other items are touched or moved.	A partial attempt at an initial survey is made; there is some evidence of a verbal assessment of the scene, and a few notes are taken; minor disruption is made to the crime scene.	A thorough survey of the scene is conducted to prioritize evidence collection; verbal assessment of the scene is made and notes are taken; no furniture or items are moved.
<b>Processing the scene</b> (X1)	Little to no investigation of the scene is evident; no sketches or diagrams are created; proper procedure is not followed for evidence collection, and/ or there are obvious signs of contamination.	A mostly thorough investigation of the scene is conducted and some sketches or diagrams are created; proper procedure is followed for most of the evidence collection, and there are limited signs of contamination.	A thorough investigation of the scene is conducted and sketches or diagrams are created; proper procedure is followed for evidence collection, and there are no obvious signs of contamination.
<b>Evidence collection</b> (X1)	Three or more pieces of evidence are missing, and/ or some of the collected items are not those specified.	Most pieces of evidence from the team's materials list are included and are correct.	All pieces of evidence in the team's materials list are included and are correct.
<b>Technique</b> (X2)	Little to no indication of proper technique is used in collecting the evidence.	Some indication of proper technique is used in collecting the evidence.	Proper technique is used in collecting most or all of the evidence.
<b>Crime scene analysis</b> (X2)	Written analysis is weak and/ or contains personal theories or conclusions; analysis does not clearly provide a detailed summary of the scene, processing, and evidence collection.	Written analysis is somewhat complete and contains limited personal theories or conclusions; analysis provides a somewhat detailed summary of the scene, processing, and evidence collection.	Written analysis is strong and does not contain personal theories or conclusions; analysis clearly provides a detailed summary of the scene, processing, and evidence collection.

**ANALYSIS OF CRIME SCENE SUBTOTAL (70 points)**

Record scores in the column spaces below.



Rules violations (a deduction of 20% of the total possible points for the above sections) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: \_\_\_\_\_

**PRELIMINARY SUBTOTAL (120 points)**

**Semifinal LEAP Response (12 points)**

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points
<b>LEAP Response</b> (10% of the total event points)	The team's efforts are not clearly communicated, lack detail, and are unconvincing; few, if any, attempts are made to identify and incorporate the SLC Practices.	The team's efforts are adequately communicated, include some detail, are clear, and are generally convincing; identification and incorporation of the SLC Practices are satisfactory.	The team's efforts are clearly communicated, fully-detailed, and convincing; identification and incorporation of the SLC Practices are excellent.

**SEMIFINAL LEAP RESPONSE SUBTOTAL(12 POINTS)**

Rules violations (a deduction of 20% of the total points earned) must be initiated by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: \_\_\_\_\_

**SEMIFINAL SUBTOTAL (12 POINTS)**

(To arrive at the TOTAL score, add the PRELIMINARY SUBTOTAL and the SEMIFINAL SUBTOTAL.)

**TOTAL (132 points)**

Comments:

I certify these results to be true and accurate to the best of my knowledge.

Evaluator

Printed name: \_\_\_\_\_

Signature: \_\_\_\_\_