



FORENSIC TECHNOLOGY

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

Entries are limited to one (1) team of two (2) individuals per chapter.

TIME LIMITS

- A. Participants are allowed one (1) hour to complete the written test.
- B. Semifinalists are allowed fifteen (15) minutes to gather evidence from the mock crime scene. Time commences when all participants are in the crime scene room and concludes after fifteen (15) minutes. 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.

ATTIRE

TSA competition attire, as described in the National TSA Dress Code section of this guide, is required.

PROCEDURE

- A. Team members report for the written test at the time and place stated in the conference program.
- B. A written forensic science test is administered to all team members at the same time.
- C. Twelve (12) teams with the highest averaged scores are selected as semifinalists for the on-site problem. A list of semifinalists in random order is posted.
- D. 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.



- E. Each team will be given a copy of the on-site problem and allowed fifteen (15) minutes to review the crime scene to collect items, data, and/or other information necessary to solve the problem. At the end of the fifteen (15)-minute period, teams will be taken to another area and given fifteen (15) minutes to complete the written analysis (see Mock Crime Scene Analysis form).

It is essential that students and advisors routinely check the TSA website (www.tsaweb.org) for updated information about TSA general rules and competitive event guidelines. This information is found on the website under Competitions/Competition Updates. When students participate in any TSA competitive event, they are responsible for knowing of all updates, changes, and clarifications related to that event.

REGULATIONS

- A. Team members take the written test individually. These same two team members will compete in the semifinalist round, should the team qualify.
- B. No reference may be made concerning the name of the team, the team members, or their school. 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. No reference materials may be used during this event.
- D. No observers are allowed in the event or preparation rooms during the event.
- E. Teams are required to bring their own pencils (for the written test and the semifinalist round) and 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

 Participants must provide—and bring to the test site—two (2) pencils (sharpened standard #2/HB grade with an eraser, or #2 mechanical with an eraser) for any competition that involves a written test.



Optional tools:

1. Clipboard(s)
 2. Blank sheets of paper (for note taking)
- F. In order to provide a written report/analysis for the onsite problem students must be able to complete (at a minimum) the following:
- Collection of fingerprints
 - Collection of trace evidence
 - Creation of a scale drawing of the crime scene
 - Blood spatter pattern analysis

EVALUATION

Evaluation is based on a team's written test score and performance on the on-site problem (semifinalists only). Please refer to the official rating form for more information.



STEM INTEGRATION

This event has connections to the STEM areas noted below. Please refer to the STEM INTEGRATION section of this guide.

Science, Technology, Engineering, Mathematics

COMMON CORE STATE STANDARDS (CCSS) INTEGRATION

Please refer to the Common Core State Standards (CCSS) Integration section of this guide for more information.

LEADERSHIP SKILLS

Leadership skills promoted in this event:

- Critical thinking: Students demonstrate knowledge of forensic science. Use leadership activities: *Guess The Famous Leader* and *Fact or Fiction*
- Problem solving: Students analyze evidence from a crime scene. Use leadership activities: *Breaking It Down* and *Finding A Way*
- Teamwork: Students work together to gather evidence from a crime scene. Use leadership activities: *Jump Rope* and *Match Face*

Additional leadership skills promoted in this event:

- Communication
- Decision making

TSAAND CAREERS

This competition has connections to one or more of the career areas featured in the TSAAND CAREERS section of this guide. Use *The 16 Career Clusters* chart and the *TSA Competitions and Career Clusters* grid as resources for information about careers.

CAREERS RELATED TO THIS EVENT

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



FORENSIC TECHNOLOGY EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

- A. Event coordinator
- B. Evaluators, two (2) or more
- C. Evaluators for semifinalist presentations, two (2) or more
- D. Timekeepers for recording start/stop times, one (1) per event room
- E. Monitors, one (1) per event room

MATERIALS

- A. Coordinator's packet containing:
 - 1. Event guidelines, one (1) copy for the coordinator and each evaluator
 - 2. TSA Event Coordinator Report
 - 3. List of evaluators/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. Copy 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. Upon arrival at the conference, report to the CRC room and check the contents of the coordinator's packet. Review the event guidelines and check to see that enough evaluators/assistants have been scheduled.
- B. 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.
- C. One (1) hour before the event is scheduled to begin, meet with evaluators/assistants to review time limits, procedures, and



regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

- D. Begin the event at the scheduled time by closing the doors and checking the entry list. All participants and evaluators should be in the room at this time. In order to compete, participants must be on the list or must have approval of the CRC.
- E. Monitor the one (1)-hour written test.
- F. Determine the twelve (12) semifinalists. Submit semifinalist results to the CRC for posting.
- G. Set up the mock crime scene in the designated room one (1) hour prior to the semifinalist sign-up time.
- H. Facilitate semifinalist sign-up times at the designated location. This may be the same room used for teams to write their analysis. Sign-ups should not take place in the same room that is prepared for the crime scene.
- I. When each team enters the crime scene room, pass out the problem. Time begins when the problem is handed to each team.
- J. Allow fifteen (15) minutes for each team to review the crime scene in order to collect items, data, and/or other information necessary for preparing an analysis. At the end of the fifteen (15)-minute period, escort each team to the room designated for writing the analysis. Provide fifteen (15) minutes for each team to complete the written crime scene analysis.
- K. Collect all materials, including any notes, prior to dismissing the participants.
- L. Evaluators determine the ten (10) finalists. Any ties should be broken by using the highest average team score on the written test.
- M. For participants who violate the rules, the decision either to 1) deduct twenty percent (20%) of the total possible points or 2) disqualify the entry, must be discussed and verified with the evaluators, event coordinator, and CRC manager, who all must initial either of these actions on the rating form.
- N. Submit the finalist results and all related forms in the results envelope to the CRC room.
- O. Manage security and removal of all materials from the crime scene area.



Participant/Team ID# _____

FORENSIC TECHNOLOGY

2016 & 2017 OFFICIAL RATING FORM

MIDDLE SCHOOL

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points
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.)			
Written Test Score (50 points)			
			SUBTOTAL (50 points)
Analysis of Crime Scene (70 points)			
Primary survey/ walkthrough (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.
Processing the scene (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.
Evidence collection (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.
Technique (X2)	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.
Crime scene analysis (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.
			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 initialed by the evaluator, coordinator and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: _____

(To arrive at the TOTAL score, add any subtotals and subtract rules violation points, as necessary.)

TOTAL (120 points)

Comments:

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

Evaluator

Printed name: _____

Signature: _____