



OVERVIEW

Participants will demonstrate their knowledge of computer science and coding by taking a written test. Semifinalists will further demonstrate their programming knowledge by participating in an on-site programming challenge. Details about the on-site challenge (e.g., programming language to be used and practice problems) can be found on the TSA website under Competitions/Themes and Problems.)

ELIGIBILITY

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

TIME LIMITS

1. Preliminary Round: Participants have one (1) hour to complete the written test; all participants will take the test simultaneously.
2. Semifinal Round: Participants have four (4) hours to complete the on-site challenge.

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. Teams report for the test at the time and place stated in the conference program and submit their LEAP Response.
2. Both team members take the written test.
3. The top twelve (12) averaged scoring teams qualify as semifinalists.
4. A list of twelve (12) semifinalist teams (in random order) will be posted.

Semifinal Round

1. Semifinalist teams report at the time and place stated in the conference program.
2. The problem, evaluation criteria, and materials will be distributed to the teams on-site.
3. Participants must provide their own computer hardware and software.
4. Teams have four (4) hours to design and present their solution.
5. The LEAP Response will be judged for semifinalist teams.
6. Ten (10) finalists will be announced during the conference awards ceremony.

REGULATIONS

Preliminary Round

- A. Participants will take a multiple choice test to evaluate their knowledge of software development, coding, operating systems, programming languages and algorithms
- B. An answer sheet (scan-type) and paper are furnished to each participant at the test site.

Semifinal Round

- A. All work must be completed in the event area during the time specified for the event.
- B. Teams must bring:
 1. Maximum of one (1) laptop
 2. Extra charged laptop battery
 3. One (1) computer mouse
 4. Teams may also bring pencils and paper.
- C. Teams do NOT have access to electrical power/outlets during the event.
- D. Teams do NOT have access to the Internet during the event.
- E. Students must have all software development tools needed for the competition downloaded and accessible on their computers.
- F. All solutions must be tested, demonstrated and presented by participants in front of the judges.
- G. 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: Each team's average written test score is used to determine the twelve (12) semifinalist teams.
2. Semifinal Round: Semifinalists will be evaluated on the solution to the on-site problem, and the content and quality of their LEAP Response.
 - a. Each problem in the programming challenge will have an objective correct answer.
 - b. Second-best attempts or other objective criteria will be used to break ties when possible.
 - c. Only as a last resort will subjective criteria, such as originality, be used to evaluate solutions.

STEM INTEGRATION

Depending upon the subject of the problem, this event may align to one or more STEM areas.

CAREERS RELATED TO THIS EVENT

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

- Computer software engineer
- Mathematician



CODING

EVENT COORDINATOR INSTRUCTIONS

PERSONNEL

- A. Event coordinator
- B. Judges:
 - 1. Preliminary round, two (2) or more
 - 2. Semifinalist round, two (2) or more
- C. Assistants for the set-up, monitoring, and clean-up of the on-site activity, two (2) or more

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. Stick-on labels for entries, as needed
 - 5. Results envelope with coordinator forms
- B. Tables and chairs for participants
- C. Tables and chairs for judges
- D. Twelve (12) copies of a well-written, technologically appropriate problem for each semifinalist team that can be objectively measured, one (1) copy per team
- E. Adequate conditions, tools, materials, monitoring, and testing devices for the problem
- F. Stopwatch or clock for timekeeper

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 to be 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 to begin, meet with judges 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. Participants registered but not present may be disqualified.
 - 4. In order to compete, participants must be on the entry list or must have approval of the CRC.
 - 5. Monitor the one (1)-hour written test.

6. 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.
7. Judges determine the twelve (12) semifinalists and discuss and break any ties.
8. Submit semifinalist results and all related forms in the results envelope to the CRC room.

C. Semifinal Round:

1. At least one (1) hour before the event is scheduled to begin, meet with semifinalist judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.
1. Once teams are seated and general announcements have been given, distribute and review the problem and start the time.
2. Judges and assistants observe, with judges evaluating solutions as soon as appropriate.
3. 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.
4. Judges determine the ten (10) finalists and discuss and break any ties.
5. Submit the finalist results and all related forms in the results envelope to the CRC room.
6. Manage security and the removal of materials from the area.



Participant/Team ID# _____

CODING**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.

- Laptop is present
 Completed LEAP Response 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 (50 points)**WRITTEN TEST SUBTOTAL (50 points)**

Rules violations (a deduction of 20% of the total possible points for the above section) 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: _____

PRELIMINARY SUBTOTAL (50 points)**Semifinal On-site Problem - Subjective (20 points)**

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points
Subjective criteria (X2)	Minimal performance: Team did not work well together/Team did not understand solution/Team did not demonstrate understanding of coding practices.	Team worked reasonably well together; team demonstrate adequate understanding of problem solutions/ team demonstrates adequate understanding of coding practices.	Team works well together/demonstrated superior understanding of their solution/demonstrated superior understanding of coding practices.

ON-SITE PROBLEM (SUBJECTIVE) SUBTOTAL (20 points)**Semifinal On-site Problem- Objective (80 points)**

Evaluation: A finite unit of measure, such as elapsed time, linear distance, and/or strength, etc., is used to determine ranking.

1st: 80 points	2nd: 75 points	3rd: 70 points	4th: 65 points
5th: 60 points	6th: 55 points	7th: 50 points	9th: 40 points
		8th: 45 points	10th: 35 points

ON-SITE PROBLEM (OBJECTIVE) SUBTOTAL (80 points)**Semifinal LEAP Response (15 points)**

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points
LEAP Response (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 (15 points)

Record scores in the column spaces below.



Rules violations (a deduction of 20% of the total possible points for the above section) 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: _____

SEMIFINAL SUBTOTAL (115 points)

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

TOTAL (165 points)

Comments:

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

Evaluator

Printed name: _____

Signature: _____