



# STEM CAREERS

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## OVERVIEW

During the school year, participants work to develop a specific skill and complete a thorough project about the skill's relationship to a STEM career area of their choice. Participants research and prepare documentation related to the skill and prepare a video that demonstrates the skill. Semifinalists participate in an on-site interview to discuss the skill developed.

## ELIGIBILITY

Participants are limited to six (6) individuals per state.

## TIME LIMITS

- A. Participants report to the event area at the time and place stated in the conference program to submit their entries.
- B. The length of the video (submitted as part of the entry) is limited to a maximum of three (3) minutes. A deduction of five (5) points will be incurred for exceeding the three (3)-minute time limit.
- C. Semifinalist interviews are limited to ten (10) minutes.
- D. The semifinalist LEAP interview will be conducted immediately following each semifinalist interview and will last a maximum of five (5) additional minutes.

## LEAP LEADERSHIP RESUME/INTERVIEW

An Individual LEAP Leadership Resume is required for this event and must be submitted at event check-in. Semifinalists will respond to interview questions related to their submitted LEAP Resume for a maximum of five (5) minutes.

## ATTIRE

Competition attire, as described in the [National TSA Dress Code](#) section of this guide, is required for this event.




## PROCEDURE

- A. In preparation for this event, participants thoroughly research and document the skill selected, document either a job shadowing experience or an internship related to the career pathway for the skill selected and developed, and prepare a video demonstration of the skill.
- B. Participants report to the event area at the time and place stated in the conference program to check in their documentation portfolio, video (on a USB flash drive), and LEAP Leadership Resume. The video must be in Mpeg format. The length of the video is limited to a maximum of three (3) minutes. A deduction of five (5) points will be incurred for exceeding the three (3)-minute time limit.
- C. Entries are reviewed by evaluators to determine the twelve (12) semifinalists. Neither students nor advisors are present at this time.
- D. A semifinalist list in random order is posted. Semifinalists will sign up for an interview time at the time and place listed in the conference program.
- E. Semifinalists report to the event area at the time and place stated in the conference program to participate in an interview.
- F. The LEAP interview will be conducted immediately following the semifinalist event interview and will last a maximum of five (5) additional minutes.

**It is essential that students and advisors routinely check the TSA website ([www.tsaweb.org](http://www.tsaweb.org)) for updated information about TSA general rules and competitive events. This information is found on the website under [Competitions/Updates](#). When students participate in any TSA competitive event, they are responsible for knowing of updates, changes, or clarification related to that event.**

## REGULATIONS

- A. Documentation materials (comprising a “portfolio”) are required and should be placed and secured in a [clear front report cover](#). The report cover must include the following single-sided, 8½" x 11" pages, in this order:
  - 1. Title page with the event title, the conference city and state, and the year; one (1) page

 Read the General Rules and Regulations section in the front of this guide for information that applies to all of TSA's competitive events.



2. Table of contents; pages as needed
  3. Description of a STEM-related job shadow/internship experience and the outcome of the experience; three (3) single-sided pages
  4. Description of research about the skill selected and developed and the related STEM career pathway; two (2) single-sided pages
  5. Skill demonstration video (a maximum of three [3] minutes) saved in Mpeg format on a USB flash drive and included in a protective sleeve
  6. Log sheet(s) documenting the job shadowing or internship experience that details activities and skills experienced; pages as needed
- B. LEAP Leadership Resume (see Forms Appendix or TSA website)/Interview— Students document, in the LEAP leadership resume (see resume template), the leadership skills that they have developed and demonstrated while working on this event. Semifinalists will respond to questions about the content of their resume as part of their LEAP interview. The LEAP Leadership Resume/Interview guidelines and other resources can be found on the [TSA website](#).

## EVALUATION

Evaluation is based on the participant's documentation, video, log sheet(s), LEAP requirements, and interview (semifinalists only). Please refer to the official rating form for more information.



### STEM INTEGRATION

This event aligns with the STEM educational standards noted below. Please refer to the STEM Integration section of this guide for more information.

Science, Technology, Engineering, Mathematics

### TSA AND CAREERS

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

### CAREERS RELATED TO THIS EVENT

Careers will vary, based on the student's area of interest.

## STEM CAREERS

### EVENT COORDINATOR INSTRUCTIONS

#### PERSONNEL

- A. Event coordinator
- B. Assistants, two (2)
- C. Event evaluators, two (2) or more for entries
- D. Event evaluators, two (2) or more for semifinalist interviews

#### MATERIALS

- A. Coordinator's packet, containing:
  - 1. Event guidelines, one (1) copy for the coordinator and for each evaluator
  - 2. TSA Event Coordinator Report
  - 3. List of evaluators/assistants
  - 4. Pre-populated flash drives for evaluators
  - 5. Results envelope
  - 6. Envelope for LEAP Leadership Resumes
  - 7. LEAP Interview Judging Protocol
- B. Interview questions appropriate for careers
- C. Tables and chairs for participants
- D. Tables and chairs for evaluators

#### 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. Check in the entries and the LEAP Leadership Resumes at the time stated in the conference program.
- C. Inspect the area or room 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.
- D. Meet with evaluators/assistants to review time limits, procedures, regulations, and all other details related to the event. If questions arise that cannot be answered, speak to the event manager before the event begins.



- E. For participants who violate the rules, the decision either to deduct 20% of the total possible points or to disqualify the entry must be discussed and verified with the evaluators, event coordinator, and a CRC manager.
- F. Evaluators independently assess the entries and determine twelve (12) semifinalists.
- G. Submit semifinalist results to the CRC for posting.

### **Interview**

- A. Inspect the area(s) in which interviews will be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.
- B. Meet with your evaluators to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.
- C. Each student is interviewed by the evaluators. The LEAP interview will be conducted immediately following the semifinalist event interview and will last a maximum of five (5) additional minutes.
- D. Evaluators determine the ten (10) finalists and their ranking, and discuss and break any ties.
- E. Review and submit the finalist results and all related forms in the results envelope to the CRC room.
- F. If necessary, manage security and the removal of materials from the area.



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

# STEM CAREERS

2017 &amp; 2018 OFFICIAL RATING FORM

HIGH SCHOOL

## Go/No Go Specifications

Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box. If an item is missing, leave the box blank and place a check mark in the box labeled ENTRY NOT EVALUATED. If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

- The portfolio is present.  
 The video is present on a USB drive.  
 Completed LEAP Leadership Resume is present.  
 ENTRY NOT EVALUATED

## Job Shadowing/Internship Documentation (40 points)

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.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.			
<b>Portfolio components</b> See Regulation A (X1)	The portfolio is unorganized and/or is missing three or more components.	The portfolio is somewhat organized; most components are adequate.	The portfolio is organized, complete, and includes all required components.
<b>Experience description</b> (X1)	The participant fails to describe the experience (shadowing/ internship), and/or how the opportunity was discovered, and/or interest and relevance to a STEM career.	The participant describes how the opportunity was identified, the reason for interest, the overall experience, and the experience outcome.	The participant clearly describes the opportunity, the reason for interest in the career area, skills involved, the relationship of the experience to a career in a STEM field, and the experience outcome.
<b>Relationship to skills</b> (X1)	The participant largely fails to identify any skills involved in the career area, and does not adequately discuss the day-to-day functions of a person in this STEM career.	The participant provides a general explanation of the connection between the functions of the job experience and STEM skills.	The participant clearly relates the job experience to STEM skills.
<b>Writing mechanics</b> (X1)	The writing contains distracting errors in punctuation, spelling, and grammar.	Punctuation, spelling, and grammar are generally correct, with few errors.	Punctuation, spelling, and grammar are correct with no errors evident.
			<b>SUBTOTAL (40 points)</b>

Record scores in the column spaces below.

## Skill Research (20 points)

CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points
<b>Research description</b> (X1)	The description of the research is too brief and lacks appropriate details about the selected skill.	The description of the research about the selected skill is adequate.	The description of the research about the selected skill is clear, concise, and conveys understanding of the skill.



Skill Research (continued) (20 points)			
<b>Appropriate information</b> (X1)	The information is largely not relevant to the skill and how it relates to fulfilling job requirements for the selected STEM career.	The information is adequately relevant to the skill and how it relates to job requirements for the chosen STEM career.	The information relates the skill to career job requirements; all information is appropriate for the STEM career choice.
<b>SUBTOTAL (20 points)</b>			

Video (40 points)			
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points
<b>Skill demonstration</b> (X4)	The skill demonstrated does not reflect connection to the selected career.	The skill demonstration is basic and adequate; it reflects a connection to the career.	The demonstration is well-planned and provides an in-depth look at the chosen career and how the skill connects to the career.
<b>SUBTOTAL (40 points)</b>			

A five (5)-point deduction will be incurred for exceeding the three (3)-minute time limit for the video. Record the deduction in the space to the right.

Rules violations (a deduction of 20% of the total possible points in the sections above) 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: \_\_\_\_\_

Semifinalist Interview (60 points)			
CRITERIA	Minimal performance 1-4 points	Adequate performance 5-8 points	Exemplary performance 9-10 points
<b>Organization</b> (X1)	Participant seems unorganized for the interview.	Participant is generally organized for the interview.	The interview with evaluators is well organized and logically completed.
<b>Knowledge</b> (X2)	Participant seems to have little understanding of the concepts in the project and provides vague responses to interview questions.	Participant has a generalized understanding of the concepts in the project and answers questions fairly well.	Participant shows clear evidence of a thorough understanding of the concepts in the project; interview answers are thorough and reflective.
<b>Articulation</b> (X1)	The interview is full of illogical thoughts that indicate lack of understanding.	The interview is somewhat logical and easy to understand and follow.	The interview provides a clear, concise, and easy-to-follow description of the project.
<b>LEAP Leadership Resume/Interview</b> See Regulation B and instructions on TSA website (X2)	The individual's efforts are not clearly communicated, lack detail, and/or are unconvincing. Few, if any, attempts are made to identify and/or incorporate the LEAP Be. Know. Do. criteria.	The individual's efforts are adequately communicated, include some detail, are clear, and/or are generally convincing. Identification and/or incorporation of the LEAP Be. Know. Do. criteria is adequate.	The individual's efforts are clearly communicated, fully-detailed, and convincing. Identification and/or incorporation of the LEAP Be. Know. Do. criteria is excellent.
<b>SUBTOTAL (60 points)</b>			





Rules violations (a deduction of 20% of the total possible points in the semifinalist 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: \_\_\_\_\_

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

**TOTAL (160 points)**

Comments:

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

Evaluator

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

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