

Creative Problem Solving



New for 2023 - 2024

The Folger and Michalko resources have been retired.

Solve It! and *Critical Thinking & Logic Mastery* resources have been added.

The test plan has been updated.

The number of team members has changed from 3 – 4 to 2 – 6.

These guidelines are written for ILC. States may modify events or have different event processes and deadlines. Be sure to check with your Local/State Advisor (or state website) to determine how the event is implemented for the regional/area or state conference.

Editorial updates have been made.

Event Summary

Creative Problem Solving provides members with the opportunity to analyze the problem-solving process and to work as a team to apply their problem-solving skills in creating a solution to a hypothetical health or HOSA-related problem. This competitive event consists of 2 rounds and each team consists of 2 – 6 people. Round One will consist of a written test and the score will be used to qualify the team for Round Two. In Round Two teams will be given a potential problem related to HOSA, the health community, or a specific health issue and have 30 minutes to analyze the problem. At the end of the preparation time, teams will have eight (8) minutes to present their solution to a panel of judges. This event aims to inspire members to be proactive future health professionals and utilize higher order thinking to solve complex challenges.

Dress Code

Competitors shall wear the HOSA uniform or proper business attire. Bonus points will be awarded in both rounds for [proper dress](#). All team members must be properly dressed to receive bonus points.

Competitor Must Provide

- ☐ [Photo ID](#)
- ☐ #2 lead pencils (NOT mechanical) with eraser for both rounds

General Rules

1. Competitors in this event must be active members of HOSA in good standing.
2. **Eligibility Divisions:** Secondary and Postsecondary/Collegiate divisions are eligible to compete in this event.
3. Competitors must be familiar with and adhere to the "[General Rules and Regulations of the HOSA Competitive Events Program \(GRR\)](#)."

- A. Per the [GRRs](#) and [Appendix H](#), HOSA members may request accommodation in any competitive event. To learn the definition of an accommodation, please read [Appendix H](#). To request accommodation for the International Leadership Conference, [submit the request form here](#) by May 15 at midnight EST.
 - B. To request accommodation for any regional/area or state level conferences, submit the request form [here](#) by your state published deadline. Accommodations must first be done at state in order to be considered for ILC.
4. Each team will consist of 2 - 6 team members.
 5. All competitors shall report to the site at the time designated for each round. At ILC, [photo ID](#) must be presented prior to competing in each round.

Official References

6. All official references are used in the development of the written test.
7. [Adair, John. *Decision Making & Problem Solving: Break Through Barriers and Banish Uncertainty at Work \(Creating Success, 8\)*. Kogan Page. Latest edition.](#)
8. Sternad, Dietmar. [Solve It!](#) Econcise Publishing. Latest edition.
9. [Thinknetic. *Critical Thinking & Logic Mastery 3 Books in 1*. Latest edition.](#)

ROUND ONE: The Test

10. [Round One Test Instructions](#): Each team will be evaluated in Round 1 by a fifty (50) item multiple choice written test. Competitors will be given sixty (60) minutes to complete the test.
11. The team test score average from Round One will be used to qualify the team for the Round Two presentation.
12. Round One: Written Test Plan
 - Critical& EffectiveThinking..... 26%
 - Problem Solving Strategies &Skills.....24%
 - Clarification of Problems and Generating Ideas.....10%
 - Examining Constraints/Developing Alternatives.....20%
 - Components of Logic.....20%
13. **Time Remaining Announcements:** There will be NO verbal announcements for time remaining during ILC testing. All ILC testing will be completed in the Testing Center and competitors are responsible for monitoring their own time.
14. **Sample Round One Test Questions**
 1. Invisible rules exist such as keyboards designed with QWERTY as the first six letters. Why were keyboards created in this fashion? (Sternad, pp. 44)
 - A. Uses power fingers to type the most common letters
 - B. Maintains the equal use of all fingers
 - C. Increases the speed of typing by standardizing the keyboard
 - D. **Slows down the speed of typing as the letters are spread around the keyboard**

2. In the context of critical thinking, what refers to the ability to understand how others think and why? (Thinknetic, pp 61)
 - A. Charitability
 - B. Humility
 - C. Empathy**
 - D. Foresight
3. In the classic approach to decision making, what is the third step? (Adair, pp 20)
 - A. define the objective
 - B. generate feasible options**
 - C. collect relevant information
 - D. implement and evaluate

ROUND TWO: The Problem and Presentation

15. The problem is a secret topic. A sample of secret topic can be found [here](#). Each team will be asked to solve the same problem. Professional ethics demand that competitors DO NOT discuss or reveal the secret topic until after the event has concluded. Competitors who violate this ethical standard will be penalized per the [GRRs](#).
16. Resources about the secret topic may be provided to teams for use during their 30-minute preparation time (such as data, supporting research, etc.).
Materials allowed in preparation room:
 - a. HOSA will provide index cards for taking notes.
 - b. HOSA will provide flip chart paper and markers for preparing solution materials.
 - c. Competitors may NOT bring anything, except pencils, into the preparation room, except the pencils required for evaluations.
17. The section leader will announce when teams have five (5) minutes and one (1) minute remaining in the preparation room. At the one-minute mark section leader will announce, "You have one minute remaining. Please conclude your preparation, gather your materials, and prepare to be escorted to the presentation room."
18. At the conclusion of the 30-minute preparation time, teams will be escorted to another room for their oral presentation.
Materials allowed in the oral presentation room:
 - a. Index cards the team prepared as notes in the preparation room.
 - b. Flip Chart paper the team prepared to support their solution in the preparation room.
 - c. Extra paper, markers, or any other materials will NOT be allowed in the presentation room.
19. Teams will be allowed a maximum of eight (8) minutes for their oral presentation of a solution to the secret problem. The timekeeper shall present a flash card advising the competitors when there is one (1) minute remaining. Time will be stopped at the end of eight (8) minutes.
20. All team members must take an active role in the presentation.

Final Scoring

21. The team test score average will be added to the presentation score to determine final results.
22. In case of a tie, the highest averaged test score will be used to determine the rank.

CREATIVE PROBLEM SOLVING ROUND TWO: Judge's Rating Sheet

Section # _____

Judge's Signature _____

Team # _____

Division: SS _____ PS/C _____

A. Presentation Content	Excellent 15 points	Good 12 points	Average 9 points	Fair 6 points	Poor 0 points	JUDGE SCORE
1. Understanding of problem/health issue	Demonstrates clear evidence of a deep, insightful understanding of the problem or health issue.	Shows a solid grasp or understanding of the problem or health issue.	Demonstrates an average understanding of the problem or health issue. Judges left with a few questions	Shows a basic understanding of the problem or health issue. Judges left with more questions than answers.	Team is not able to demonstrate an understanding of the problem or health issue.	
2. An imaginative and innovative approach is used to solve the problem	The team provided creative, imaginative solution(s) that were highly innovative and thoughtful.	The solution was unique and offered a fresh approach to solving the problem. Missing the "wow" factor though.	The solution to the problem was adequately imaginative. Would like to see more innovation in the solution.	Solutions provided were unoriginal and little imagination was included in the presentation.	No evidence of imagination was used to solve the problem.	
3. Explanation of solution	Clear and concise explanation of the solution in a logical, well-constructed presentation.	The explanation of the solution was mostly clear and logical.	An average explanation of the solution was provided. Some aspects seem to be presented out of sequence.	The explanation of the solution did not flow and was hard to follow.	The explanation did not provide a logical solution and was fragmented.	
4. Applies previous knowledge and experience to current problem	Clear, thorough connection to prior knowledge and experiences were used to enhance the solution to the current problem.	Good examples of previous knowledge and experiences were applied to the solution of the current problem.	Some demonstration of prior knowledge and experiences were applied to the solution of the current problem.	Prior knowledge and experiences were not clearly demonstrated in correlation to the current problem.	No prior knowledge or experiences were connected to the current problem.	
A. Presentation Content	Excellent 10 points	Good 8 points	Average 6 points	Fair 4 points	Poor 0 points	JUDGE SCORE
5. Explanation of solution is financially sound	The solution is realistic and financially sound. The resources required to fund this solution are thoughtful and concise.	The solution appears to be financially sound. Slight questions arise on the feasibility of the budget and ability to complete the task in a fiscally responsible manner.	The solution may require resources that are outside the budget constraints of this project. Careful consideration must be made to move forward with this project.	The solution provides questionable budget requirements and would require further attention to detail.	The solution is outside of budget constraints and is not recommended to move forward as presented.	
6. Use of the information provided in the secret topic.	The presentation offered clear and effective use of the information provided in the secret topic.	The information on the secret topic was mostly effective in the presentation but could have been clearer.	The presentation provided an average use of the information provided in the secret topic.	The presentation used a small amount of the information provided to teams on the secret topic.	The team did not include information provided on the secret topic.	

B. Presentation Delivery	Excellent 10 points	Good 8 points	Average 6 points	Fair 4 points	Poor 0 points	JUDGE SCORE
1. Voice Pitch, tempo, volume, quality	Each team's voice was loud enough to hear. They varied rate & volume to enhance the speech. Appropriate pausing was employed.	The team spoke loudly and clearly enough to be understood. The competitor varied rate OR volume to enhance the speech. Pauses were attempted.	The team could be heard most of the time. The competitors attempted to use some variety in vocal quality, but not always successfully.	The team's voice is low. Judges have difficulty hearing the presentation.	Judge had difficulty hearing and/or understanding much of the speech due to low volume. Little variety in rate or volume.	
2. Stage Presence Poise, posture, eye contact, and enthusiasm	Movements & gestures were purposeful and enhanced the delivery of the speech and did not distract. Body language reflects comfort interacting with audience. Facial expressions and body language consistently generated a strong interest and enthusiasm for the topic.	The team maintained adequate posture and non-distracting movement during the speech. Some gestures were used. Facial expressions and body language sometimes generated an interest and enthusiasm for the topic.	Stiff or unnatural use of nonverbal behaviors. Body language reflects some discomfort interacting with audience. Limited use of gestures to reinforce verbal message. Facial expressions and body language are used to try to generate enthusiasm but seem somewhat forced.	Most of the team's posture, body language, and facial expressions indicated a lack of enthusiasm for the topic. Movements were distracting.	No attempt was made to use body movement or gestures to enhance the message. No interest or enthusiasm for the topic came through in presentation.	
3. Diction*, Pronunciation** & Grammar	Delivery emphasizes and enhances message. Clear enunciation and pronunciation. No vocal fillers (ex: "ahs," "uh/ums," or "you-knows"). Tone heightened interest and complemented the verbal message.	Delivery helps to enhance message. Clear enunciation and pronunciation. Minimal vocal fillers (ex: "ahs," "uh/ums," or "you-knows"). Tone complemented the verbal message	Delivery adequate. Enunciation and pronunciation suitable. Noticeable verbal fillers (ex: "ahs," "uh/ums," or "you-knows") present. Tone seemed inconsistent at times.	Delivery quality minimal. Regular verbal fillers (ex: "ahs," "uh/ums," or "you-knows") present. Delivery problems cause disruption to message.	Many distracting errors in pronunciation and/or articulation. Monotone or inappropriate variation of vocal characteristics. Inconsistent with verbal message.	
4. Team Participation	Excellent example of shared collaboration in the presentation. Each team member spoke and carried equal parts of the presentation.	All but one person on the team was actively engaged in the presentation.	The team worked together relatively well. Some of the team members had little participation.	The team did not work effectively together.	One team member dominated the presentation.	
Total Points (120):						

*Definition of Diction – Choice of words especially with regard to correctness, clearness, and effectiveness.

**Definition of Pronunciation – Act or manner of uttering officially