Creative Problem Solving

New for 2014-15

The presentation by teams has been reduced to 8 minutes. The time for judges to complete the rating sheet has been increased to 2 minutes. The Dombroski resource has been deleted.

Purpose: To encourage Health Science students 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 healthcare or HOSA-related problem.

Description of Event: This event will involve two rounds of competition. Round One will consist of a written test to evaluate the team’s understanding of problem solving processes and theories. The top scoring teams will advance to Round Two and will be given a potential problem related to HOSA, a healthcare issue or the healthcare community. Teams will have 30 minutes to analyze the problem. Selected resource materials related to the problem will be provided. At the end of the preparation time, teams will have eight (8) minutes to present their solution to a panel of judges.

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.

Rules and Procedures

1. Competitors in this event must be active members of HOSA in good standing in the category in which they are registered to compete (Secondary or Postsecondary/Collegiate).

2. Competitors must be familiar with and adhere to the “General Rules and Regulations of the National HOSA Competitive Events Program (GRR).”

3. Teams must be composed of three (3) or four (4) members.

4. Round One Test Instructions: Each team will be evaluated in Round One by a fifty (50) item multiple choice written test. Competitors will be given sixty (60) minutes to complete the test which will be administered during the event orientation session. No proxies are allowed for this event. Team scores will be averaged to determine who will qualify for Round Two.

Round I: Written Test Plan

- Theory/Skills of Creative Thinking  40%
- Problem Identification  10%
- Clarification of Problems/Developing Objectives  15%
- Problem Solving Strategies  10%
- Examining constraints/developing alternatives  15%
- Sharing Decisions/Implementation  10%

NOTE: States/regions may use a different process for testing, to include but not limited to pre-conference testing, online testing, and testing at a computer. Check with your Area/Region/State for the process you will be using.
5. All official references* are used in the development of the written test.

6. A selected number of teams will advance to Round Two.

7. The Round Two problem is a secret topic. 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.

8. Resources will be provided to teams for use during their 30 minute preparation time, if applicable. No other printed materials may be brought into the preparation room. Competitors will be provided with index cards for taking notes and for use during their oral presentation. Teams will also be provided with flip chart paper and markers for use during the preparation and presentation.

9. The section leader will announce when teams have one (1) minute remaining in the preparation room by saying, “You have one minute remaining. Please conclude your preparation, gather your materials, and prepare to be escorted to the presentation room.”

10. At the conclusion of the 30 minute preparation time, teams will be escorted to the room for their oral presentation. Teams may take the index cards they prepared during the preparation time, and the flip chart paper and markers. The flip chart paper and index cards may be used during the oral presentation.

11. 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. Judges will have two additional minutes to complete the rating sheet.

12. Should a tie occur, the highest team average from the written test is used to break the tie.

Competitor Must Provide:
- Event guidelines – one per team (orientation)
- Pens and #2 lead pencils with eraser
- Watch with second hand (optional)

Required Personnel (Per Section):
1. One Event Manager (Per Event)
2. One Section Leader per section
3. Two - three judges per section
4. Preparation room attendant (One per preparation room)
5. One-two event assistants per section
6. One time-keeper per section (if necessary)
7. One QA to provide quality assurance for the event by ensuring that the guidelines are followed and all event documents are complete.

Facilities, Equipment and Materials (Per Section):

☐ Testing room with tables/chairs; or schoolroom desks/chairs for total number of competitors
☐ Test packets which are pre-numbered and Scantron answer forms
☐ Preparation room with table and chairs – If there are multiple sections, more than one team will prepare at the same time in the preparation room.
☐ Copy of secret problem - one for each team member and the judges
☐ Calculators, note pads, and pencils for judges
☐ Index cards
☐ Flip chart paper – as many pages as needed per team
☐ Flip chart pad or easel in presentation room
☐ Colored Markers
☐ Masking tape (if self-adhesive flip chart paper is not used)
☐ Flash card for 1 minute remaining
☐ Rating sheets – one per judge per team
☐ Evaluation Forms – competitor, judge, and personnel
☐ #2 lead pencils with eraser to complete evaluations

Sample Round One Test Questions

1. Creativity is characterized as a/an
   A. ability to function as a contributing group member.
   B. ability to research and apply theories.
   C. expression of our uniqueness.
   D. interaction with people in stress situations.

2. Benchmarking is used in problem identification by
   A. comparing the practices of an organization with those of a similar organization recognized as the “best.”
   B. conducting opportunity searches in similar organizations.
   C. hiring consultants to help objectively uncover problems and make substantive recommendations.
   D. keeping an accurate record of employee complaints in order to use them to recognize patterns of discontent.

3. A group problem-solving process in which all group members discuss a situation until all agree that they can live with whatever is proposed is
   A. squeeze and stretch.
   B. What do you know?
   C. developing a why-why diagram.
   D. consensus building.
Event Flow Chart

Orientation
50-item test in 60 minutes

Scan Tests

Add scores of team members and
determine the team average. Top
teams advance to Round Two

Teams report at appointment
time for 30 minute preparation of
solution to secret problem.

Teams escorted to oral
presentation room to present
solution to panel of judges.

Judges complete rating sheet and scores
are totaled to determine the winners. If
there are multiple sections, the computer
is used to mathematically compensate
for the differences among judges and
fairly determine the final standings.

Icon Key

The orientation includes an event
element. Competitors must bring
pencils/pens.

Team event – Minimum and maximum (if
greater than 2) number of team members.

Round One scores are used to advance
competitors to Round Two at the NLC.

A computer is used at the NLC to provide
a statistically fair method for balancing
scores when multiple sections are
scheduled.

Includes a secret topic that may not be
discussed or revealed to others until the
event has concluded.
## Creative Problem Solving
### Judge's Rating Sheet

<table>
<thead>
<tr>
<th>Items Evaluated</th>
<th>Points Possible</th>
<th>Superior</th>
<th>Excellent</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>Points Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Understanding of problem/health issue.</td>
<td></td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2. Effectively applies previous knowledge and experience to current problem.</td>
<td></td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3. Solution was clear and logical.</td>
<td></td>
<td>15</td>
<td>12</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4. Solution was financially sound and workable.</td>
<td></td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>5. Solution showed good use of research/expert data.</td>
<td></td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>6. An imaginative and innovative approach was used to solve the problem.</td>
<td></td>
<td>15</td>
<td>12</td>
<td>9</td>
<td>6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>7. Evidence of teamwork in reaching a solution.</td>
<td></td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>8. Organization, delivery and quality of oral presentation.</td>
<td></td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>9. Total group involvement in presentation of solution.</td>
<td></td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL POINTS</strong></td>
<td></td>
<td><strong>100</strong></td>
<td><strong>80</strong></td>
<td><strong>60</strong></td>
<td><strong>40</strong></td>
<td><strong>20</strong></td>
<td></td>
</tr>
</tbody>
</table>