

2009 National *You Be The Chemist* Challenge Rules

General Rules

1. Students participating in the Chemical Educational Foundation's (CEF) 2009 National *You Be The Chemist* Challenge competition (Challenge) must qualify under the following requirements:
 - They must not have passed beyond the eighth grade on or before April 1, 2009.
 - They must not reach the age of 15 on or before September 1, 2009.
 - They must have won, placed first runner-up, or alternate in their Local and/or State Challenge in the same academic year as the National Challenge competition in which they wish to compete.
 - They must not have been disqualified at any level of the Challenge competition in the same academic year as the National Challenge competition in which they wish to compete.
 - They must not have been declared the champion of any previous National *You Be The Chemist* Challenge competition.
2. The official source for all answers will be found in the compiled Challenge Study Guide. Challenge competition questions are based on an understanding of the Study Guide material, often requiring students to apply the information to both familiar and unfamiliar situations. The complete Study Guide will be posted on the CEF Web site at <http://www.chemed.org/ybtc/students/study.aspx> (Navigation from CEF Homepage: *You Be The Chemist* → Students → Study Materials) by May 11, 2009. Students should study all sections of the Study Guide (basic, intermediate, and advanced), as well as the periodic table handouts. Hard copies of the Study Guide will also be mailed to each participant.
3. The National Challenge will take the form of Rounds. (Explanations of each type of Round begin on page 3.) Individual questions shall not appear more than once in a competition. As the participants answer a question, selecting the best answer, the judges (using the electronic scoring system when applicable) will record correct and incorrect answers for each participant.
4. At the end of each Round, the judges (using the electronic scoring system when applicable) will tally the number of correct and incorrect answers from each participant. The participant(s) with the least number of correct answers will be eliminated from the competition.

At the conclusion of the first three Preliminary Rounds, three participants will be eliminated. At the conclusion of the fourth Preliminary Round, two participants will be eliminated. At the conclusion of the Quarter-final and Semi-final Rounds, one participant will be eliminated. (Eliminations are detailed in the table on the next page.)

| Round Number | Round Type | Number of Participants |
|--------------|---------------------|------------------------|
| 1 | Preliminary Round | 15 |
| 2 | Preliminary Round | 12 |
| 3 | Preliminary Round | 9 |
| 4 | Preliminary Round | 6 |
| 5 | Quarter-final Round | 4 |
| 6 | Semi-final Round | 3 |
| 7 | Final Round | 2 |

Please note: Lightning Rounds may take place among any number of participants following any Preliminary, Quarter-final, or Semi-final Round.

5. If any number of participants has the same lowest number of correct answers at the end of any Round (that would eliminate more than the designated number of participants for that Round), a tie-breaker (see rules 6-8 under Preliminary Rounds) and, if necessary, a Lightning Round should be used for those students to determine who is eliminated. If none of the participants in the competition during any Round answer a question correctly or none answer incorrectly, all participants will be entered into a tie-breaker, followed by a Lightning Round, if necessary.

For example: At the end of the first Preliminary Round, if five participants answered two questions incorrectly and the other ten students answered only one question incorrectly (and no initial tie-breaker is applicable), the five participants that answered two questions incorrectly shall enter a Lightning Round to determine which three participants will be eliminated. Likewise, if two participants answered one question incorrectly and the other thirteen participants answered all questions correctly (none incorrect); the participants that answered one question incorrectly will be eliminated from that Round. The remaining thirteen participants will enter a Lightning Round to determine which participant will be the third eliminated participant for that Round.

6. CEF's selected judges shall be in complete control of the Challenge competition. If there are any irregularities during the competition, the judges will rule on the result and continuation of the competition based on the rules established by CEF. All appeals must be made by the student(s) immediately following the conclusion of a Round and prior to the start of the next Round. The judges' majority decision shall be final on all questions.
7. **All judges' decisions are final.**

Preliminary Rounds

1. Participants will sit on the stage in a pre-determined order. Participants will have the opportunity to answer 15 questions per Round. Each participant, using an electronic key pad, will respond to every question at the same time. Eliminations will occur at the end of each Round.
2. The participants will be able to view the question and the possible answers (in multiple-choice format) on a screen as the moderator reads the question and multiple-choice answers aloud. There will be a 10-second time limit enforced by the judges, except as noted for certain questions, that will begin as soon as the moderator has completed reading the question and answer choices aloud.
3. The judges, using feedback from the electronic system, will keep track of the number of correct and incorrect answers for each participant.
4. At the end of the first three Preliminary Rounds, the three participants with the lowest number of correct answers will be eliminated. If there is a tie between those with the lowest score (that would eliminate more than three participants from the competition), a tie-breaker will be used.
5. At the end of the fourth Preliminary Round, the two participants with the lowest number of correct answers will be eliminated. If there is a tie between those with the lowest score (that would eliminate more than two participants from the competition), a tie-breaker will be used.
6. As the tie-breaker, the judges will tally the total number of correct answers in all previous rounds (excluding Lightning Rounds). Among the participants entered into the tie-breaker, those with the least number of correct answers overall will be eliminated.
7. If there is still a tie, the tied participants will participate in a Lightning Round to determine who advances to the next Round (see Lightning Round rules on page 5). Tie-breakers/Lightning Rounds will only take place between those with the same score.
8. After each Round and any necessary Lightning Rounds, there will be a short break, during which the judges will tally scores and announce which participants will continue on in the competition.
9. When the number of participants is narrowed to four, the Quarter-final Round begins (see rules for Quarter-final and Semi-final Rounds below).

Quarter-final and Semi-final Rounds

1. At this point, the competition assumes an oral format, and participants will no longer be using the electronic system, except during Lightning Rounds (see Lightning Round rules on page 5). Participants will sit on stage in their pre-determined order. Following the pre-determined order, each participant, in turn, will be asked to answer a question. Each participant will answer a different question, except during Lightning Rounds (see Lightning

Round rules on page 5). For multiple-choice questions, participants must state the letter and the full answer.

2. The participants will be able to view the question and the possible answers (in multiple-choice format) on a screen as the moderator reads the question and multiple-choice answers aloud. The participant may ask the moderator to repeat the question or multiple-choice selections one additional time. There will be a 10-second time limit enforced by the judges, except as noted for certain questions, that will begin as soon as the moderator has completed reading the question and answer choices aloud.
3. Each participant will have the opportunity to answer five questions per Round. The judges will keep track of the number of correct and incorrect answers for each participant. Eliminations will occur at the end of each Round.
4. At the end of the Quarter-final and at the end of the Semi-final Round, the participant with the lowest number of correct answers will be eliminated. If there is a tie between those with the lowest score (that would eliminate more than one participant per Quarter/Semi-final Round), a tie-breaker will be used.
5. As the tie-breaker, the judges will tally the total number of correct answers in all previous regular rounds. Of the participants entered into the tie-breaker, the participant with the least number of correctly answered questions will be eliminated.
6. Please review rules 6-8 of the Preliminary Rounds (page 3).
7. When the number of participants is narrowed to two, the Final Round begins. (See rules for Final Round below.)

Final Round

1. Please review rules 1-2 of the Quarter-final and Semi-final Rounds (pages 3-4). Participants will remain in their pre-determined order, answering questions in turn.
2. Each participant will have the opportunity to answer three questions. The judges will keep track of correct and incorrect answers for each participant.
3. After each participant has been asked three questions, judges will tally the number of correct and incorrect answers. The participant with the highest number of correct answers will be declared National *You Be The Chemist* Challenge Champion.
4. If both participants have the same number of correct answers, the Final Round will continue with each participant, in turn, answering three new questions. This process will continue until a champion is declared.
5. If one participant answers the first two of his/her three questions correctly and the other participant answers the first two of his/her three questions incorrectly, the judges will halt

the competition and the participant that answered correctly twice will be declared the champion.

6. If a champion has not been declared by 12:30 p.m., the judges will tally the scores of the participants to determine the champion. The participants' scores and their resulting place (champion, runner-up, etc.) in the competition will be determined based on the number of total correct answers throughout all regular Rounds (excludes Lightning Round scores) of the competition.

Lightning Rounds

1. In the event of a Lightning Round, each participant (in that Lightning Round) shall be given the same question to answer. All participants will be able to view the question and all possible multiple-choice answers on a screen while the moderator reads the question aloud.
2. Each participant will use his/her electronic key pad to select his/her response. The participants will have 10 seconds (unless otherwise noted) to select their answer after the moderator has finished reading the question and answer choices. After 10 seconds have passed, the judges will record correct and incorrect answers utilizing feedback from the electronic system.
3. In a Lightning Round, those answering correctly and those answering incorrectly will be divided accordingly. Participants in either group may be asked additional Lightning Round questions based on the number of open positions in the next regular Round. If one or more participants answer incorrectly when enough other participants answer correctly to fill the next Round, those participants who answered incorrectly will be automatically eliminated. The Lightning Round will continue among those who answered correctly. Likewise, if one or more participants answer incorrectly but not enough answered correctly to fill the next round, those participants who answered correctly will automatically move on to the next regular Round. The Lightning Round will continue among those who answered incorrectly to fill the remaining open position(s).

For example: If five participants tie for two open spots, and three participants answer the first Lightning Round question correctly, the two participants that answered incorrectly will be eliminated. The three participants who answered correctly will be asked the next Lightning Round question. Similarly, if only one participant answers correctly, he/she will move on to the next regular Round, and the four participants that answered incorrectly will be asked another Lightning Round question to determine who will fill the remaining open positions. This process will continue until all open positions have been filled.

4. If all participants answer correctly or all answer incorrectly, they will be asked another question.

*Please note: These rules are based on fifteen participants at the National YBTC Challenge. Should that number vary, CEF reserves the right to change the rules accordingly.