

2010 National *You Be The Chemist* Challenge Rules

General Rules

1. Students participating in the Chemical Educational Foundation's (CEF) 2010 National *You Be The Chemist* Challenge competition (National Challenge) must qualify under the following requirements:
 - They must not have passed beyond the eighth grade on or before April 1, 2010.
 - They must not reach the age of 15 on or before September 1, 2010.
 - They must have won, placed first runner-up, or be designated as an alternate in their 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 YBTC Challenge competition.
2. The official source for all answers will be found in CEF's complete Challenge Study Guide, including the Periodic Table and Periodic Table of Atomic Weights handouts. 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 Study Guide is 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). Students should study all sections of the Study Guide - basic, intermediate, and advanced - as well as the periodic table handouts.
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) determined to have the least number of correct answers will be eliminated from the competition.

At the conclusion of each of the first four Preliminary Rounds, three participants will be eliminated. At the conclusion of the fifth 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.)

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

Round Number	Round Type	Number of Participants
1	Preliminary Round	18
2	Preliminary Round	15
3	Preliminary Round	12
4	Preliminary Round	9
5	Preliminary Round	6
6	Quarter-final Round	4
7	Semi-final Round	3
8	Final Round	2

Please note: Lightning Rounds may take place among any number of participants following any Preliminary, Quarter-final, or Semi-final Round. (Lightning Round rules on pages 5-6.)

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 7-9 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 in the form of a total score analysis, followed by a Lightning Round, if necessary.

For example: At the end of the first Preliminary Round, if six participants answered two questions incorrectly and the other twelve students answered only one question incorrectly (and no initial tie-breaker is applicable), the six 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 seventeen participants answered all questions correctly (none incorrect); the participants that answered one question incorrectly will be eliminated from that Round. The remaining seventeen 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 these 2010 National YBTC Challenge Rules and accounting for any mitigating or collateral circumstances. 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 alphabetically (by last name). Participants will have the opportunity to answer 12 questions per Round. Each participant, using an electronic key pad, will respond to every question at the same time by pressing the letter of the multiple-choice answer he/she would like to select. 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. Once the 10-second time limit has passed, the correct answer will be indicated on the screen and noted by the moderator.
4. The judges, using feedback from the electronic system, will keep track of the number of correct and incorrect answers for each participant.
5. At the end of each of the first four 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 in the form of a total score analysis will be used.
6. 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 in the form of a total score analysis will be used.
7. As the total score analysis 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.
8. 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 pages 5-6). Tie-breakers/Lightning Rounds will only take place between those with the same score.
9. 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.
10. When the number of participants is narrowed to four, the Quarter-final Round begins (see rules for Quarter-final and Semi-final Rounds on next page).

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 pages 5-6).
2. Participants will sit on stage in alphabetically (by last name). Following that 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 pages 5-6). In stating their selected answer, participants must **state the letter and the full answer**.
3. 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.
4. Each participant will have the opportunity to answer five questions per Round.
5. Once an answer is stated or the 10-second time limit has passed, the correct answer will be indicated on the screen and noted by the moderator.
6. 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.
7. At the end of the Quarter-final Round and at the end of the Semi-final Round, the participant determined to have 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 in the form of a total score analysis will be used.
8. As the total score analysis tie-breaker, the judges will tally the total number of correct answers in all previous Rounds (excluding Lightning Rounds). Of the participants entered into the tie-breaker, the participant with the least number of correctly answered questions will be eliminated.
9. 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 pages 5-6). Tie-breakers/Lightning Rounds will only take place between those with the same score.
10. 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.
11. When the number of participants is narrowed to two, the Final Round begins. (See rules for the Final Round on the next page.)

Final Round

1. Participants will remain in alphabetical order, and each participant, in turn, will be asked to answer a question. Each participant will answer a different question. In stating their selected answer, 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 three questions. The judges will keep track of correct and incorrect answers for each participant.
4. 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 Challenge Champion.
5. 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.
6. 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.

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 an additional question.

Competition Conclusion

1. If a champion has not been declared by 12:30 p.m. EDT, the judges will tally the scores of the participants that remain in the competition to determine the results. 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 Rounds (excluding Lightning Rounds) of the competition.
2. Upon tallying total scores, if the judges determine that more than one participant has the same total score throughout all Rounds for the positions of champion, runner-up, etc., those participants will be declared joint champions, runners-up, etc. and be provided with the prizes designated for that position.

For example: If two participants remain in the Final Round when the time reaches 12:30 p.m. EDT. The competition will end, and judges will tally the total scores of those participants based on the number of total correct answers throughout all Rounds (excluding Lightning Rounds). The participant with the highest total score will be declared champion with the other participant being declared 1st runner-up. If both participants are determined to have the same total score, they will be declared co-National Challenge Champions.

Appeals

1. If a participant feels his/her electronic device is not working properly, he/she should raise his/her hand immediately to notify the judges. Judges will make the necessary adjustments, as they deem appropriate, to the current Round and the current Round only, for a faulty device.

2. If during a Round a participant feels a need to appeal a question or answer, he/she must appeal to the judges immediately following that Round and prior to the start of the next Round.
 - At the end of the Round in which the question arises, participants should raise their hand and wait to be acknowledged by the judges.
 - Once acknowledged, the participant should individually approach the judges and address them privately.
 - If necessary, the judges will call a short break to review the appeal.
 - A majority of judges will decide any appeal.
3. Appeals must be made individually directly to the judges. Participants may not consult any other individual (participant, parent, etc.) prior to making his/her appeal.
4. Appeals must be made before participants leave the stage for any reason. If participants leave the stage for a break or elimination, their appeal will not be heard by the judges upon their return.
5. If the next Round begins before the participant has appealed to the judges, no changes will be made.
6. Any appeal that is sustained will be announced to the audience by the judges. Any appeal not sustained will be reported privately to the participant.
7. Audience members, including parents, chaperones, and teachers, are **not** permitted to appeal to, approach, or address the judges at any point. Anyone other than a participant that attempts to appeal to, approach, or address the judges will be asked to leave the competition room.
8. **Again, all judges' decisions are final.**

Conduct

1. The National Challenge is a competitive event focusing on the outstanding efforts of its participants. The utmost respect should be given to those participants throughout the event.
2. Participants are expected to comply with the rules of conduct established in this document, the National Challenge Participant Agreement, and with any rules or codes of conduct stated verbally by the CEF staff and its agents. Participants are expected to act with integrity and courtesy throughout the event.
 - Study materials are **not** permitted on stage. All study materials, including the Challenge Study Guides and periodic table handouts, should be put away securely before the competition begins and should remain secured throughout the

competition. Judges have access to copies of these materials should a participant need to reference the material for an appeal.

- Participants should refrain from talking to one another on the stage while the competition is in progress.
- Cell phones and other electronic devices are **not** permitted on stage.
- Participant behavior will be observed throughout the competition. Any participant deemed to be exhibiting behavior that is distracting, questionable, or dishonest will be disqualified from the competition.
- If eliminated, participants should quietly exit the stage using the stairs and sit with their chaperone and/or guests for the remainder of the competition. At this point, those participants become audience members and are expected to exhibit the same conduct as expected of all other audience members.

3. All audience members are expected to comply with the rules of conduct established in these rules and with those stated verbally by the CEF staff and its agents. Audience members are expected to act with integrity and courtesy throughout the event.

- All study materials, including the Challenge Study Guides and periodic table handouts, should be put away securely before the competition begins and should remain secured throughout the competition.
- Audio and video recording is **not** permitted.
- Writing materials and electronic devices are **not** permitted to be in use in the auditorium (with the exception of coloring materials or silent electronic games for young children). All such materials should be turned off and put away once in the auditorium.
- Audience behavior will be observed throughout the competition. Any audience member deemed to be exhibiting behavior that is distracting, questionable, or dishonest will be asked to leave the competition room and may result in the disqualification of their accompanying participant.

4. No one should enter the auditorium once a Round has begun. Audience members should wait until the end of a Round to enter or exit the auditorium. If it is necessary for an audience member to leave the auditorium during a Round, they should leave quietly through the back doors. Participants should wait until the designated breaks to exit the auditorium.

Please note: CEF reserves the right to alter these rules as necessary in the event of any technological difficulties, force majeure, or any other unforeseen circumstances that would inhibit the continuation of the competition as detailed in these rules. Any adjustments will be noted to the participants prior to the competition.