

**2010 National Science Bowl<sup>®</sup>**  
**Official Academic Competition Rules**  
*Changes and clarifications in bold/italic*

## Eligibility Requirements

1. Each competing team consists of four or five student members (only four will be playing at any time). To be eligible to compete, a **high school** student must be enrolled for the current school year in grades nine, ten, eleven or twelve at the team's school, and be **born after May 3, 1990**, or receive a special waiver from the Department of Energy. To be eligible to compete, a **middle school** student must be enrolled for the current school year in grades six, seven, or eight at the team's school, and be **born after May 3, 1995 and before May 3, 2000**, or receive a special waiver from the Department of Energy. **A student may not compete in both the middle school and high school events in the same year.**

Teams of home school students, girl scouts, boy scouts and science clubs are welcome to participate; however, if the school a student attends is competing in a Regional Science Bowl, then that student may compete only on a team from that school.

2. No school or student group may compete in more than one regional competition. No student may compete on more than one team. Each regional coordinator will determine if more than one team from a middle or high school will be allowed to participate in that regional as well as the geographic area their regional will encompass. No more than 3 teams from one middle or high school or student group may compete in a regional event.
3. To be eligible for the National Science Bowl<sup>®</sup> finals, a student must have competed on the team that won the Regional Science Bowl or on the next highest place team that accepts the invitation if the first place team declines to attend. The winning team from each regional tournament is eligible to be invited to participate at the National finals April 29 - May 4, 2010.  
***Middle School Winning Team to National: If your regional event includes both a car competition and an academic event, the team that will go to the National Science Bowl<sup>®</sup> in Washington, DC will be the winning academic team. The winning regional car team will not attend the National Science Bowl<sup>®</sup> unless they are also the regional academic winning team..***
4. By **March 12, 2010**, the winning team's coach is required to inform the National event coordinator of its availability to participate at the Nationals. During this time of the school year, students are participating in a variety of activities and academic events that may conflict with their participation in the National Science Bowl<sup>®</sup> (including, but not limited to, state athletic tournaments, proms, International Baccalaureate, Advanced Placement and SAT exams). In the interest of safety, continuity, and educational value, the National Science Bowl<sup>®</sup>

requires students to take part in ALL of its events and activities. Therefore, no waivers will be granted or special arrangements made for students to participate in any conflicting activities or exams. If team members are involved in these pursuits, the students will need to determine which activity or event is in their best interest and make their selection by **March 12, 2010**. All teams must arrive and depart on the designated dates and participate in all events, as scheduled throughout the duration of the National Event, including those on Saturday and Sunday. If the winning regional team (at least 4 students) is unable to participate at all activities, at all scheduled times, the next highest place team will be invited to replace them.

## **Competition Structure**

5. Regional competitions have the option of choosing their tournament style, e.g. only double elimination, only round robin, or a combination of both.
6. The National finals will use a round robin tournament format with several divisions for the preliminary rounds. For the preliminary rounds at the Nationals, teams will be placed in divisions by drawing lots, with the number of teams per division as equal as possible. The number of teams in each division will depend on the number of teams participating in the competition. Each team will play every team in its division. At the end of each round robin match, regardless of the overall score, two points are awarded for a win, one point for a tie, and zero points for a loss. The top 2 teams from each round robin division will move on to the seeded double elimination tournament.
7. For games that occur in the elimination tournaments, if the score is tied at the end of the regulation time period, a series of five toss-up questions will be used to break the tie. Interrupt, blurt, and consultation penalties are in effect during tie-breaker.

## **The Questions**

8. Two types of questions will be used: toss-up and bonus questions. A toss-up question may be answered by any of the four members of either team that are actively competing. A team answering a toss-up question correctly will always get a chance to answer a bonus question; the other team is ineligible. No consultation is allowed on toss-up questions. The high school question categories are: astronomy, biology, chemistry, earth science, general science, mathematics, and physics. The middle school question categories are: life sciences, physical sciences, earth sciences, mathematics and general science.
9. No team will have more than one opportunity to answer a toss-up question.
10. Questions are either multiple-choice or short answer. A participant may answer a multiple-choice question with either the letter answer (W, X, Y or Z) or the verbal answer; however, if the verbal answer is given, it must be exactly as indicated in the question or as read by the moderator. The only acceptable

answer to a multiple-choice question will be the best of the four choices indicated in the question.

11. Once read in its entirety, a question will not be re-read.
12. For toss-up questions, the first player on either team to activate the lock-out buzzer system wins the right to answer the question, except that no player may buzz in until AFTER the moderator has identified the subject area of the question. If a player buzzes in prior to the reading of the subject area, the moderator will inform the player that he/she has buzzed in too soon. The moderator may add time back to the clock, if necessary.
13. ***On any toss-up or bonus question, the first response given, as determined by the officials, is the only one that counts. However, if a participant gives both a letter answer and a scientific answer to a multiple choice question, both parts must be correct. Any prefacing remarks that do not directly answer the question, such as "my answer is" or repeating the question, will be considered delaying the game and counted as an incorrect answer. (Note: a very short "um", "er", or vocal stumble is acceptable, provided the officials do not consider it delaying the game.)***
14. If the first team's answer to a toss-up question is wrong and the question was completely read, the other team is given the opportunity to answer it. The second team is allowed a full 5 seconds to buzz in after the moderator indicates the answer is wrong or that a blurt or consulting has occurred.
15. The answer to a bonus question must come from the team's captain, including when the question has been interrupted. Moderators should ignore an answer from anyone but the captain on the bonus question.

## **Verbal Recognition & Consulting**

16. Before answering a toss-up question, the team member who has buzzed in must be verbally recognized by the moderator or scientific judge. (Before the match, the official **who will be** recognizing participants will be identified.) If a student was not recognized, it is treated as a non-answer (blurt) and the moderator will award 4 points to the opposing team, but will not indicate whether the answer was right or wrong. The toss-up question is then offered to the opposing team, if still eligible. If the question has not been completely read, the question is reread in its entirety, and the opposing team has an opportunity to answer the toss-up question, and, if correct, a chance to answer the bonus question.
17. On toss-up questions, no consultation among team members may occur. Prior to buzz: Should consultation among any of the team members occur without a team member buzzing in, or if any team member should give an answer without buzzing in, any answer given does not count, the moderator will not indicate whether the answer given was correct or incorrect, and the team loses the right to answer the toss-up question. The question is then offered to the opposing

team, if still eligible. After a buzz: If consulting occurs, the consulting is then classified as a blurt as in previous rule, and 4 penalty points will be awarded to the opposing team.

## Timing

18. The match is played until either the time expires or all of the toss-up questions (and earned bonuses for correct toss-ups) have been read. Regional competitions will have two 8-minute halves with a 2-minute break (halves at the Nationals are 10 minutes). Each half begins with a toss-up question.
19. After reading a toss-up question, the moderator will allow 5 seconds for the two teams to respond before proceeding to the next toss-up question. Timing begins after the moderator has completed reading the toss-up question.
20. A participant who has buzzed in on a toss-up question must answer the question promptly after being verbally recognized by the moderator or scientific judge. After recognizing a participant, the moderator will allow for a natural pause (up to **2 seconds**), but if the moderator determines that stalling occurred, it will be treated as a wrong answer.
21. After a team member has answered a toss-up question correctly, the team is given the opportunity to answer a bonus question. The team will have 20 seconds for its captain to begin to give its answer to the bonus question. Consultation among team members is allowed on bonus questions.
22. On a bonus question, the signal "5 SECONDS" will be given by the timekeeper after 15 seconds of the allowed 20 seconds have expired. Additionally, the timekeeper will indicate the end of the 20-second bonus period by saying "TIME." If the team captain has not begun the response before the timekeeper calls "TIME," the answer does not count. If the team captain has begun the response, he/she may complete the answer, but may not stall.

## Summary of Timing

Type of Question	Time Allowed
Toss-up	Teams have 5 seconds to buzz in after question is read. If no team has buzzed in, say "TIME"
Buzz in after Toss-up has been read	Must answer within natural pause (up to 2 seconds). If no answer, say "TIME"
Bonus	Team gets 20 seconds to discuss. After 15 seconds, Timer will announce "5 seconds". If no answer after 20 seconds, say "TIME"
End of Game	Each half is 8 minutes. At 8 minutes, say "Game". If team is in process of answering a question, just turn off the clock and announce "Game" when process of the question has been completed

## Scoring

23. Toss-up questions are worth 4 points, and bonus questions are worth 10 points.
24. If a toss-up question is interrupted, the player recognized, and the answer correct, the team will receive 4 points. If the answer is incorrect, or if a player from the team buzzing in answers without being verbally recognized, or if consultation occurs on the team buzzing in, 4 points are added to the opposing team's score, the question is reread in its entirety, and the opposing team has an opportunity to answer the toss-up question, and, if correct, the chance to answer the bonus question.
25. The double interrupt. If a toss-up question is interrupted and a team incurs a penalty as in the previous rule, 4 points are added to the opposing team's score. The question is then reread in its entirety. However, if the opposing team interrupts the re-reading and subsequently incurs a penalty as in the previous rule, 4 points are added to the first team's score. The moderator will give the correct answer and move on to the next toss-up question.

26. If the moderator inadvertently gives the answer to a toss-up question without giving either team a chance to respond, no points are awarded and the moderator goes on to the next toss-up question.
27. If the moderator inadvertently gives the answer to a toss-up question before allowing the second team to respond (after an incorrect answer, or an answer given without the team member having been recognized) the next toss-up question will be read to the second team in place of the inadvertently answered question. If this situation occurs on question #25, the officials will obtain a replacement toss-up question.
28. On a toss-up question, if the moderator inadvertently recognizes a player other than the one who buzzed in, the player who buzzed in will be allowed to answer as though he/she had been correctly recognized.
29. On a bonus question, if the moderator inadvertently responds to someone other than the captain while indicating whether an answer is correct, the next bonus question will be read to the team eligible for the bonus. If this situation occurs on question #25, the officials will obtain a replacement bonus question.

### Summary of Scoring

Type of Question	Points Awarded
Correct Toss-up Incorrect Toss-up	+4 points & eligible for bonus +0 points
Correct Bonus Incorrect Bonus	+10 points +0 points
Interrupted Toss-up: - Correct Answer - Incorrect Answer	+4 points & eligible for bonus +4 points to opposing team
After a team member buzzes in: - Unrecognized Toss-up (Blurt) - Unrecognized Interrupted Toss-up (also a Blurt) - Consultation among players	+4 points to opposing team
Before a team member buzzes in: - Answering a toss-up - Consultation among players	+0 points but team will be disqualified from toss-up

## Challenges

30. Challenges must be made before the moderator begins the next question, or for the last question of a half, within three seconds of the end of that half. All challenges must come from the four members of each team who are actively competing. The fifth team member and/or the coach may not object verbally or by signal. If either the fifth team member or the coach objects verbally or by signaling to the active team members, the challenge will not be allowed. All decisions of the judges are final.
31. Challenges may be made either to scientific content or to the application of the rules. Challenges may NOT be made to judgment calls by the officials, including but not limited to whether a question has been interrupted, whether 5 seconds have elapsed before a student buzzes in on a toss-up, whether 20 seconds have elapsed before a captain begins answering a bonus, whether a half has expired before a new toss-up question begins, whether a stall or consultation has occurred, whether a player has given a first response, or whether time should be added back to the clock.
32. Should a question or challenge arise during a competition, the competition and the clock will be stopped until the question is resolved. Once the question has been resolved, the match will continue from that point. Should the moderator decide that some time was lost due to the interruption in play, the moderator has the right to put the appropriate amount of time back on the clock.
33. If a team's answer to a toss-up question is judged incorrect, and they wish to challenge the ruling on the basis of scientific content, but the opposing team is still eligible for the toss-up, the first team should hold its challenge until after the opposing team has completed its toss-up opportunity. The first team should then state its challenge before the next bonus or toss-up question is read. If the challenge is upheld, the second team's answer will be disregarded and the time lost since the first team's answer was disallowed will be put back on the clock. The first team will then have the opportunity to answer the bonus question.

## When Time Runs Out

34. If a toss-up question is begun before time expires in a half, that question will be finished under the usual rules of play, including the bonus if the toss-up is answered correctly. The half is then over. A question will be considered to have been begun if the subject area has been completely read. The second half will begin with the first toss-up question not read in the first half.

## Miscellaneous Rules

35. Substitutions may be made only at the half. If a team has five players, the player who did not play in the first half may substitute for any of the four starters. Teams may switch captains, but only at the half.

36. No one in the audience may communicate with participants during the match; communication will result in ejection from the competition room.
37. If someone in the audience shouts out an answer, the question will be thrown out (as will the person) and the moderator will proceed to the next question.
38. Prior to each match, the two team coaches will introduce themselves to each other and will sit together in the back row of the competition room.
39. No notes may be brought to the competition table. Nothing may be written before the clock starts. Scratch paper will be provided at the beginning of each match and collected at half-time and at the conclusion of the match.
40. Calculators are not permitted.
41. Members of the audience, including the **teams and** coaches, will not write down the questions/answers the moderator reads or use any electronic recording or transmitting device, including digital cameras, cell phones, or computers during the match. At the Nationals, coaches will be provided with a team score sheet to track the number of questions answered by each individual student on their team. No one else in the competition room is permitted to write or make notes of any kind during the active competition. If this occurs, the individual(s) will be asked to leave the competition room.

## **Rules for the End of Round Robin Tournaments at Regional Events**

42. At the regional events at the end of Round Robin: A tie-break procedure in the following order will be used to determine teams that advance to the elimination tournament:
  - (i) Head to head won/loss record
  - (ii) If two (2) teams are still tied, there will be a five toss-up question tiebreaker (interrupt and blurt penalties in effect). No bonus questions will be used during this segment of the competition. If still tied, another five toss-up question run-off will be used, etc. until the advancing team is determined.
  - (iii) If more than two teams are tied, each team, in separate rooms, will be given a series of ten toss-up questions (no bonus questions will be used during this segment of the competition). The usual five (5) seconds will be allowed for a competitor to buzz in after the question is completely read. There are no interrupt penalties but also no reason to interrupt since all ten questions will be read. Scoring will be based on the number of questions right minus the number wrong. If two or more teams are still tied, procedure (ii) or (iii), as appropriate, will be used until the advancing teams are

determined.

## Rules for the End of Round Robin Tournaments at National Event

43. At the National finals for *middle school*: Ties for positions 1 and 2 in each Division will be broken using the following rules in the given order until ties are broken:
- (1) If each team involved in the tie has played every other team involved in the tie or if a team involved in the tie has defeated every other tied team or lost to every other tied team, head-to-head results in the round-robin tournament will be used. If more than two teams are tied, records in all games involving two of the tied teams will be used. If one or more teams receive a position or are otherwise separated above or below the rest of the group, remaining tied teams will be compared again using only those games involving two of them.
  - (2) If two teams are tied for first place in their division, a coin flip will be used to break the tie.
  - (3) If more teams are involved in the tie than will qualify for the double-elimination tournament, a set of tie-breaker questions will be used, consisting of toss-up questions only. If two teams are tied, the teams will play against each other with a set of five questions, with the usual timing and scoring rules in effect, including the interrupt and blurt penalties. If more than two teams are tied, each team will be given the same set of ten questions in separate rooms, with usual timing rules in effect and scores of +1 for each correct answer, -1 for each incorrect answer, and 0 for each unanswered question. If one or more teams either advance or are eliminated, remaining ties will be broken by first reverting to rule (2) above.
44. At the National finals for high school: In the event of ties for the two positions from each round robin division to qualify for the double elimination tournament, the rankings of the teams in the Division Team Challenge will be used to break the tie.