



U.S. DEPARTMENT OF
ENERGY

Office of
Science

Overview of Volunteer Roles 2021 Virtual NSB (vNSB)

2021 **NSB**

NATIONAL SCIENCE BOWL®
a competition like no other . . .

Tournament Structure

2. Competition Structure

2-1. Regional competitions will all be virtual events in 2021. Teams will not play head-to-head matches in the virtual regional competitions. Instead, teams are competing against all of the other teams in the competition. Each competition will have at least 2 preliminary rounds, in which each individual team will be read the same set of questions during each round. The teams with the highest combined point totals from all preliminary rounds will advance to the Elimination Tournament. The number of teams advancing to the Elimination Tournament will be decided by each Regional Tournament Director, but will be no more than 32 and no fewer than 8 teams. (See Rules 8 – 10 below regarding the breaking of ties.)

The assumption is that each student and coach will be in their individual homes, but if local and state guidelines permit a team to gather together, it may do so. Due to these unusual circumstances, teams must agree to the following requirements:

- Each student must be available via computer with web camera or smartphone for a Zoom meeting (which will be password protected with hidden meeting IDs)
- In addition, **another** device with a camera must also be on the Zoom call via the Zoom app, to show the student's workspace and surrounding area during the competition, to help the officials ensure the students and coaches are not breaking any rules. If multiple students are in one location, additional cameras for each student may be required to ensure the workspace of each student can be monitored.
- Each coach and co-coach may also be in the Zoom meeting. For each coach, **another** device with a camera must also be on the Zoom call via the Zoom app, to show the coach's entire person from the side. Any other adults in the same room with the students should also have a camera facing them.
- No one should be recording any part of the questions – via audio, video, or writing. After the competition is complete, the questions will be shared online.
- After play of the tournament, players, coaches, and spectators must not communicate about the questions with anyone outside their team, other than National Science Bowl® officials, until the questions are shared on the NSB website.

Tournament Rules

3. The Questions

- 3-1. Two types of questions will be used: toss-up questions, worth 4 points, and bonus questions, worth 10 points. A toss-up question may be answered by **any of the 4 or 5 members** of the team by the student raising their hand so that the moderator can see. A team answering a toss-up question correctly will always get a chance to answer a bonus question.
Communication among team members is allowed on both toss-up and bonus questions; this communication may be verbal, visual, or written in the Zoom chat box. The high school question categories are: Biology, Chemistry, Earth and Space Science, Energy, Mathematics, and Physics. The middle school question categories are: Life Science, Physical Science, Earth and Space Science, Energy, and Mathematics.
- 3-5. For toss-up questions, the first player seen by the officials to raise their hand earns the right to answer the question. This player will be verbally recognized before the answer is given, but there are no penalties for blurting. Answers will only be accepted from the student recognized by the official. Other players should remain quiet while an answer is being given.
- 3-6. 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.) The moderator may interrupt a player in the process of giving an incorrect answer at any time, so as to continue the flow of the game.
- 3-7. The answer to a bonus question may come from any of the team members. The player who will answer the question should raise their hand and wait for the moderator to recognize them. Answers will only be accepted from the student recognized by the moderator.

Timing Rules

4. Timing

- 4-1. The match is played until all of the toss-up questions (and earned bonuses for correct toss-ups) have been read (15 toss-up questions for middle school and 18 toss-up questions for high school).
- 4-2. After reading a toss-up question, the moderator will allow **7 seconds** for the team to respond. Timing begins after the moderator has completed reading the toss-up question, including all choices on a multiple-choice question. **Note:** The 7 seconds is based on the moderator's timing, which begins upon completion of the question. One of the officials must see someone's raised hand BEFORE 7 seconds has elapsed on the moderator's timer. (Teams should be aware that they will most likely NOT have the complete 7 seconds due to a variety of factors, including internet bandwidth.) If no player raises their hand before the 7 seconds elapses, the moderator will announce that time has expired, and proceed to the next toss-up question.
- 4-3. 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 **22 seconds** for a team member to raise their hand to give an answer to the bonus question; timing begins by the moderator after the moderator has completed reading the bonus question, including all choices on a multiple-choice question. **Note:** the 22 seconds is based on the moderator's timing, which begins upon completion of the question. One of the officials must see someone's raised hand BEFORE 22 seconds has elapsed on the moderator's timer. (Teams should be aware that they will most likely NOT have the complete 22 seconds due to a variety of factors, including internet bandwidth.)
- 4-4. On a bonus question, the signal "5 SECONDS" will be given by the moderator after 17 of the allowed 22 seconds have elapsed. If no player raises their hand before the 22 seconds elapses, the moderator will announce that time has expired, and proceed to the next toss-up question.
- 4-5. A participant who raises their hand on a toss-up or bonus question must answer the question promptly after being verbally recognized by the moderator. After recognizing a participant, the moderator will allow for a natural pause (up to 2 seconds), but if the moderator determines that stalling has occurred, it will be treated as a wrong answer.

Ties

8. Rules for Breaking Ties to Determine the Top X Teams Advancing to the Elimination Tournament

- Middle school teams: In case of a tie, the first tie-breaker will be the combined score on questions 11 – 15 from all of the Preliminary Rounds. The second tie-breaker will be the score on question #15 (combined toss-up and bonus) from all of the Preliminary Rounds. The third tie-breaker will be the score on question #14 from all of the Preliminary Rounds, etc., with further tie-breakers using the questions in reverse order until the tie is broken.
- High school teams: In case of a tie, the first tie-breaker will be the combined score on questions 13 – 18 from all of the Preliminary Rounds. The second tie-breaker will be the score on question #18 (combined toss-up and bonus) from all of the Preliminary Rounds. The third tie-breaker will be the score on question #17 from all of the Preliminary Rounds, etc., with further tie-breakers using the questions in reverse order until the tie is broken.

9. Rules for Breaking Ties to Determine the Top X Teams Advancing to the Next Round of the Elimination Tournament

- Middle school teams: In case of a tie, the first tie-breaker will be the combined score on questions 11 – 15. The second tie-breaker will be the score on question #15 (combined toss-up and bonus). The third tie-breaker will be the score on question #14, etc., with further tie-breakers using the questions in reverse order until the tie is broken.
- High school teams: In case of a tie, the first tie-breaker will be the combined score on questions 13 – 18. The second tie-breaker will be the score on question #18 (combined toss-up and bonus). The third tie-breaker will be the score on question #17, etc., with further tie-breakers using the questions in reverse order until the tie is broken.

10. Rules for Breaking Ties at the End of the Championship Round

- Middle school teams: To break any ties between two teams competing in the Championship Round, each team will be given the same series of five toss-up questions (no bonus questions will be used during this segment of the competition). The usual timing and scoring rules for the virtual competition are in effect.
- High school teams: To break any ties between two teams competing in the Championship Round, each team will be given the same series of six toss-up questions (no bonus questions will be used during this segment of the competition). The usual timing and scoring rules for the virtual competition are in effect.

What to expect to see...

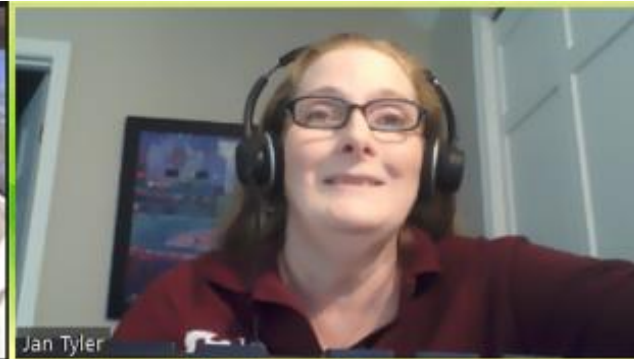
A screenshot of a Zoom video conference grid showing 12 participants in a 4x3 layout. The participants are:

- Alyssa Martinez
- Jan Tyler
- Alyssa Watcher
- Mike Gonzales
- Melissa Andrade
- Rafael Garcia
- Mary Lou O'Donnell
- Sophia
- caprisun
- Eli Andrade
- Rafael Garcia
- Vince

The bottom of the screen shows the Zoom interface with icons for:

- Stop Video
- Security
- Participants (12)
- Chat
- Share Screen
- Record
- Breakout Rooms
- Reactions

What to expect to see...



Volunteer Roles

Three officials per “room”

- Moderator/Timer
- Recognizer/Official Scorer (Google Form)
- Question Judge/Chat Box Scorer*

*Moderator must wait for the Question Judge to complete the Chat Box scoring before proceeding to the next toss-up question



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Moderator/Timer

A script will be provided for each round

“Toss-up Number XY is in CATEGORY, ShortAnswer/MultipleChoice”

- After you finish reading the question, **start your timer** – do not look at the team – only the timer.
 - Toss-up Questions: 7 seconds
 - Bonus Questions: 22 seconds w/ 5 second warning at 17 seconds
 - Once you hear the Recognizer speak, you may look at the team as they give their answer
- If correct: “Your bonus is in CATEGORY, ShortAnswer/MultipleChoice”
- If incorrect: Please give the correct answer
- If no answer is given: The Recognizer will say, “No Answer”
 - PAUSE after time expires to ensure no players have beaten the time call
 - After confirming, “No Answer”, give the correct answer
- **Read slower than you normally would!**
 - Speak clearly and articulate
 - Give students every advantage, *within the rules*, to hear you
 - If you see or hear that students are having internet issues: AFTER A QUESTION IS COMPLETED you may pause to ask the student if they are okay, or if they need to re-connect.
 - We want to be helpful and supportive

Consistency is
Key to a
Successful NSB

Moderator/Timer's Screen

Sample screen set-up

- Script/questions on the left of the screen
- Online timer on the top right of screen
- Zoom screen on the bottom left
- You can also use a stopwatch or your cell phone as a timer

Virtual Science Bowl
Elimination Tournament
Middle School – Round of 32

Begin Recording

Ensure that each student and coach are on camera and have a second device filming students (at an angle so that officials can see the students' computer screen, keyboard, and part of their desks where they would write on their 3 pieces of scratch paper) and coaches (so that we can see the coaches from behind).

Ask the students if anyone else is in their room. If there is, these people must sit so they can be seen on camera (unless someone is holding the student's 2nd device).

Before we start, I'd like to congratulate each of you for advancing to this round of the 2020 NSB National Finals.

My name is _____ and I am _____ job/place _____. I'm at my home in _____ city/state _____. I will be reading the questions and keeping the time today.

I'd like the other officials to please introduce themselves, let's start with the official scorekeeper: _____
(*This person may have multiple duties*)

Next, let's go to the Science Judge: _____

Now to our Chat Box Scorekeeper (*who may also be recognizing the students*): _____

And finally, the person who will be recognizing you (*if they haven't already been recognized*): _____

Once _____ recognizer _____ sees your hand up, _____ he/she/they _____ will call on you to answer. To raise your hand, please raise it close to, or in front of your face. Can each of you please demonstrate this for me?

A review of a few rules that are different from the usual Science Bowl rules.

For both the toss-up and bonus questions, anyone can raise their hand to be recognized to answer the question, not just the team captain.

Also, for both toss-up and bonus questions, you may communicate with one another, including taking notes in the chat box.

Basically, the difference between toss-up and bonus questions

online timer - Google Search

google.com/search?q=online+timer&rlz=1C1CHBF_enUS69...

About 401,000,000 results (0.33 seconds)

TIMER STOPWATCH

5s 87

STOP RESET

Feedback

www.timeanddate.com > timer

Online Timer - Time and Date

Timer online with alarm. Create one or multiple timers and start them in any order. Set a silent timer clock or choose a sound.

Zoom Meeting

Participants: 12

Stop Video Security Participants Chat Share Screen Pause/Stop Recording Reactions More

End

Recognizer/Official Scorer

Calls on students, by name, to answer the questions

- Should be watching the screen while question is being read
- Call on the first student to raise their hand, and do so **immediately**
- If time is called and no one has raised their hand, say “No Answer”
 - This alerts other officials that the Moderator is preparing to give the correct answer
 - Other officials can interrupt if they see someone’s hand before or when the Moderator says “TIME” – but they must be quick!
- **Students win all ties** with the word “TIME” – please do not give the teams a reason to have a bad experience

*Consistency is Key
to a Successful NSB*

Recognizer/Official Scorer

Sample High School Official Scoring Form:

https://docs.google.com/forms/d/e/1FAIpQLSdqxByf2R2Rs1Zafo5AMyNctSJktMPmL-HtzSGS6Ty93RcDSA/viewform?usp=sf_link



Sample Middle School Official Scoring Form :

https://docs.google.com/forms/d/e/1FAIpQLSdUMoHqMVg9Ku17osVBKAJSKnuAQDOhwyZekNZ-OXYUFhltQg/viewform?usp=sf_link

- Official scorer should enter score after each question without consulting the chat box
- After entering the score, then check to see that the chat box agrees
 - If not, correct the wrong one immediately, stopping the game if necessary.
 - If the chat is obviously wrong, such as misaddition, the Official Scorer can enter the correct score in the chat without stopping the game

Question Judge/Chat Box Scorer

Follow every question, word-for-word, as the Moderator is reading

-  Should be prepared to interrupt the moderator if they begin to give an answer when they shouldn't
- Correct the Moderator **immediately** if important words in the question are misread or not read
- **Stop** the Moderator from reading the bonus question when the toss-up question was not answered correctly
- Ensure the Moderator is reading the CORRECT set of questions
-  Stop the moderator if they accept numerical or scientific answers that are not listed without calling them in
- Be prepared to re-read an unfinished question in case the Moderator drops out of the Zoom call

Consistency is Key to a Successful NSB

Question Judge/Chat Box Scorer

14:00:38 From Preeti : We have everyone
14:07:50 From Mary Lou O'Donnell : 1-0
14:07:51 From Mary Lou O'Donnell : 0
14:08:00 From Melissa : ntp?
14:08:09 From Preeti : all?
14:08:17 From Mary Lou O'Donnell : 2-0
14:08:19 From Mary Lou O'Donnell : 0
14:08:43 From Melissa : What was the question
14:08:47 From Preeti : True?
14:08:52 From Mary Lou O'Donnell : 3-0
14:08:54 From Mary Lou O'Donnell : 0
14:09:04 From Preeti : isosceles
14:09:09 From Preeti : Vertex is 7x
14:09:20 From Preeti : two dice
14:09:23 From Preeti : Sum is prime
14:09:44 From Melissa : nice
14:09:46 From Mary Lou O'Donnell : 4-4/10
14:09:47 From Mary Lou O'Donnell : 14
14:10:00 From Preeti : boiling
14:10:14 From Benjamin : titanium
14:10:14 From Benjamin : iron
14:10:18 From Preeti : Ti, fe, zn, mn
14:10:23 From Alvin : greatest yea
14:10:41 From Mary Lou O'Donnell : 5-4/10
14:10:48 From Mary Lou O'Donnell : 28
14:10:53 From Melissa : Electron diffraction
14:11:12 From Melissa : phonons
14:11:30 From Mary Lou O'Donnell : 6-4/10
14:11:31 From Mary Lou O'Donnell : 42

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14:11:31 From Mary Lou O'Donnell : 42

Question 4 – Toss-up correct; Bonus correct;
Score after Question 3 was 0

4-4/10

14

Question 5 – Toss-up correct; Bonus correct
5-4/10

28

For 2021:

Ques#-Total Score for Question Cumulative
Score

4-14 14

5-14 28