



**NATIONAL SCIENCE BOWL**<sup>®</sup>  
*a competition like no other . . .*

*Virtual*



**Training Guide**

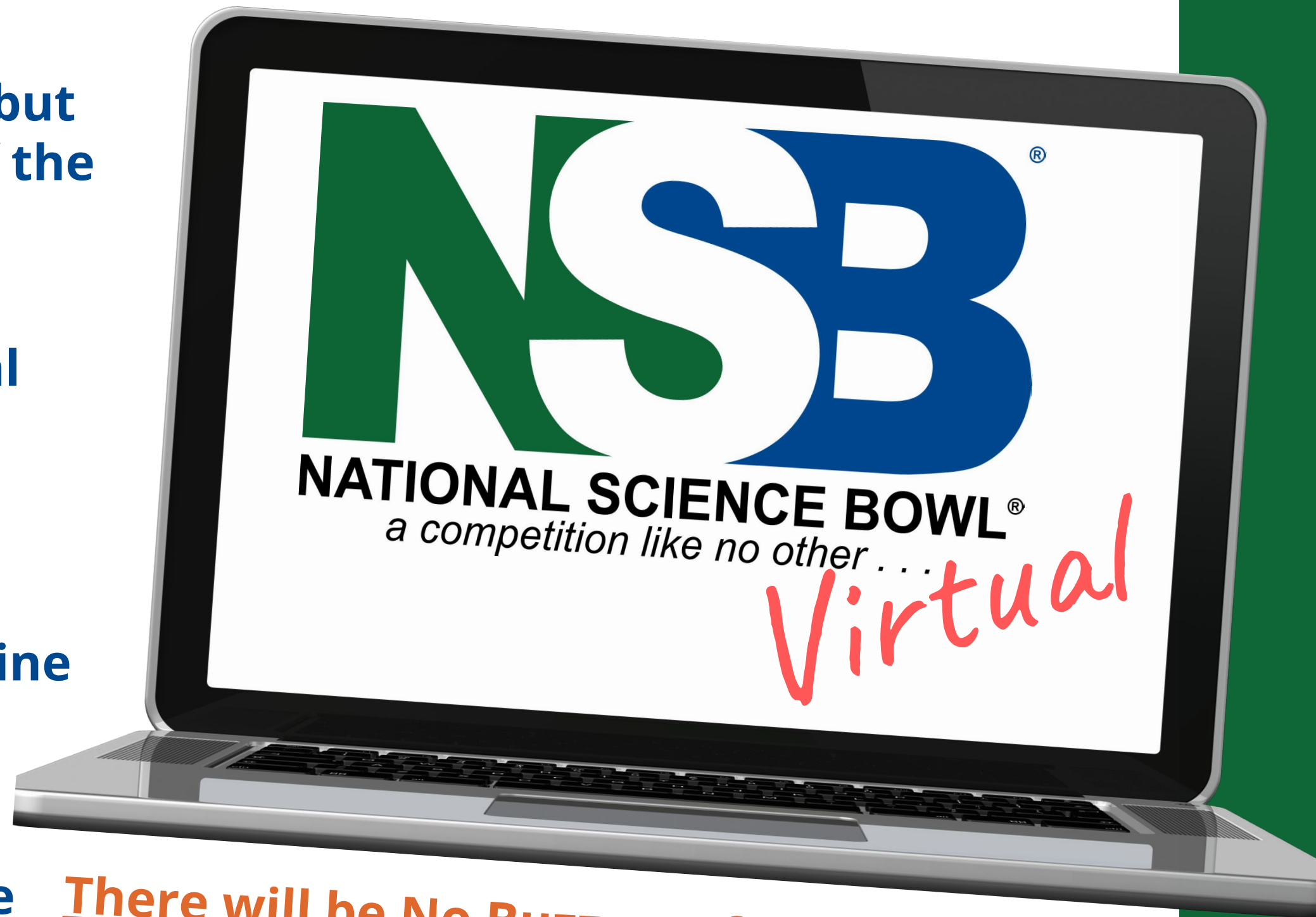


U.S. DEPARTMENT OF  
**ENERGY** | Office of  
Science



# Welcome to NSB *Virtual*

- Teams will not play head-to-head matches but instead, teams are competing against all of the other teams.
- There will be only ONE TEAM in each virtual “room”.
- Each team will get a chance to answer ALL questions for a total score that will determine advancement.
- Each student, coach, and volunteer must be available via computer or a device with web camera and zoom capabilities.



**There will be No Buzzers - Students will raise their hands - Physically - Like Exercise!**

# Toss-Up and Bonus Questions

## Multiple Choice

- May say letter answer (W, X, Y, or Z) or scientific answer
- If scientific answer – **it must be exact as is written on question and answer sheet**
- If say both letter and scientific answer, they must both be exact

## Short Answer

- Does not need to be exact
- Units need not be given unless they are specifically asked for, but if they are given, they must be correct
- Review the Conventions in the rules

First word counts...  
no "My answer is..."



# Volunteer Roles: *Virtual*

At least three officials in each room



## Moderator and Timekeeper

The Moderator will read the questions and start the timer.

The script will be available to them ahead of time.

## Recognizer and Score Keeper

The Recognizer will acknowledge the students who raise their hand during the competition.

They will also enter the official score into the Google Form.

## Question Judge & Chat Box Scorer

The Question Judge (formerly the Science Judge) ensures the questions are read correctly.

They will also enter scores into the Zoom chat box in real time.

Virtual

# The Tournament Structure

\*\*Each Regional may differ in number of rounds due to size and other limitations but each one will typically follow this format.



## Preliminary Tournament

**Every team will compete in at least TWO Preliminary Rounds.** (Many regionals will have three or possibly four Preliminary Rounds. These rounds may be separated into sections depending on size of the regional.)

- Preliminary Round 1: 1A or 1B or 1C**  
(use the same questions in 1A, 1B, 1C)
- Preliminary Round 2: 2A or 2B or 2C**
- Preliminary Round 3: 3A or 3B or 3C**

Each team's Preliminary Round scores will be combined to create their advancement score. The top xx teams will advance to Elimination Rounds.

## Elimination Tournament

The Elimination Rounds will run similarly to the Preliminary rounds, but **The Elimination Rounds will be numbered according to the number of teams who will be competing.**

- Elimination Round of 16: (The Top 16 Teams)**
- Elimination Round of 8: (The Top 8 Teams)**
- Elimination Round of 4: (The Top 4 Teams)**
- Elimination Round of 2: (The FINAL/Top 2 Teams)**

The top teams will advance to the next round. These teams will be posted in an Advancement Spreadsheet.

# New Match Structure

## Preliminary Rounds

Each competition will have at least 2 Preliminary rounds. The combined score for the Preliminary rounds will determine advancement.



## Team Info

3 to 5 students on a team (no more than 5 per team)

All 5 can compete together

Students can discuss answers with each other out-loud via the Zoom chat box

No breaks or substitutions.



## Highest Score Advances

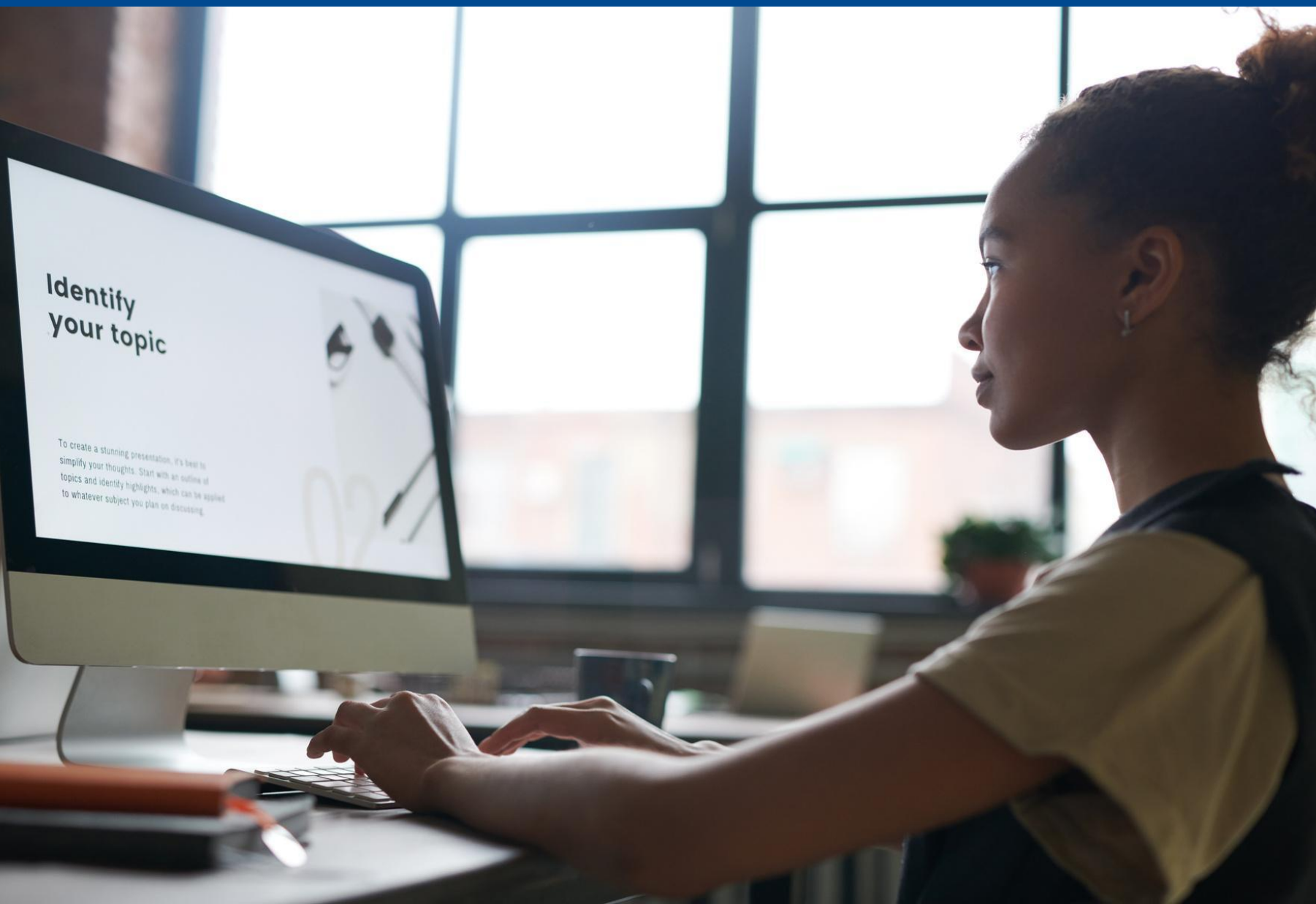
The teams with the highest combined point totals from the Preliminary Rounds will advance to the Elimination Tournament.



# NEW: Virtual Monitoring

Each student and coach must have two devices logged into zoom. One to show their face and another to show the the student's workspace and surrounding area.

*Virtual*



This is the ideal second device set up:  
You can see the student, the student's  
computer, workspace and hands.



The Audio should be turned off on the 2nd device.

Please rename 2nd device if possible

Students should name themselves what they like to be called.



# Virtual Monitoring Rules



- Students may have up to 5 sheets of plain white paper-no notes
- **No calculators, phones, books, notes etc.**
- Students should only be looking at their computer screens and scratch paper
- Coaches should sit still; they are allowed to keep score on paper
- Players, but not coaches, may type in the chat box during the game

# What will I see?

Make sure all students and coaches can see and be seen as well as hear and be heard.

2<sup>nd</sup> device should be closer



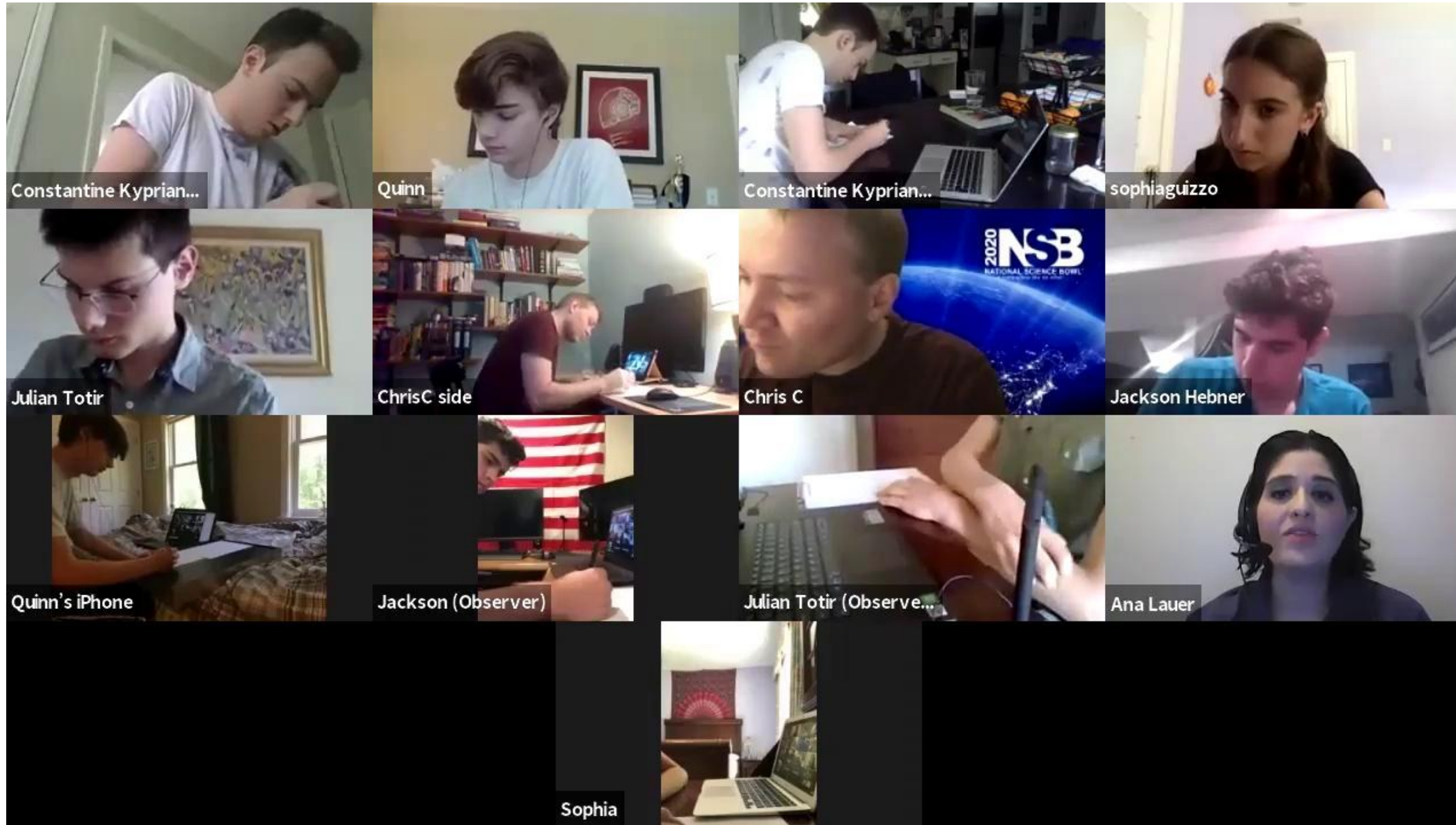
Students and coaches will need two devices.

Perfect 2<sup>nd</sup> device set-up

Please only use first names (and last initial if 2+ students have the same first name)

Grace's head should be centered in her "box"

Please download the newest version of the Zoom app.



[Sample Video Link](#)

# Virtual Timing Rules



After reading a toss-up question, the moderator will now allow 7 seconds for the team to respond. **(4 points)**

Bonus Questions will be asked if the toss-up questions were correct. The team will now have 22 seconds to give an answer to the bonus question. A 5-second warning will be announced. **(10 points)**

There is no time limit on the Match. The match is played until all of the toss-up questions and earned bonuses have been read.

15 Questions for Middle  
School

18 Questions for High  
School

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# *Virtual* Answering Rules



- Any team member may raise their hand to answer
- Team members may consult with each other verbally via Zoom or the Zoom chat box
- The first player seen to raise their hand and be verbally recognized by the officials earns the right to answer the question
- Players must raise their hands in front of or next to their face (not off screen) and be recognized by name to answer before time is called

# Virtual Answering Rules

- Once read in its entirety, a question will not be re-read. No matter what happens – sirens, dropped signals, etc.
- Answers will only be accepted from the student verbally recognized by the Recognizer. There are no penalties for blurting – although blurting may affect what the moderator hears while the person who is called upon is answering.
- No stalling (stalling is the same as a wrong answer).
- No prefacing of an answer with things like "My answer is..."



## Introductions and Digital Setup

- Log into Zoom and check that everyone can hear and be heard
- Make sure recording is on, and that everyone is in gallery view
- Have the following on your computer screen: Question Sets, a digital timer, the zoom screen in gallery view and chatbox
- Follow the script to introduce yourself, the other officials, the rules and the round information
- Check with the QJ that you are using the correct question set

## Reading the Questions

- Announce whether it is a toss-up or bonus question
- Announce the question number
- Announce the question category
- Announce whether it is multiple choice or short answer
- Read the question
- Start the timer and watch the clock not students
- If no one is recognized say “TIME” when time has run up

## After they Answer

- If the Toss-up is correct, move on to Bonus Question
- If Toss-up is wrong give correct answer and move on
- If the recognizer says “No Answer”, confirm with the team, give the correct answer, and move on

## Keep in Mind .....

**Toss-Up**  
Students have 7 seconds to raise hand to answer.

**Bonus**  
Students have 22 seconds to answer with a 5 sec warning



## Minimum Requirements:

- Be able to articulate clearly and maintain a good pace
- Know and be able to apply all of the rules
- Read and review the questions prior to the event



## #1 Read the entire Toss-up Question

**Read slower than normal!**  
**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 while also being consistent.

## #2 Look at Timer



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**

**Give a 5-second warning at 17 seconds**

Once you hear the Recognizer speak, you may look at the team as they give their answer.

## #3 After they Answer



**If correct Say:** “Your bonus is in CATEGORY, Short Answer/Multiple Choice”

**If incorrect:** Please give the correct answer and move on to the next toss-up question.

**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 and move on to the next toss-up question.



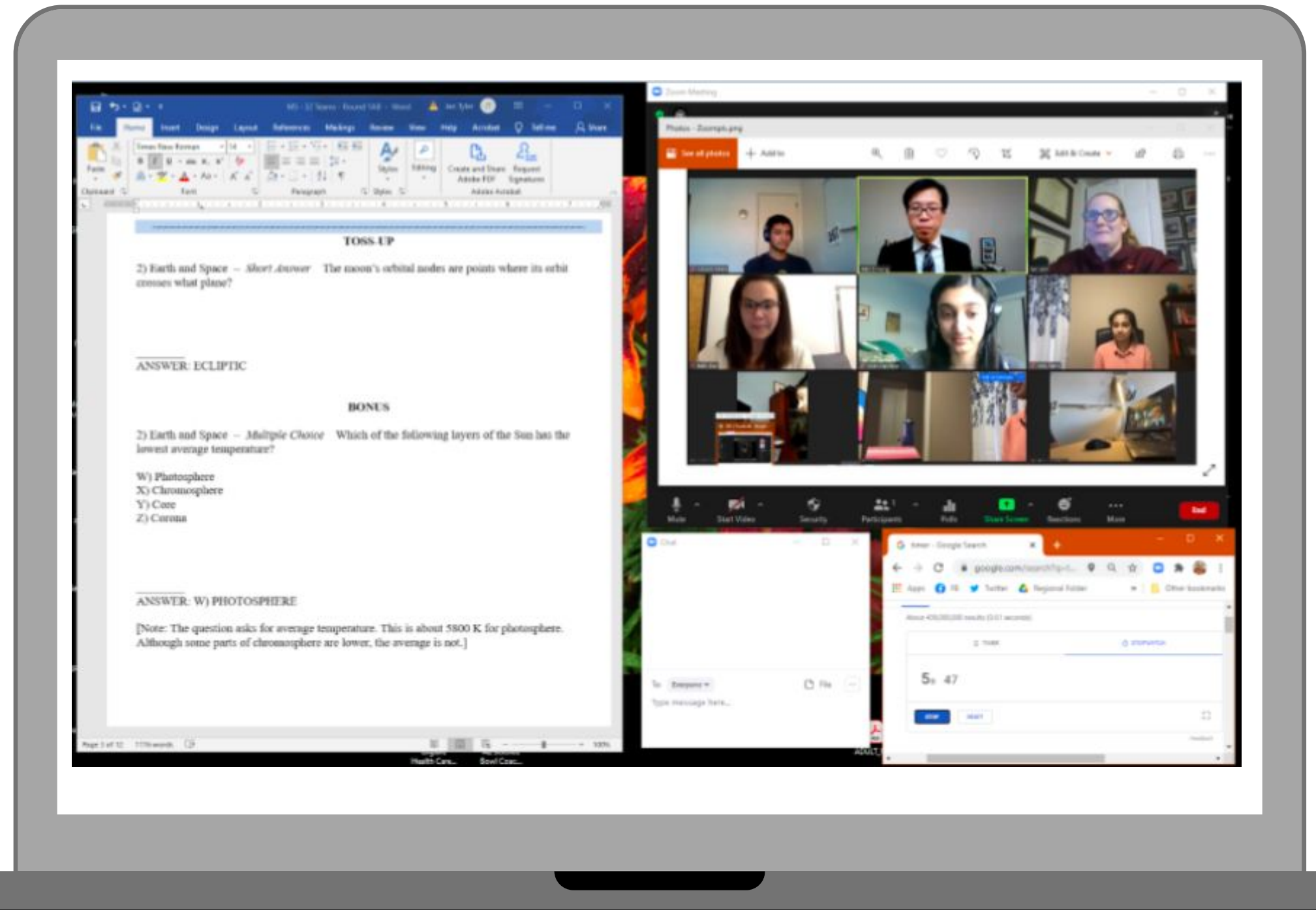
# The Moderator's Screen

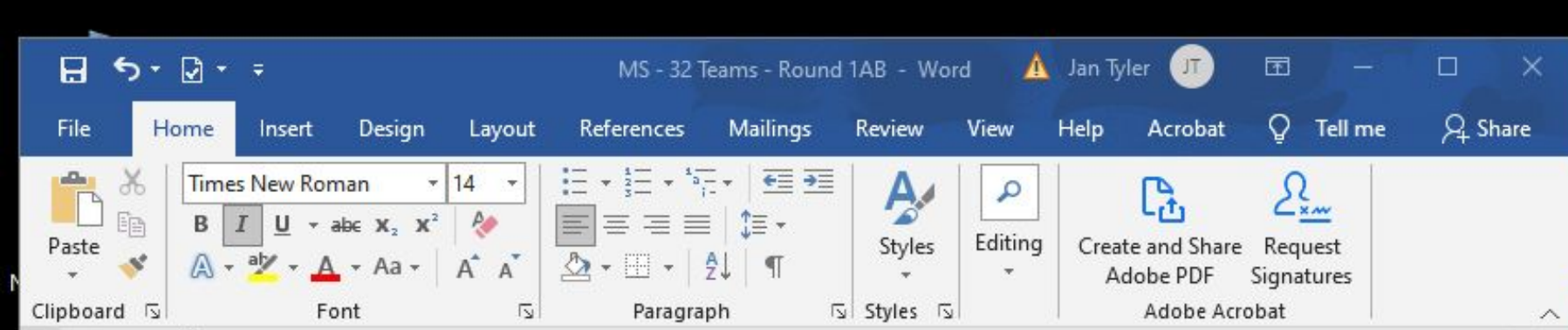
#1 Script/Questions

#2 Zoom Screen

#3 Timer

You may also use a stopwatch or cellphone





### TOSS-UP

2) Earth and Space – *Short Answer* The moon's orbital nodes are points where its orbit crosses what plane?

ANSWER: ECLIPTIC

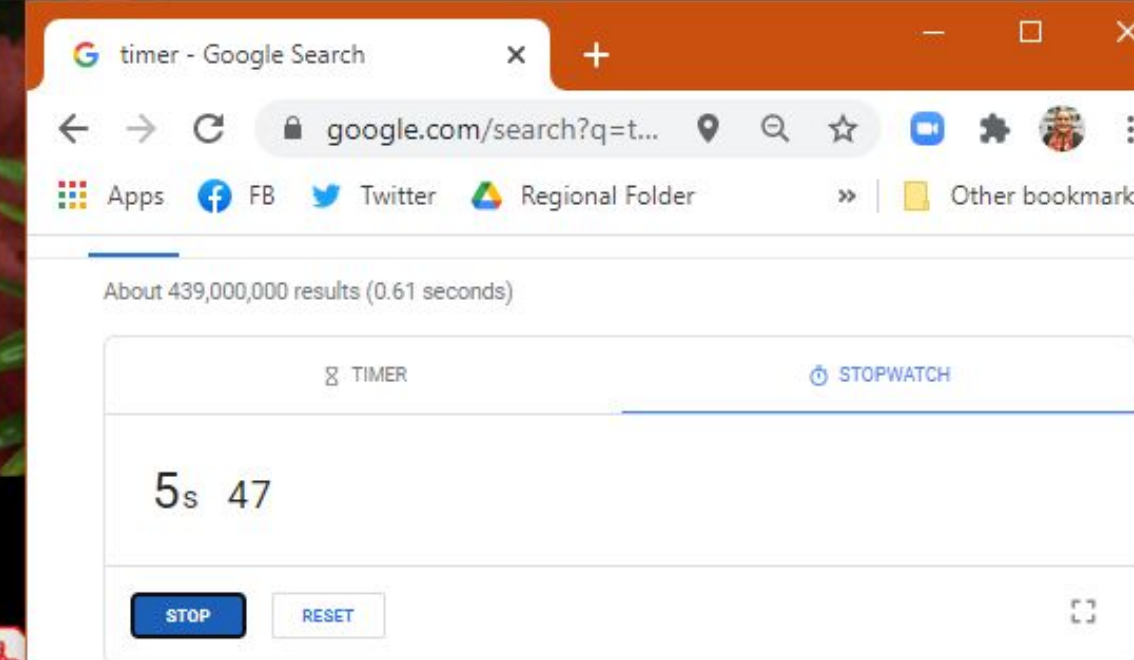
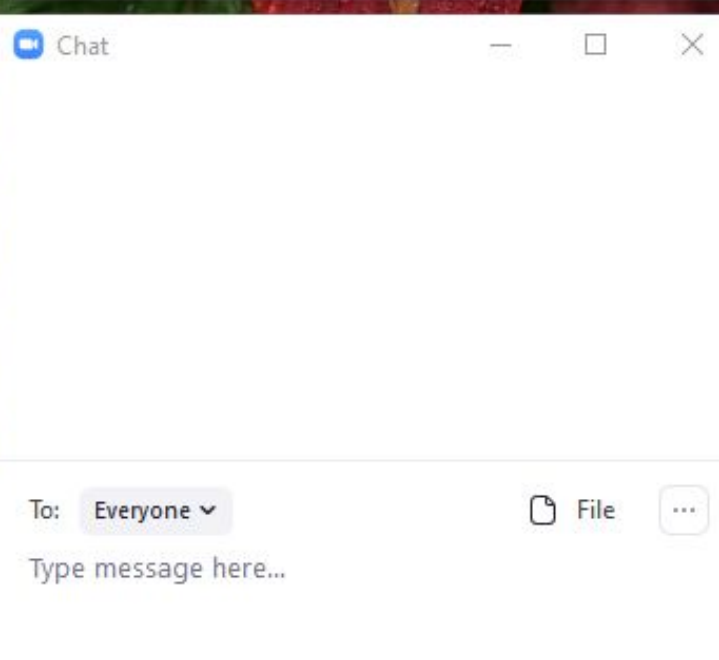
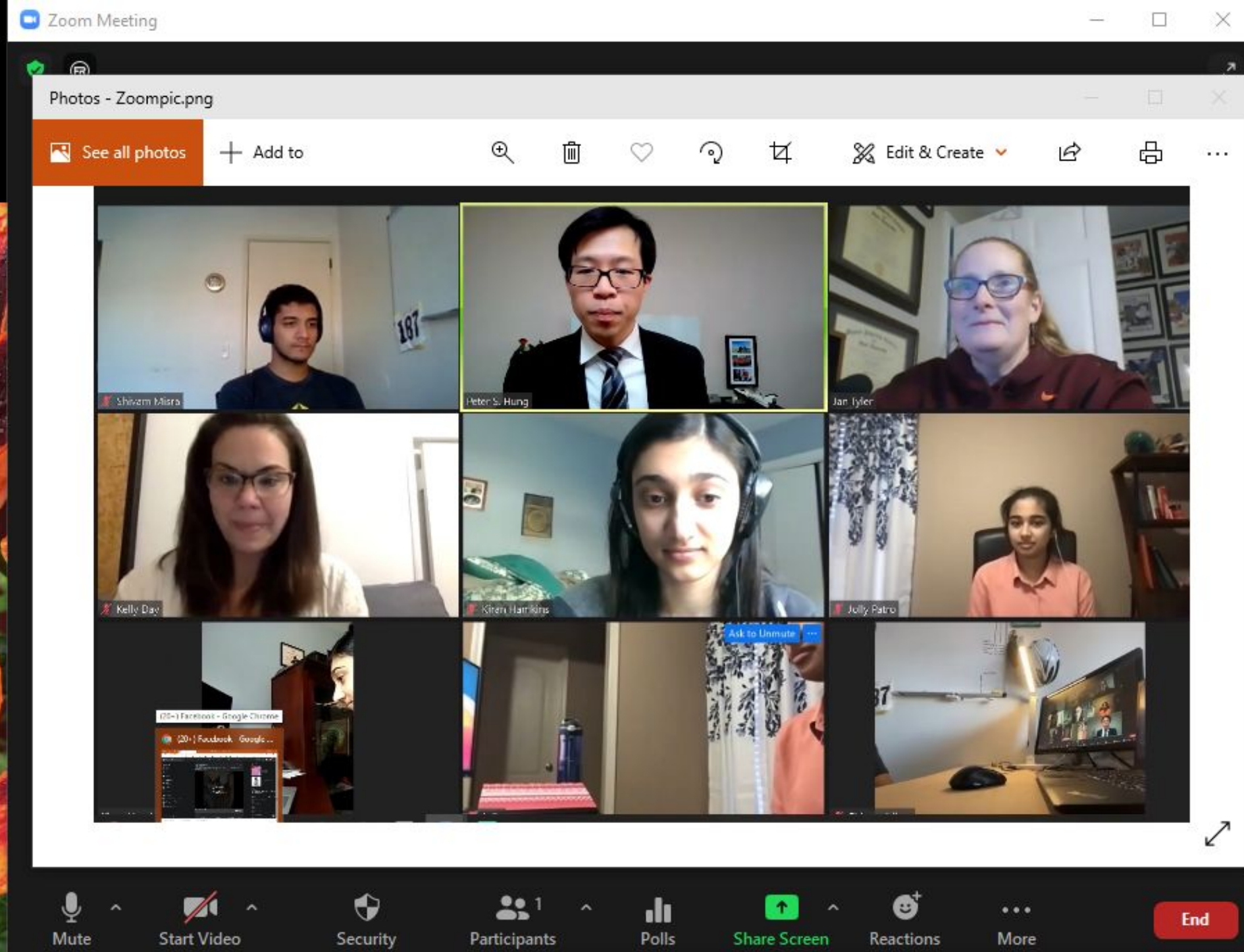
### BONUS

2) Earth and Space – *Multiple Choice* Which of the following layers of the Sun has the lowest average temperature?

- W) Photosphere
- X) Chromosphere
- Y) Core
- Z) Corona

ANSWER: W) PHOTOSPHERE

[Note: The question asks for average temperature. This is about 5800 K for photosphere. Although some parts of chromosphere are lower, the average is not.]



# Virtual RECOGNIZER/ SCOREKEEPER

## Before the round begins

- Begin by opening up the digital Score Form and log into zoom
- Fill out the correct team info and round number in Score Form
- Make sure you can properly see and hear all students
- Move students so that they & their working space can be properly seen
- Ask how to properly pronounce student's name
- Practice having students raise their hands in front of their face



## When the round questions start

- You should be **watching the screen** while the question is being read
- Call on the first student to raise their hand, and do so Immediately
- Call on students, **by name**, to answer the questions
- If no student raises their hand in the allotted time, say: **No Answer!**

VERY IMPORTANT: At end of game announce the final score and check to see if score matches with chat box score. Also make sure you submit the score electronically as soon as the round is finished.

## Scoring

There are only three scoring options for each question

- Missed the toss up questions = 0 points
- Answered ONLY toss-up correctly = 4 points
- Answered BOTH toss-up & bonus correctly = 14 points

### Minimum Requirements:

- Be able to perform basic math skills quickly and accurately
- Be able to focus on the scoring in a competition setting
- Be comfortable being on zoom with camera on the entire time

# Recognizer/ Official Scorekeeper

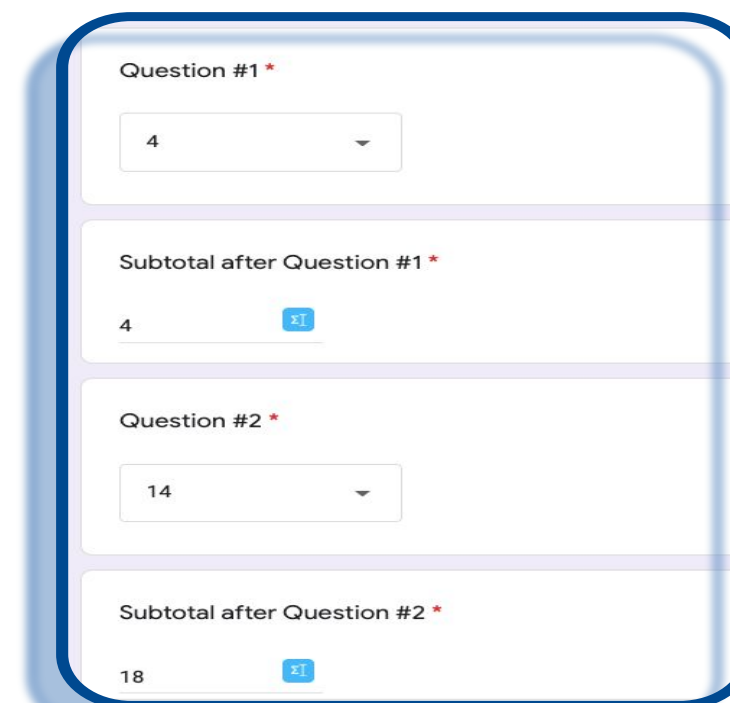
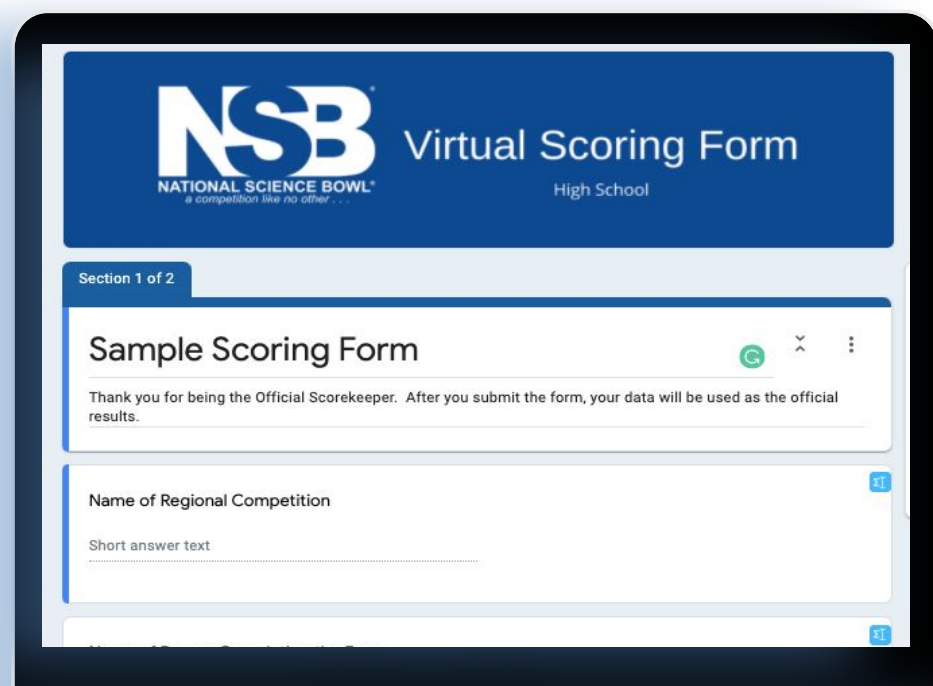
Virtual



**#1 Open Official Scoring  
Google Form**

**#2 Call on Students who  
Raise their Hands**

**#3 Enter the Score  
into the Official  
Scoring Form**



# Recognizer and Official Scorer

## #1 Open Official Scoring Google Form

- Before competition begins you must set up the Google Form by filling in the general information.
  - Regional Name
  - Team Name
  - Team Number (If applicable)
  - Round Number
- This form must be open on your computer along with the zoom screen.
- Once competition begins you will enter in the official scores here.

The image shows a laptop screen displaying a Google Form titled "NSB Virtual Scoring Form High School". The NSB logo (National Science Bowl) is in the top left. The form is labeled "Section 1 of 2" and "Sample Scoring Form". A message reads: "Thank you for being the Official Scorekeeper. After you submit the form, your data will be used as the official results." Below this is a text input field for "Name of Regional Competition" with a "Short answer text" label. The word "Virtual" is handwritten in red next to the input field.

# Recognizer and Official Scorer

## #2 Call on Students who Raise their Hands

Call 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**



## What if there is a tie?

Students win all ties with the word "TIME" – if a student raises their hand as time is called, please call on the student and allow them to answer.

## What if there is no answer?

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!

# Recognizer and Official Scorer

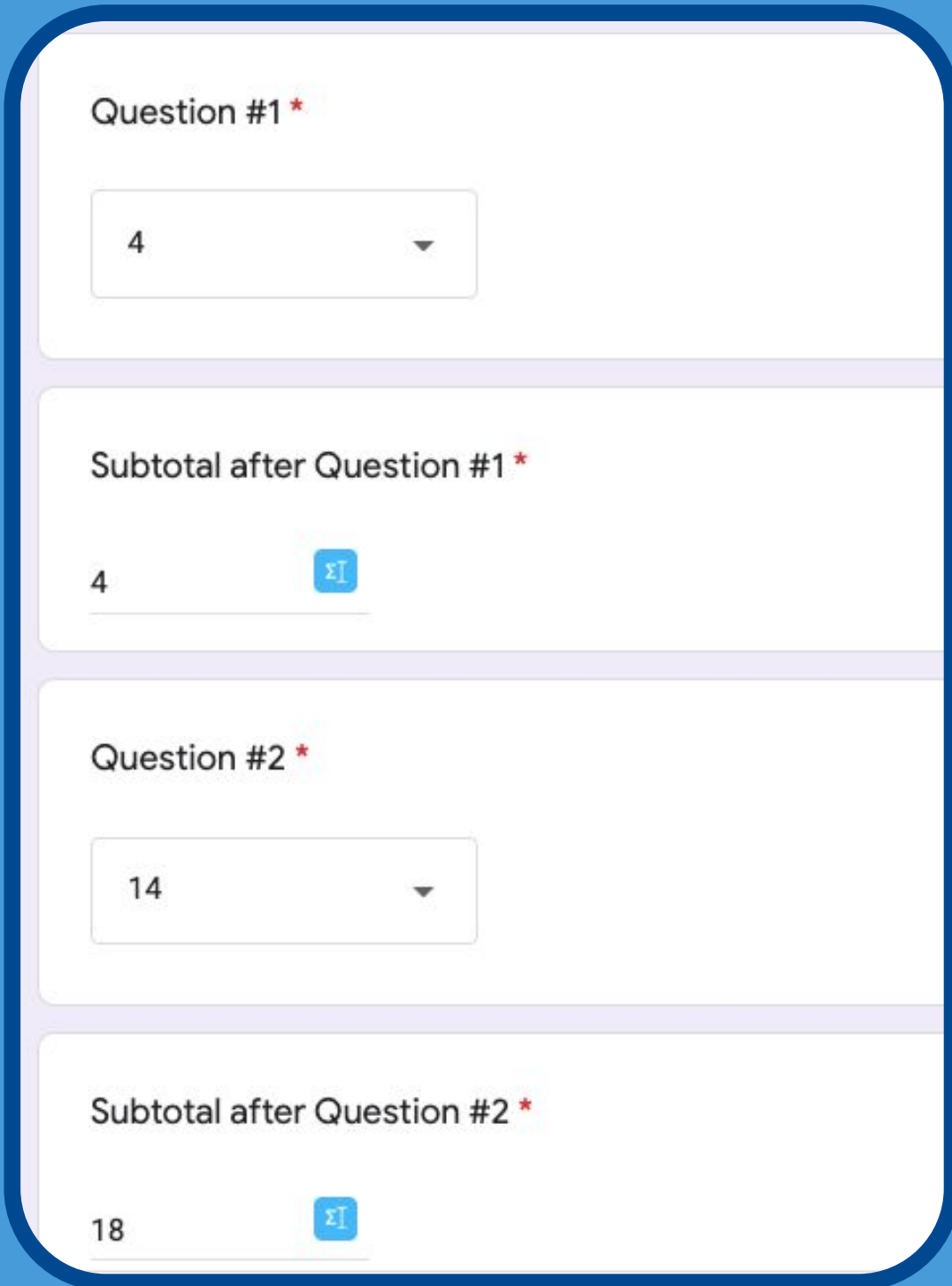
## #3 Enter the Score into the Official Scoring Form

- Select the Dropdown score for each question
- There are only 3 dropdown options
  - 0 pts (They missed the Toss-up)
  - 4 pts (They got the Toss-up but missed Bonus)
  - 14 pts (They got both Toss-up and Bonus)



- After each question, enter the running subtotal
  - \*\*\* You may want to have a calculator at hand
- Check with the Chat Box total as you go along
- Submit the form at the end with the total score
- Sample Form - NOT official:

<https://docs.google.com/forms/d/e/1FAIpQLScPGSE-mZI33L-LkJOgXuo2ZFiLXQTTegSIBSORbBzL28EhGA/viewform>



Question #1 \*

4

Subtotal after Question #1 \*

4

Question #2 \*

14

Subtotal after Question #2 \*

18

## Ensure that:

- The correct teams are in the competition room and can hear the moderator
- The moderator is reading questions from the correct round
- The moderator is reading the questions correctly
- Make sure that the moderator is not skipping words, & using correct pronunciations
- Be Prepared to take over if something happens to the moderator's internet connection
- Stop the moderator if they are reading a wrong question, reading a bonus question that wasn't earned or giving an answer when they shouldn't



## Keep the score updated in chat box

- Update the scores in the chat box after each question
- Use the Following Format: Question number- Question score- Total running score

## Challenges

ALL challenges must be called in to the National Appeals "Room" and must be made before the moderator begins the next question.

## Minimum Requirements:

- Be able to follow the competition flow
- Know and be able to apply all of the rules
- Read and review the questions prior to the event



# Question Judge/Chat Box Scorer

*Virtual*

## #1 Listen to Questions to make sure they are presented correctly

- Follow every question, word-for-word, as the Moderator is reading
- 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
- Ensure the Moderator is reading the CORRECT set of questions
- Be prepared to re-read an unfinished question in case the Moderator drops out of the Zoom call

Be prepared to STOP  
the game if needed.

- Stop the Moderator from reading the bonus question when the toss-up question was not answered correctly
- Stop the Moderator if they accept numerical or scientific answers that are not listed

# Virtual Question Judge/Chat Box Scorer



## #2 Enter the Score in the Zoom Chat Box

### Zoom Chat Box Format

Question Number-Question Score-Total Score

6-14-36

Example: This is Question Six. The team scored 14 points (Toss Up + Bonus) and they now have a running total of 36 points.

# How will I know where to "Go"?

**Volunteers will receive their schedules and Zoom links from their Regional Coordinators in advance of the competition day (2-10 days\* in advance).**

**PLEASE DO NOT SHARE THE ZOOM LINKS WITH ANYONE**

**Students, coaches, and parents should only receive Zoom Links from the Regional Coordinators.**



# Zoom Checklist

We will need one volunteer per Zoom Room to act as Zoom Host. The host will be responsible for recording the session answering basic zoom questions and muting devices when necessary.



[Link to Zoom Help Center](https://support.zoom.us/hc/en-us/articles/201362323-Changing-the-video-layout-Active-Speaker-View-and-Gallery-View-)

<https://support.zoom.us/hc/en-us/articles/201362323-Changing-the-video-layout-Active-Speaker-View-and-Gallery-View->

- Make sure you download the newest ZOOM app in advance
- Arrive 10 mins early – especially the Recognizer
- The Recognizer must make sure that:
  - Each 1st device audio is working (have everyone unmute themselves)
  - Each 2nd device is not connected to audio
  - Everyone has their correct name on BOTH devices.
  - You know proper Pronunciation of names
  - You properly see each student when they raise their hand and can see student workspace
- The Zoom Host must make sure that:
  - The recording is on
  - Everyone can hear and be heard
  - Everyone is looking at the gallery view



# Challenges @ 646-543-5266

Challenges must be made before the moderator begins the next question

**ALL challenges must be called in to the Appeals "Room" @ 646-543-5266**

**Do not accept ANY numerical answers that are not listed**

**Teams MAY NOT challenge judgment calls**

**To maintain consistency across rooms, ALL unusual situations or other questions should be immediately called in to the Appeals Room**

**Teams are limited to 2 unsuccessful challenges per team per match**

# Technical Problems?

Contact your Regional Coordinators

Also, download the newest Zoom App before the event

Try a practice-run beforehand



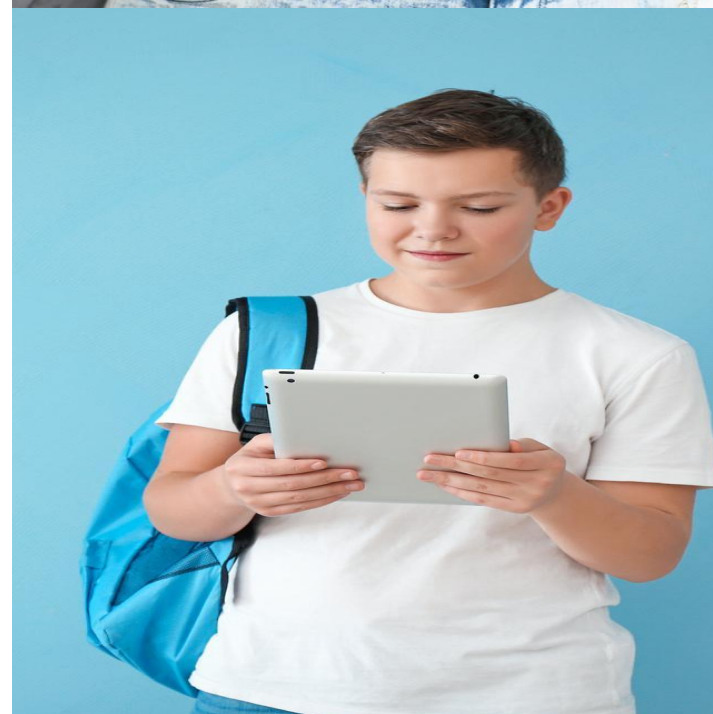


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**We are doing this  
for the Kids!**

**Let's make this a  
Great Experience!**





U.S. DEPARTMENT OF  
**ENERGY**

Office of Science

*Thank You For Volunteering!*



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