

# 2024 Dino Ridge Science Quiz Bowl Rules & Roles

## Getting There:

The 4th Annual Dino Ridge Science Quiz Bowl will be held at Colorado School of Mines in Golden on Saturday, October 19, 2024. Check-in will be in the lobby of the Green Center (Arapahoe & 16th St.) with free parking in Lots N, O, and along surrounding streets.

Competition rounds will take place in Marquez Hall across 16th street, and the Final Round will be held in Bunker Auditorium inside the Green Center. Signs will be posted to help guide Teams.

## Schedule:

7:15 a.m.	Training for Timekeepers & Scorekeepers (Marquez Hall classroom)
7:30 a.m.	Teams & Coaches check-in (Green Center lobby)
8:00 a.m.	Welcome & General Address (Bunker Auditorium in Green Center)
8:30 a.m.	Round 1 - Written Round (Bunker Auditorium)
9:35 a.m.	Round 2 - (Marquez Hall classrooms)
10:25 a.m.	Round 3 - (Marquez Hall classrooms)
11:05 a.m.	Round 4 - (Marquez Hall classrooms)
11:50 a.m.	Lunch Break (1 hour, 15 minutes)
1:05 p.m.	Announcement of Quarterfinalist teams
1:15 p.m.	Round 5 - Quarterfinals (Marquez Hall classrooms)
2:00 p.m.	Round 6 - Semifinals (Marquez Hall classrooms)
3:00 p.m.	Round 7 - Finals (Bunker Auditorium)
3:45 p.m.	Awards & Goodbyes

## Buzzer Modules & Classroom Setup:

- The Quiztron 3 Buzzer System will be used. This is the same system used in Knowledge Bowl. Each Buzzer System has 12 hand buzzers, 4 for each of the 3 teams (one per Team Member); any individual can buzz in to answer a question.

- All 12 buzzers in each system are connected to a control module. The Reader and Timekeeper have that control module in front of them. The module shows which Team has buzzed in first, second, and third. The Reader calls on them in sequence until the correct answer is given, or until all Teams have given incorrect answers, or until time runs out. The buzzer modules do not have a timer. The Reader, Scorekeeper, and Timekeeper will be seated in the front of the room. Teams will be seated at three separate tables arranged in a “U” formation in most cases.

## Competition Rounds, Substance & Scoring:

The day begins with a 30-minute Written Round, followed by 3 Oral Preliminary Rounds. If necessary, Scorekeepers or Timekeepers may be drawn from the parents/coaches within the rooms, though we will endeavor to have these roles filled in advance.

- A maximum of 5 students per Team may participate in the Written Round.
- ALL TEAMS participate in the first 4 Rounds (1 Written, 3 Oral).
- The 5th Round is the Quarterfinals in which the highest scoring 12 Teams compete.
- The 6th Round is the Semifinals in which the highest scoring 6 Teams compete.
- The 7th Round is the Finals in which the top scoring 3 Teams compete.
- In every Round:
  - **approximately one-third** of the questions asked will be related to **geology**.
  - **approximately one-third** of the questions asked will be related to **paleontology**.
  - **approximately one-third** of the questions asked will be a mix of **other scientific disciplines** (astronomy, botany, physics, etc.)
- Many questions will come from “Question Authorities.” The Dinosaur Ridge Education Team is also creating a number of Dinosaur Ridge-oriented questions to include in small numbers for each Round.
- When a Team answers a question **correctly**, they receive **1 point**.
- When a Team answers a question **incorrectly**, whether or not it was read in its entirety, they receive **0 points**. The Scorekeeper must abide by the Reader’s ruling, only challenging the Reader if the Scorekeeper believes the Reader has misspoken/spoken in error (meant to say something else).
- The Scorekeeper keeps the score on an ongoing basis, on a scoring grid posted in the front of the classroom for all to see at all times. The printed scoring grid will be signed by each Team’s Coach and taken to the Cumulative Scoring Center immediately after each Round.

## Preliminary Rounds:

After Written Round 1, Teams will be sorted into 8 groups based on their score rankings. Groupings for Round 2 will be:

Teams 1-3  
 Teams 4-6  
 Teams 7-9  
 Teams 10-12  
 Teams 13-15  
 Teams 16-18  
 Teams 19-21  
 Teams 22-24

- Rounds 2-4 are Oral Rounds. After each, the cumulative score of the Written Round and each Oral Round will be used to re-rank teams. For example, if Boulder High School scored 22/30 on the Written Round, they might be ranked 3rd and would be placed in the first group. If Boulder then scored 7 in Round 2, they would have 29 points total after two Rounds. If Vanguard scored 17 on the Written Round, perhaps they were ranked 7th and placed in the initial 3rd group. If Vanguard then scored 13 in Round 2, adding up to 30 cumulative points, they would have a higher score than Boulder. At that point, perhaps the two teams might be ranked 5th (Vanguard) and 6th (Boulder). In such case they would square off in the second group in Round 3. If the cumulative scoring results in three teams facing off against each other in consecutive Rounds, the scoring team may, at their discretion, assign one of the Teams to the immediately higher or lower group, switching them with another Team in order to mix up the competition a little more. For example, if after Round 3, Teams 7,8 and 9 are still at the same place, Scorers may move one of the Teams up or down one “room” so that Teams may compete against as many different opponents as possible throughout the day.
- Teams are re-ranked after each Round based on cumulative scores and sent to assigned rooms for the next Round based on new rankings.
- Because only cumulative scores matter, it does not matter who wins any individual Round in the Preliminary Rounds.
- If necessary, tiebreakers for cumulative scores only will be used to seed, or rank, Teams every Round, by which Team did better in the most recent Round.
- If the most recent Round tiebreakers doesn't break the tie, then going backwards in time (e.g., Round 4, Round 3, then Round 2) will be used until the tie is broken. If in the unlikely case all Rounds are exactly the same score for two tied Teams, then the last questions from the Written Round will be used, going backwards from the last question, until one team has a question correct and the other incorrect.

## **Playoffs: Quarterfinals, Semifinals, Finals**

- After Round 4, the top scoring 12 Teams advance to the Quarterfinals, aka the “Playoffs.”
  - In the Playoffs, Scorekeepers, Readers, and Timekeepers do not include Coaches/ Parents, etc.
  - Unlike in the Preliminary Rounds, protests can be lodged by Teams if they believe the Reader's judgment to be incorrect. However, the protest must be lodged before the next questions is being read. If the next question is underway, the Reader's previous decision is final. If a protest is successfully lodged, then the Reader, Scorekeeper, and Timekeeper will briefly huddle and the majority opinion regarding the protest will guide the final decision. Accordingly, a Reader's decision will only be overturned if *both* the Scorekeeper and Timekeeper disagree with the Reader's decision. In such case, the Reader must defer to the others' judgments.
  - Round 5, the Quarterfinals, will include four classroom competitions, including the Teams with the following rankings following Round 4:
    - ROOM 1: Teams ranked 1,5,9
    - ROOM 2: Teams ranked 2,6,10
    - ROOM 3: Teams ranked 3,7,11
    - ROOM 4: Teams ranked 4,8,12

Six Teams will advance from Round 5, the Quarterfinals, to Round 6, the Semifinals:

- All four winners from these four Round 5 competitions, plus:

- The other two Teams among the Round 5 non-winners with the highest **cumulative** scores between Rounds 1-5.

Round 6, the Semifinals, will feature the 6 Teams advancing from Round 5, as determined above. **At this point, cumulative scores are discarded, and scoring starts afresh.** The competitors in the Round will be as follows:

- Semifinal 1: a) Winner from (Round 5) ROOM 1; b) Winner from (Round 5) ROOM 4; c) second-highest scoring non-winning Team (cumulative through Round 5).
- Semifinal 2: a) Winner from (Round 5) ROOM 2; b) Winner from (Round 5) ROOM 3; c) highest-scoring non-winning Team (cumulative through Round 5).
- Three Teams will advance from Round 6 to the Finals, Round 7:
  - Semifinals 1 Winner
  - Semifinals 2 Winner
  - Highest-scoring non-winning Team in Round 6 (non-cumulative, Round 6 score only)

Round 7, the Finals, will take place in Bunker Auditorium in the Green Center. Reader for the Finals will be Dinosaur Ridge's Interim Director of Paleontology Amy Atwater.

- The top three Teams in the entire competition are simply determined by scores from this round. If a tiebreaker is needed after 30 questions, then there will be three designated tiebreaker questions. The first Team to answer one correctly will win the tiebreaker.

## Roles of the Competition: Volunteer Readers

Other than the single possibility for protests noted above, Readers are in total control of their ROOMS and the competition in those ROOMS. It is imperative that the competition starts as soon as the Teams are seated and the Reader has gone over a short, pre-determined list of instructions/tasks. Those instructions will be read at the start of every Round.

- If necessary, recruit a Scorekeeper from the ROOM (Rounds 2-4 only).
- Make sure that the Timekeeper and Scorekeeper are prepared to start the Round before reading the first question.
- Encourage the Teams to get seated quickly and make sure Teams are prepared to begin the Round before reading the first question.
- Remind all students to put away and silence all electronic devices, and for observers to silence electronic devices.
- Remind observers in the ROOM that no verbal or electronic noise should emanate from the observing audience, nor will mouthing of answers be tolerated, even if inadvertent. Violation of any of these standards may result in the dismissal of an audience member from the ROOM.
- Remind Team members about not speaking to one another or communicating by paper. Violation of these rules or the rules about electronic devices may, at the Reader's discretion, result in the dismissal of a Team member or in an extreme case, an entire Team, from that Round, with a score for the Round of what was achieved when the Team was dismissed, and in case of an individual dismissal, the Team must complete the Round with just three team members.
- Remind Team members that the only allowable answer is the answer on the answer key available to the Reader, and that it is entirely in the Reader's discretion as to whether to accept alternative answers, though the Readers have been trained to be as consistent as possible with each other, with respect to answers that are not exactly as written on the answer keys.

- There will be no appeals beyond the Reader in the Preliminary Rounds. Appeals will only be allowed in the “Playoff” Rounds.
- After every 10 questions (question 10, question 20, and after the conclusion of the Round), the Reader will stop and ask for a scoring update, which the Scorekeeper then gives verbally to apprise everyone in the ROOM of the ongoing score.

## **During Rounds, Readers:**

- Announce “correct, 1 point” or “incorrect, zero points” for each answer.
- Read next questions immediately (within a few seconds) after announcing “incorrect” or “correct” for prior question.
- Will not re-start questions following a question that is interrupted with a buzzer, and if the first-answering Team is wrong, the Reader will start where they left off with the early buzzer. If no Teams buzz within approximately 3-seconds of the completion of a question, the Reader will read the question a second time.
- If time elapses without a response from any Team, the Reader says, “The correct answer is...” then gives the correct answer and proceeds to the next question.
- Can throw out questions on which they’ve made a mistake or when there’s been a significant interruption; there will be a limited number of additional questions on each question list to make this possible.
- Must ask for a scoring update after 10 questions, after 20 questions, and at the Round’s conclusion.
- Should stop mid-sentence or mid-word if a buzzer is buzzed before the question is finished being read.
- Should always remind the Scorekeeper to get the Round results to the Cumulative Scoring Team ASAP after a Round. This timing is crucial to keeping the event on schedule.

## **Scorekeepers:**

- In Preliminary Rounds: Readers may recruit someone from the parent/coach ranks to be Scorekeeper if needed.
- Scorekeepers keep track of scores on a printed grid that will be posted at the front of the room for all to see in each competition room. For each question asked, the Scorekeeper must mark whether Team A, B, or C, received a point for answering the question correctly. If none of the teams answered the question correctly, then the Scorekeeper must check the “Auk” column for that question, signaling zero points for any team on that question.
- After every Round, all Team Coaches, as well as the Reader, and either the Timekeeper or Scorekeeper, must sign the Scorekeepers’ scoresheets before the scoresheets are taken to the Cumulative Scoring Team room. Scorekeepers and Readers both should make sure that this happens every Round. Scorekeepers must at once deliver scoresheets to the Cumulative Scoring Team as soon as the Coaches, Reader, and Timekeeper/Scorekeeper sign the scoresheets, without delay.
- These instructions need to be conveyed to Scorekeepers by Readers; we will have “cheat sheets”/task lists available for Scorekeepers to remind them of their responsibilities.

## **Timekeepers/Timing:**

### Written Round Timing (only one Timekeeper):

- Teams work together to answer questions during this first (Written) Round.

- Timekeeper will announce to the entire auditorium when there are 15-minutes left in the Round, 5-minutes left in the Round, and one-minute left in the Round. The Timekeeper will also announce the end of the Round.
- Answer Sheets will be collected and immediately scored following the announcement of the end of the Round. Event volunteers, including Scorekeepers, Timekeepers, Readers, and others should endeavor to simultaneously retrieve all Written Answer Sheets from Teams as soon as the Round ends.
- There are no buzzers in the Written Round.

#### All Oral Rounds (2-7): Time Limits to Answer Questions/Reading Full Questions and Other Protocols

All Timekeepers will be given a handheld timing device on the morning of the competition. Timekeepers are expected to strictly enforce time limits to ensure event consistency and integrity in Rounds 2-6. The Final Round is handled by a single Timekeeper.

- 1) If the buzzer is buzzed before the end of a question, the buzzing Team has 5-seconds to finish their answer. The Timekeeper should immediately start the timer to count to 5-seconds. After 5-seconds have elapsed, the Timekeeper will loudly announce, "Time!"
  - The Reader always stops reading— even mid-word— as soon as a buzzer is buzzed. Once the buzzer is buzzed, the Timekeeper calls out the Team's letter (A, B, C, as visibly designated on the buzzer module).
  - Such designation needs to happen before each Round for the Teams, the Reader, Scorekeeper, and Timekeeper should familiarize themselves with the buzzing module and which schools are represented by A, B, and C.
  - In general, if the buzzing Team in this scenario does not complete their answer before the Timekeeper says, "Time!" Then their answer is incorrect, and they are given zero points.
- 2) If the earliest-buzzing Team in #1 above is incorrect, then another Team that buzzes in, or has already buzzed in according to the module, will then also have 5-additional seconds. The Reader calls out the second Team and the Timekeeper should then immediately start the timer to count to 5-seconds. After 5 more seconds have elapsed, the Timekeeper will loudly announce, "Time!" Then if their answer is incorrect, they are given zero points. If 1 or 2 Teams are early buzzers and incorrect, then the Reader will continue to finish reading the question after the missed answer(s).
- 3) Once a question is finished being read a second time, Teams that have not already buzzed in have 15-seconds to buzz. Accordingly, once a question is finished being read a second time, if there has been no buzzing, the Timekeeper should start the timer counting up to 15-seconds after the end of the question. After 10-seconds have elapsed, the Timekeeper will loudly announce, "5 seconds!" And then "Time!" after the full 15-seconds have elapsed. If no Team has buzzed by the time the Timekeeper announces, "Time!" then no Team will get credit for the question, and the Reader will simply move on to the next question after sharing the correct answer with the ROOM.
- 4) Once a Team has buzzed after a fully read question, they will then have 15-seconds to answer. The Timekeeper should start their timer counting to 15-seconds. Again, after 10-seconds have elapsed, the Timekeeper will loudly announce "5 seconds!" And then "Time!" After the full 15-seconds have elapsed. If 15-seconds have elapsed and the Timekeeper announces "Time!" Then the answer will be counted as incorrect if the answer is not completed. More detail on this below.
- 5) It is possible for a question to be fully read, and then a Team buzzes in and is given 15-seconds, and that Team misses the question and a second (or third) Team buzzes in. Each new

buzz after a question is fully read, the Team buzzing in gets a new 15-seconds, and the same process is followed as above. So, to be clear, Team A could buzz in 14-seconds after a question is read, and then miss after 14-seconds. Then another 15-seconds would start for Teams B and C to answer, and so on.

\*One easy “hack” to thinking about the timing rules is that the buzzer is set to 5-seconds for buzzes that come in before the question is finished, and is set for 15-seconds for buzzes that come in after the question is finished.

## Other Rules/Clarifications:

- During each Round, one or more substitutions can be made by each Team after question 15. No substitutions are allowed at other times. An appropriate pause will be taken to allow for substitutions.
- Team members are never allowed to speak to one another during competition time, including to decide who will answer a question. They may use other nonverbal, non-written signals such as hand gestures to decide who answers the question.
- Other than questions involving math functions, Teams may NOT write notes during the Oral Round competition; this is considered the same as oral consultation. Teams should be given scratch paper and pencils before each Round (one for each Team Member), as some answers may require brief math work. They can use scratch paper to figure a computation question or a palindrome or something similar, but they cannot write notes to each other. Team members who are NOT performing a computation MUST NOT watch a teammate who is doing a computation, as this is also considered inappropriate consultation.
- No resources (e.g. books/notes) are allowed to be referenced.
- There will be no separate divisions based on school size. All participating schools will compete against each other regardless of size.
- During the competition, Teams will wear T-shirts provided by Dinosaur Ridge. All other apparel must be free of distractions including political viewpoints or offensive language. Readers have the discretion to request clothing be replaced.
- For answers to count as correct, they must be clearly stated and audible. If the Reader cannot understand the answer, it will be deemed incorrect.
- Electronic devices must be put away during each competition Round. This includes electronic watches.
- Answers cannot be changed. The first words spoken become part of the answer and cannot be retracted.
- Readers are only required to accept answers as they are exactly shown on the answer page. Within a standard of “limited discretion.” Readers may deem other close answers as acceptable; however, this is entirely in the Readers’ discretion. Readers are trained to allow and disallow similar discretionary answers, though precise consistency cannot be guaranteed. In general, however, simple mispronunciations of answers by Teams should not be counted as a wrong answer. In all cases until the Quarterfinals, the ruling of the Reader will be final. Readers are allowed to consult with the Timekeeper if desired about a questionable answer, but such is not required.
- If there is a “chorale” response (multiple Team members from the same team responding simultaneously) then the answers need to be both consistent and correct to be counted as correct; one incorrect and one correct answer stated simultaneously counted as incorrect. Accordingly, if anything stated is incorrect, the answer is incorrect.

More detail on answering within 5 or 15-seconds: In all cases, answers must be started within 5 or 15-seconds, depending on the situation as spelled out above. The answer does not need to be finished within the sometime frame (5 or 15 seconds), however, as long as there is no

notable pause in the answer. If there is a notable pause during the answer, and the end of the answer is more than 5 or 15 seconds, as relevant, then the answer should be counted as incorrect.

For instance:

If the answer to a question was “Tyrannosaurus rex” and the Team buzzed in early (and therefore had 5-seconds to answer), and said:

- A. “Tyrannosaurus” within 4-seconds, paused for 3 full seconds, and then said “rex” then the answer should be treated as incorrect because there as a notable pause and it took more than 5-seconds to give the full answer.
- B. On the other hand, if the answer is “Tyrannosaurus rex” and the answer starts being given just before the 5-second mark and finishes just after the 5-second mark, with no notable pause, then the answer should be counted as correct.
- C. Finally, if there is a notable pause, but the answer is fully given before 5-seconds, then that answer should be allowed as correct. Such would be the case if the answerer said “Tyrannosaurus” after 1-second and then “rex” 3-seconds later, getting the whole answer in within 5-seconds even though there was a notable pause.

The bottom line is that if there is *both* a notable pause and the answer takes more than 5-seconds, then the answer should be considered incorrect. An answer that takes slightly longer than 5-seconds, with no notable pause, should be counted as correct.

## Final Mentions:

- **VIDEO PRODUCTION:** Throughout the day and especially during the Final Round, a video production crew will be recording parts of the competition in various rooms and between Rounds to capture the competition. The Final Round when a Winning Team is determined will be entirely videotaped and there will be some stopping and starting in order to ensure all pertinent moments are recorded for the edit. As much as possible the crew will endeavor to avoid being disruptive and distracting, especially during actual Rounds when timing is crucial.

At some point to be announced a 30-minute version of the Dino Ridge Science Quiz Bowl will be “aired” on Rocky Mountain PBS (RMPBS) stations around the state, and available to stream on-demand. An effort will be made to include appearances from every participating team and not just those that make it to the Final Round. Information will be shared with coaches as soon as RMPBS sets its schedule. You can see the 2023 episode here: <https://video.rmpbs.org/video/dino-ridge-science-quiz-bowl-hwbbou/>

A Media Release will be part of check-in. At that time please note any participants that DO NOT wish to appear on video and the crew will be notified.

- **STAY AND WATCH:** Teams that do not make the Playoffs are welcome to stay and watch if they would like. There will be a TV production happening during the Final Round and audience participation is encouraged!

We totally understand that some Teams will have traveled a long distance and may want to get going, but please know that there is plenty of room to stay and observe if you would like. We greatly appreciate the time commitment that goes into preparing and participating in the Quiz Bowl and want all Teams to leave feeling it was a worthwhile experience. A survey will



be sent to all Coaches the following week for feedback.

If you have any questions prior to October 19 please email [kristen.Kidd@DinoRidge.org](mailto:kristen.Kidd@DinoRidge.org) and we will get answers to you ASAP!