

COORDINATOR MANUAL

National Science Bowl®
for High School and Middle School Students



United States Department of Energy
National Science Bowl®
High School — May 1-6, 2008 — Washington, DC
Middle School — June 19-22, 2008 — Denver, CO
<http://nationalsciencebowl.energy.gov>



2007-2008



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USING THIS MANUAL

This Regional Coordinator Manual provides you with information necessary to organize a successful regional competition(s) and get your team ready to participate in the National event(s). Keep in mind the manual is a set of *guidelines* and coordinators are encouraged to individualize their own events.

This manual covers both the National Science Bowl for High School Students (NSB) and the National Science Bowl for Middle School Students (MSSB). Where there are differences, the MSSB pages will be a different color or in italics.

This Manual contains information on the following:

- Organizing and managing a regional competition,
- School responsibilities and filing forms,
- Competition rules and duties of officials,
- Publicity, media coverage and corporate sponsorships, as well as
- Examples of programs, competition flow charts, and other materials.



**U.S. DEPARTMENT OF ENERGY
 NATIONAL SCIENCE BOWL®
 FOR HIGH SCHOOL AND MIDDLE SCHOOL STUDENTS
 2007-2008 COORDINATOR MANUAL**

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**2007 NSB Champions
Honey Creek Middle School
Poudre High School**

**U.S. DEPARTMENT OF ENERGY NATIONAL SCIENCE BOWL®
FOR HIGH SCHOOL AND MIDDLE SCHOOL STUDENTS**

INTRODUCTION

The Department of Energy National Science Bowl® (NSB) competition is a proven tool in encouraging students from across the Nation to excel in math and science and to pursue careers in those fields. By raising the visibility of academic achievement in the sciences, the program has succeeded in placing these young people on a par with their peers who excel in athletics. Another goal is to encourage increased participation in mathematics and science courses and careers, especially among populations underrepresented in these fields.

Since the inception of the National Science Bowl® in 1991, more than 130,000 high school students from every region of the country have participated in this fast-paced, question-and-answer tournament. Each year the number of regional competitions has grown significantly. In 1991, there were 18 regional tournaments; in 2007, 64 regional events that represented 42 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.

Based on the success of the NSB for high school students, the U.S. Department of Energy started the National Science Bowl for Middle School Students (MSSB) in 2002. In 2007, the National Science Bowl for Middle School Students competition expanded to host 30 regional winning teams from around the country.

Similar to a sporting event, the Science Bowl competitions are set up in a round robin format followed by a single or double elimination final tournament. Teams of students compete in a “Jeopardy” style question and answer format.

The winning team from each regional competition is invited to participate in the National competition. The high school teams representing each regional will compete in the 2008 National finals, held May 1-6, 2008, at the National 4-H Center in Chevy Chase, Maryland. The National Science Bowl for Middle School Students will be held June 19-22, 2008 in Golden, Colorado, hosted by DOE’s National Renewable Energy Laboratory (NREL) and the Colorado School of Mines.

Along with the academic tournament at the National finals, students also attend outstanding science seminars and, at the Middle School event only, will participate in a Hydrogen Fuel Cell Model Car Challenge.

The NSB and MSSB competitions are managed and coordinated by the Department of Energy’s Office of Science. Department of Energy facilities, other federal agencies’ sites, utilities, and educational institutions conduct the regional tournaments.

CHANGES IN 2008

Name Change – Both the High School and Middle School events are under the NSB umbrella and will go by these names:

- National Science Bowl for High School Students
- National Science Bowl for Middle School Students

For useful abbreviations, we will continue to abbreviate High School as NSB and Middle School as MSSB. There will be **one annual theme** for the National event instead of one for high school and one for middle school. Each year, the National event uses a different theme, such as “science to the core,” or “zoom into science.” Regional events are encouraged to adapt the theme to fit the local flavor or to go with a separate theme. The National artwork will not be provided to the regional events.

Registration – **All sites are required to use the online system.** Current regional Science Bowl sites will find their username and password on a label on the inside cover of the manual. You may specify a date to cut-off registration for your event and the system will enforce your deadline. Coordinators are welcome to call DOE for tutorials, questions, system glitches, or suggestions to improve the online system.

Forms – It is recommended that regional sites use the national forms in order to save time and effort. For the national event, no paper forms will be accepted except for those requiring signatures (medicals, parent permission, and team commitment). Only digital team photos will be accepted (300 dpi and 5” wide) – and they will be uploaded online this year.

Manual – This manual (2007-08 version) incorporates the discussion from the August 2007 meeting of coordinators in Dallas. The main changes are:

- Revised medical forms
- The material on the hydrogen fuel cell model car race was pulled out and will become its own manual.

Rules Changes – see page 37



DEADLINE LIST

	NSB	MSSB
Regional Commitment	September 8, 2007	September 8, 2007
Regional Events	January 26-March 3, 2008	January 12 – May 3, 2008
National Forms Due	March 9, 2008	May 9, 2008
National Event	May 1-6, 2008	June 19 – 22, 2008



COSTS INVOLVED IN COORDINATING A REGIONAL SCIENCE BOWL

- Solicitation of teams – postage
- Lock-out systems, clocks (some regional sites share)
- Art design, program printing, reproduction (see tab for other printed items)
- Trophies or similar awards for winners (sponsors can provide)
- Meal or snack during the day of competition
- Training time for personnel working on regional competition
- Supplies: flip charts, markers, paper, pencils, signage, etc.
- Rental of facilities (may be donated by sponsor e.g. school/university)
- Optional costs: hotels for teams who travel long distances, goodies and giveaways, T-shirt for team traveling to nationals, and enhancement activities



EXAMPLES OF REGIONAL SPONSORS

- Local businesses, industry, and educational institutions may be contacted for donation of money, food, gifts, services, or facilities. Sponsors should be acknowledged in the program.
- Volunteers should be solicited from your facility, local business, industry, television/radio, education, or community institutions.
- Facilities in a given region could loan one another lock-out systems and/or clocks on alternate dates if funding is not available for the purchase of this equipment. Facilities may want to contact local high schools or colleges to see if they will lend/rent their lock-out systems to facilities for Science Bowl.
- Examples of past sponsors include: bookstores (gift certificates), colleges (space for event), hotels (for students), fast food restaurants (event food or gift certificates), local rotaries (volunteers), local sports teams (tickets for prizes), and trophy companies (trophies).

DEVELOPING PRIVATE SECTOR PARTNERSHIPS

Establishing private sector partnerships is a critical component of a successful Science Bowl program. These partnerships provide technical as well as financial assistance. Your sponsors may desire to participate in many of your ongoing education programs throughout the year.

Many facilities and laboratories have had corporate sponsors that contributed money, gifts, prizes, scholarships, and food for luncheons. High schools, community colleges, and universities have allowed the competitions to be held on their campuses free of charge. It is essential that contact with local businesses begin early in order to secure sponsorship of gifts for the competition.

Trophies, gifts, and prizes should be donated by corporate sponsors. Both National Energy Technology Laboratories have numerous sponsors that provided money, gifts, and technical assistance; several utilities in California sponsored the various regionals in that state. Others have had several local pizza restaurants donate pizza for the competition luncheon.

ACADEMIC TOURNAMENT

Each regional site determines the schedule and format for the competition. This section has resources that you can choose. There are advantages to following the format at the national event so that your winning team is more acclimated, but each site has their own limits and talents. The choice of format will depend on the space you have (10 rooms versus 20 rooms), the number of volunteers, the number of equipment sets, and the number of teams. The three most common formats are:

- (1) **Round Robin/Elimination:** Teams are divided into divisions to play within a division, then high teams advance to an elimination format. This format will take more time and space than the others.
- (2) **Single Elimination:** Teams are either seeded or randomly matched up and once they lose a match are eliminated. Winners advance till there is one undefeated team. This is the most simple and fastest format.
- (3) **Double Elimination:** Same as above but teams move to challenger bracket after one loss and are eliminated after two losses. Winner of challenger bracket plays undefeated team for title.

There are other formats available, and each site can decide what would work best for them.

ACADEMIC QUESTIONS

DOE Headquarters contracts with an independent company to write new questions each year. There are multiple sets to cover regional and national competitions. Depending on your location and event date, you will be mailed one of the sets in early January. The goal is to limit the chances that a visitor might overhear a question that they can answer in competition weeks later. Questions are written to match the grade level of the students and become progressively more difficult in later competition rounds.

DOE will have a group of science/math experts review the regional questions prior to being sent to the regional coordinators. By the time they are sent to you, these questions have been reviewed, comments sent to the contractor, and revisions have been made. However, since no one is perfect, we encourage you to have a team of experts review your questions before your event. Any feedback sent to DOE will be circulated to other sites.

Regional coordinators should collect printed questions after the event and destroy them. Do not release questions to teams, volunteers, or the media. These questions could possibly be used in the future or may be similar to future questions. Teams may find practice questions on the website.

SCIENCE BOWL CENTRAL

Science Bowl Central (SBC) is designed to provide a central location for information prior to and between rounds of competition. Officials/volunteers check in here to receive their final briefing and room assignments. Team registration also occurs at Science Bowl Central. Visitors, such as parents, friends, newspaper reporters, or other media staff, will ask for information on the competition in progress.

Science Bowl Central should be staffed by at least two individuals throughout the course of the day. Their responsibilities include answering any and all questions pertaining to the competitions, scores, advancement of teams, etc. In addition, two to four individuals should “roam” the competitions to ensure that everything is running smoothly.

Primary Responsibilities:

- Serve as the source for competition information.
- Update Science Bowl *competition scoreboards / flow charts* – An overhead projector/screen or an 8’ x 8’ wall-mounted chart can be utilized.
- Facilitate scientific challenges – A pool of scientific judges (one from each discipline) should be available in a designated area during each round.
- Collect questions packets and *official scoresheets* when they are turned in at the end of each round. You must collect all questions by the end of the competition day. These questions must be destroyed and not given to any teams, officials, etc.
- Have available *tie-breaker questions*, should they be needed. The need for these may occur at the conclusion of round robin play or at the end of a double elimination match.

Items that should be available at Science Bowl Central:

- Paper
- Pencils
- Magic Markers
- Extra Buzzer Systems and Official Clocks, if possible
- Extra light bulbs for Lockout Systems
- Extra batteries for Official Clocks

At the beginning of the competition, a few extra volunteers should remain at Science Bowl Central to serve as “emergency” officials in the event that one of the scheduled officials does not arrive.

SCIENCE BOWL EQUIPMENT

When equipment is a prohibitive cost, regional coordinators do network with each other to share equipment. The recommendation is to plan to share early so that you pick a good date and arrange for shipping/delivery. (Each system can cost \$120-\$600, and each competition room will need one system.) Other resources may include borrowing them from a local university quizbowl team or your local high school science bowl teams. It is also possible to have homemade systems.

Vendors for lock-out buzzer systems (in no special order):

- Quizzer, Ltd.: <http://www.quizzerltd.com>
- Quiz Systems: www.quizsystems.com
- Zee Craft: www.zeecraft.com
- Knowledge Master Quiztron III:
www.greatauk.com/CompetitionEquip.html
- QuikPro Systems: www.specialtydesigncorp.com/
- Sho-Me Smart Light: www.triplequestions.com
- Patrick's Press: www.patrickspress.com/Buzzers.htm
- JEM Designs: www.jemdesigns.com/products.html
- Groupics/Buzzers.com: www.buzzers.com
- Novel Electronics: www.buzzersystems.com
- Quizco QuizMaster: www.quizco.com
- Quiz Pro 2000: www.cp4e.com

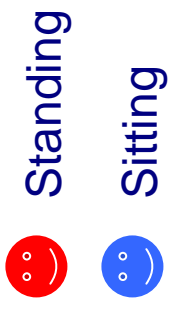
Arizona Science Bowl has custom-quizzers made by Gene Holmerud (geneous@cox.net).

Official Clocks:

- Some facilities have used sports competition clocks purchased from their local sporting goods store. If computers are available, you may download a competition clock program from www.netl.doe.gov/coolscience/funstuff/sb_clock.html.
- Others utilize a wall clock in the competition room
- We recommend the use of stopwatches to time bonus questions, etc.

NSB Competition Room Set-Up

(Audience can see students faces)



Front of Room

Participants



Rules Judge (red face icon)

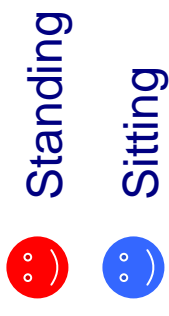
Timekeeper (blue face icon) [blue bar] Scorekeeper (red face icon)

Science Judge (blue face icon) Moderator (blue face icon)

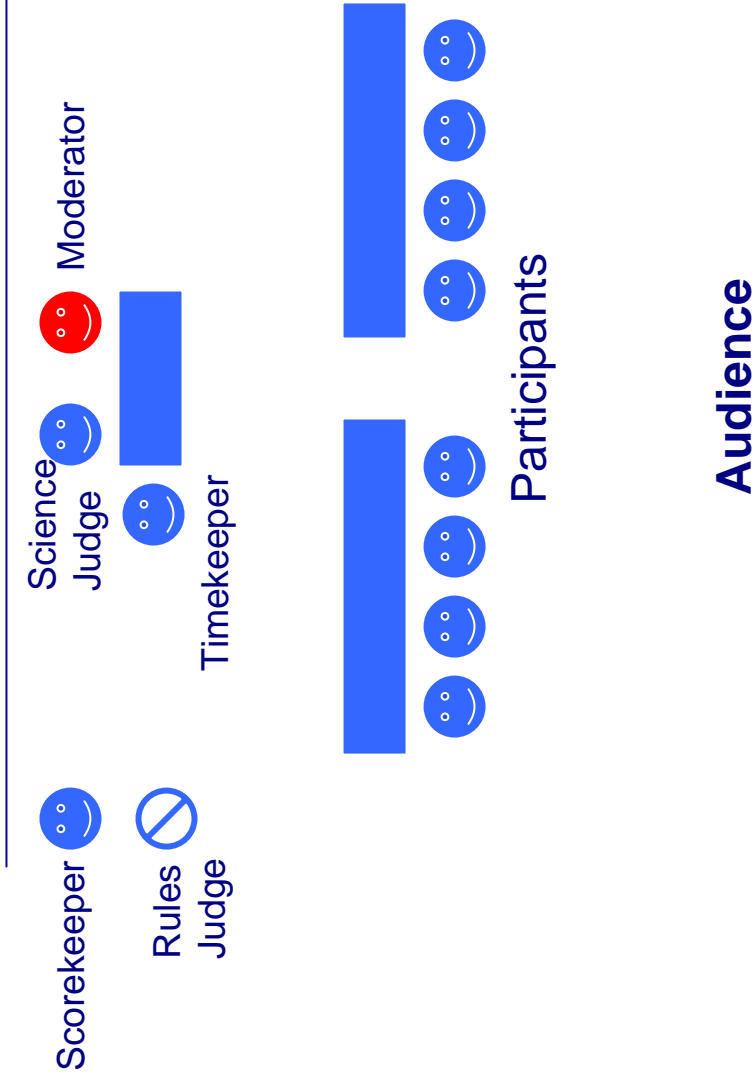
This is only one option, see next page for another common set-up.

Audience

Competition Room Set-up in University Classroom with limited volunteers (Audience cannot see students)



Front of Room (blackboard)



School furniture might make this the only option. Note that Mod can stand or sit. If only 4 volunteers, the Mod can also be rules judge, esp. if students cannot see audience.

SCIENCE BOWL COORDINATOR

The laboratory director, facility manager, education director, utility representative, etc. should appoint one person to coordinate the facility's Regional Science Bowl. This person will be responsible for planning and executing the regional competition, serving as the winning team's point of contact and working with the National coordinator. The Science Bowl coordinator will represent his/her facility at the National event by serving as the team's escort and they can expect to be utilized throughout the National event. There are many tasks that the regional coordinators are assigned, from bus monitors, to seminar facilitators, to competition officials. This is work!

The coordinator may organize the facility's individual regional event in whichever manner may be desired. Many sites have a Science Bowl committee with members having specific responsibilities, such as volunteer coordinator, media, sponsors, etc.

Middle School-specific: The regional event may be either an academic competition or a combination event, including a hydrogen fuel cell car race. It may be necessary to hold the combined academic/car race competition over a two-day period. See rule #4 for more information.

In order to ensure an easy transition to the National competition, we ask that each Region strictly follow these procedures:

- Host your event within the date guidelines so that the National coordinators can have the necessary information to plan their event. NSB regional competitions must be conducted between January 26 and March 3. MSSB regional competitions must be completed and the results reported by May 3, 2008.
- In order to avoid misinterpretation of the rules at the National competition, the same rules should also be used for the regional events. In order to prepare the teams, if the regional rules do deviate from the Nationals, we ask that you send headquarters an email stating the differences.
- Solicitation of teams can be done in any manner that is fair and inclusive. Private, parochial, and home schools are all eligible to participate (see eligibility rules).
- Regional events should use the on-line registration process. The on-line process is created for you, and information is easily submitted for the winning team.
- To qualify to send a team to the National event, a regional competition must be held and coordinated under the leadership of the Department of Energy's Office of Science.
- **It is highly recommended that the regional science bowl coordinator not be a team coach or assist in team practice. This will help avoid conflicts of interest, ensure integrity of the questions, and clarify roles/relationships of the coordinator to volunteers and to other coaches.**

- A regional competition must have a minimum of sixteen teams signed up. First year regions only need eight teams. There are no consequences if fewer teams show-up on the day of the event.
- Regional media coverage should be arranged through your local press office. However, only a few questions (less than 10) from the competition may be aired or published, and only in the interest of media use.
- Training of all personnel working at the regional and National competitions is **mandatory**. Moderators and scientific judges **MUST** have knowledge of the scientific material and be able to clearly enunciate the questions and properly pronounce the scientific terms. While rules judges, scorekeepers, and timekeepers need not have knowledge of the material, they must know the rules and be trained in the proper procedures. Sample training materials can be found on the Web site and on the CD.
- You will provide the regional questions to the moderators and scientific judges prior to the competition. They are responsible for securing this material and returning it following the competition. To avoid problems regarding the security of the questions, moderators and scientific judges should not be related to any participating coach or student. You should collect and destroy the regional questions after the competition.
- Once a team has won your regional, you must **immediately** notify the National coordinator by selecting the team online. You are responsible for making sure that the winning team submits all necessary forms for the National event by the stated deadlines. The regional coordinator should gather, sort, and review all forms before sending them in as one complete team package. Forms are to be complete and legible.
- *Middle-school combination competitions – see rule #4 for how to select the winning team that will advance to the National event.*
- At the National finals, the representative team from each facility must be composed of the same team members who competed in the regional. Awards given at the National event will only be given to and used by the team members competing. No one may compete in the National event who did not compete on the winning regional team at the Regional Event.
- Coordinators are strongly encouraged to attend and participate in the National Event.
- Coordinators are expected to maintain a connection with the DOE headquarters by reading all materials sent or emailed, participating in conference calls, and reading meeting minutes.

COORDINATOR FREQUENTLY ASKED QUESTIONS (FAQ)

When should I decide to host a regional event?

Interested sites contact the National coordinator during the August preceding the event (August 2007 for an event in January-March 2008 or before May for MSSB). Every year, each site will need to fill out a Regional Registration Form which can be found online. It is best to check calendars for your location, sponsors, and volunteers, as well as the local school district calendar before choosing dates. You can always contact the National coordinator at any time of the year to express your interest.

Who is the coordinator?

The coordinator is any person who volunteers to be the lead contact for that regional event – this could range from a college student, retired employee, home school parent, or lab employee.

Who works on the event planning?

The coordinator often recruits 2-10 people to be on the Science Bowl committee. They can share the workload and better recruit volunteers and sponsors. You may want to have a committee member each for different areas, such as recruiting and registering teams, recruiting and training volunteers, recruiting and picking up items from sponsors, creating program or t-shirts, trophies and prizes, setting up location, inviting media outlets, etc.

How much does it cost?

See page in manual on expenses. DOE does not send money to regional sites, but it does pay for and distribute the competition questions. If you have access to discounted items, you can host an event with little money. The average event runs on less than \$5,000. You can recruit sponsors to share the burden, and/or you can ask the teams to pay a registration fee.

Do I get paid?

DOE does not pay any regional coordinators, but some coordinators are paid a salary from their sites, or at least this is included in their job description. Most participate on a volunteer basis.

How much time does it take?

Depending on the size of your event, it can take more or less time. Most coordinators begin the planning process the summer before. Most events are one-day long, but some are a weekend, and still others host several sub-regional events to qualify for their regional event.

Who can I ask for help?

First, look through this manual for helpful tips. Then, contact DOE headquarters or any of the other regional coordinators. You will find most people have had similar experiences. See “who to contact” page at the back of this manual.

COORDINATOR ROLES AT NATIONAL EVENTS

Regional coordinators are encouraged to travel to the National events with their team, or to arrive two days earlier to assist with last minute preparations. Some sites send more than one representative while others rotate the responsibility.

Coordinators serve an important role as the event team – they work as competition officials, bus monitors, seminar presenters, car race officials, help stuff goody bags, help set up and register the teams, move equipment, hand out awards, etc. The job is all day and night, so expect to be kept busy lending a hand. The National coordinator will provide a detailed line-by-line schedule with all the details and assignments in advance.

In addition to their responsibilities, coordinators are able to enjoy the energy from the teams, root for their own team, sightseeing, and network with fellow coordinators.

Coordinators are invited to provide feedback and suggestions about the National event, the question sets, or any other aspect of the science bowl. Every other year, coordinators are invited to a strategy meeting – the next one will be in August 2009.



TIPS FOR REGIONAL COORDINATORS FROM VETERAN COORDINATORS

Planning the Event:

When planning your regional, spread the workload by forming a committee to handle jobs such as finding volunteers, procuring funds and necessary equipment, being responsible for the accuracy of questions, etc.

Select members for a Science Bowl team/committee with the following responsibilities:

- Sponsors – donations
- Training
- Public Affairs – media
- Food and Beverage – coordinates pick-up, set-up
- Administrative – mailings, receipt of packets from schools
- Question Review
- Divisional Assignments of Teams
- Equipment
- Competition Set-up
- Graphics – logo design, program, certificates

Have sponsor letters go out in August with return of monies/commitments by December. Accept all types of donations:

- Breakfast items (juice, bagels, donuts, grocery certificates to be used for coffee, etc.)
- Lunch items (cookies, fruit, beverages)
- Store certificates (Bageland, Dunkin Donuts)
- Money
- Give Aways (pens, stress balls, etc)

Create a list of important dates at your first meeting in June/July:

- Date of first mailing to schools
- Date intent to compete should be returned
- Date registration fee is due (if you have one)
- Date registration and other forms are due
- Date of training
- Date of competition (preliminary/final)

Get your notice out for volunteers in December:

- Mandatory training – two hours
- Minimum of two years volunteering before becoming a moderator
- Utilize children for runners
 - Youth groups are given community service credit for volunteering
- Relatives and friends are a great resource
- Reward your volunteers – VERY IMPORTANT (shirts, luncheon with certificates)

Words of Wisdom:

- Be flexible.
- Let all who help you carry their portion.
- Be prepared and allow the competition to care for itself.
- Start early (like July) to think about who and what you will need.
- Solicit volunteers from all avenues all year long.
- Remember that this competition is for the students; we just put it on.
- Everyone who comes should go home happy including the coordinator for sure!
- Get plenty of rest those final days before your competition.
- Training and practice for volunteers is crucial.
- New and previous volunteers benefit from this and improve your competition day.
- Get help for your competition in February for the next year's competition.
- Call another coordinator. They love to share their experiences and can help you a lot.
- Understand what your budget is (or isn't).
- Plan for inclement weather.

Surround yourself with an energetic, positive team:

- Empower them, praise them, bribe them.
- Don't try to control all of it, but assume the responsibility to see that things get done.
- Know that you can't please everybody, accept it and move on.
- You're going to make mistakes and you're probably going to be running the next regional competition, so there's time to make changes/improvements.
- Life isn't perfect – neither are regional competitions, just try to make sure that it's fair for everyone... If you have a crummy moderator, remember that he or she is equally crummy for both teams... It ain't perfect, but it's fair.
- Start your planning ASAP.
- Ask for help... lots of us have been in your shoes and wouldn't mind helping out.

Scheduling and Volunteers:

Be sure to find experts in every subject area to: (a) check over and amend the questions BEFORE Game Day and (b) be available ON Game Day for appeals. Know where they are at all times on Game Day for when questions arise.

Rounds should be scheduled 30 minutes apart – any more is too long in regionals.

Take as many volunteers as you can get... Kids can be runners, teenagers can time/score, just make sure they are well behaved and under control. Train, rehearse, practice, practice, PRACTICE!

Moderators must be easy to understand, have good hearing, and know how to pronounce. Overbook your volunteers – you're bound to have no shows or late arrivals. Assign your "A Team" to early rounds.

Getting Schools to Participate:

- Check with your State Board of Education for a current listing of high schools and addresses.
- Send a colorful poster/memo to the Science Department chair early in the school year – include a trinket of some sort: a keychain, mug – anything to get their attention. Then send a follow up a bit closer to competition.
- Send a fax sheet that they can send back asking for more information or informally reserving 1, 2, or 3 team slots.... It gives you an early idea what you're in for.
- Assign someone with organizational skills to handle the school registration forms – they are notorious for being late.
- Only accept as many teams as you can handle, looking at your facilities and number of volunteers.
- If you have powerhouse schools that dominate these types of competitions, you might want to break your schools into size categories based on enrollment or geographic zones. Some of the smaller schools might love to be able to attend Nationals and could well appreciate it more than the larger schools. Spread the wealth!

Sponsorship:

- Lots of folks want to be associated with educational assistance.
- Assign a very personal, persuasive person to be in charge of sponsorship.... Ask for money, items, volunteers, etc....
- Radio stations will often give away CDs, T-Shirts, etc.
- Theaters will give away passes.
- Book stores will give away coupons; federal agencies will supply volunteers.
- Soda and pizza companies will donate food or cut you a deal.
- Start early – keep at it

On the Big Day

On Game Day, have plenty of volunteers to help with registration and general running.

- If you lack officials in sufficient numbers, the following can be doubled up if absolutely necessary: runner-timekeeper and scorekeeper-rules judge.
- In addition, if scientific judges are in short supply, the important function of reading the questions along with the moderator can be performed by just about anyone (and challenges in this case can be taken outside the room).
- Questions should be handed to runners one round at a time. (If not, there is a very real possibility that some moderator will read the wrong round's questions, which precludes their being used in their proper round.)
- Some folks give each moderator a binder with all the rounds of questions in it.
- Have at the very least one extra round of questions (even if you have to write them yourself). This is ESSENTIAL to take care of unforeseeable problems that may occur, such as teams going to the wrong room or the wrong questions being read in some round.
- It's very helpful to have the runner be responsible for knowing which two teams are to be playing in their room at the beginning of each round, to make sure the right two teams are actually playing.

If at all possible, set up the afternoon before competition: get the rooms organized, lock-out systems set up and tested, all supplies distributed, and signs up – and then have someone double check it all. Plan for problems – have extra lock-outs, extension cords, etc.

Use a checklist – it helps a lot.

Have a cell phone or two.... Give the teams these numbers and use them as communication control. If there's an accident on the way in or if they're late, then they can call. Also let family members have the number for other types of emergencies.

It doesn't hurt to have a nurse or EMT on site.... Allergies and stress can do weird things to kids (and coordinators).

Assign a core team to Command Central. They're the ones to answer questions, resolve challenges, and solve your problems.... They should be experienced, firm but fair.

Have one person assigned to food delivery coordination.... Get it there early.

Assign a clean up team – don't assume that you're going to have help at the end of the day.

Things that DO go wrong:

- Plan for no-shows: unless you charge a fee, you're bound to have school no-shows.
- Plan your divisions/brackets for all sorts of contingencies. Volunteers may not always show up on time. Figure out the minimum you can get by with in each room... try to have some experience in each room. Scoring and timing can be done by the same person.
- Early rounds are usually when the moderators will make mistakes – skip over questions, read the wrong questions, give out answers prematurely – so go over this in training. If you have the luxury of extra moderators, assign the experienced ones to early rounds. Have the less experienced sit in and watch.
- Inclement weather – plan for it. Set up a system of notification and have a contingency plan.
- Equipment failures – have extra equipment on hand. Schools usually have their own lock out systems... have them bring their systems as a back up.

After the Event:

Your Winning Team(s):

- Develop a relationship with the coach and team members.
- Have the information about Nationals ready... discuss any conflicts right away. Ask about IB, Prom, Sports, other competitions – you might be taking the second place team instead, so have their forms, photo, etc. available.
- Provide them additional study resources (Web sites, topics, etc) to prepare them for Nationals.
- KEEP ON THEM about their forms – fill out as much as you can ahead of time.
- Provide information about the trip and contact numbers to the parents.

Web site:

- Keep your Web site up-to-date with regional information.
- Publicize regional winners.

Sponsors:

- Publicize their support.
- Give them a shirt, certificate, program, thank-you letter.
- Ask them to speak to the students at your competition.
- Utilize complimentary tickets for school prizes or civility awards (e.g., museums, zoo).

Look for a co-sponsor(s):

- Local college.
- Major science organization (e.g., Spectroscopy Society).

Equipment:

- Have enough quizzers and clocks for all competition rooms.
- Replace old equipment on a yearly basis.
- Have equipment checked during Christmas/holiday time period, when individuals aren't as pressed with jobs/tasks (e.g., electricians).
- Let others know if you have equipment available to borrow.

Read the evaluation sheets:

- Send results of evaluation sheets with letters to the schools thanking them for participating. Let them know you care.
- Address the relevant issues. Always strive for improvement.

Get forms in to the National office (and respond to their questions) in a timely fashion. Doing so makes everyone's lives easier.

ENHANCEMENT ACTIVITIES

Science Bowl should be more than an academic competition. Teams can learn more from a variety of activities that have them use different skill sets, that de-emphasize the competitive aspects, and that accentuate the networking environment.

You are encouraged to expand your event to include “enhancement activities” that may provide greater benefit by encouraging and reinforcing interest in math and science. Some examples of enhancement activities are:

- Guest speaker
- Facility tours
- College or career fair
- Internship fair
- Hands-on challenges
(build highest tower, build bridge)
- Door prizes
- All-star awards
- Science demonstrations
- Build and race rubber band-powered vehicles or fuel cell vehicles
- Photos
- Sight-seeing trips
- Teacher workshops



REGIONAL SCIENCE BOWL SAMPLE CRITICAL TIMELINE

AUGUST

- Identify Science Bowl point of contact.
- Determine date of Regional Science Bowl.
- Attend Science Bowl Planning Conference (every other year).
- Identify competition area (counties, entire State, multi-states, etc.) and estimate number of schools in competition.
- Submit request to DOE HQ to host a regional Science Bowl (middle school only)
- High School Regional Coordinators submit on-line regional site form to commit to conducting a regional event.
- Determine facility/building to have competition.

SEPTEMBER

- Regional Science Bowl sites will be selected and notified by DOE HQ (middle school only).
- Coordinators Manual is sent to all coordinators.
- Submit Coordinator Commitment form to DOE HQ.
- Posters and brochures are sent to Regional Coordinators.

5 MONTHS PRIOR TO EVENT

- Recruit teams: issue announcement to schools in identified area.
- Send letters/brochures and contact area businesses/companies to seek sponsorship for the regional event, including gifts, prizes, etc. Sponsors will be recognized in the National program (see Tips for Regional Coordinators section for sponsorship information).

4 MONTHS PRIOR TO EVENT

- Notify coaches of selected schools.
- Provide coaches with Science Bowl information including:
 - Competition Rules
 - Sample Questions
 - MS: <http://www.scied.science.doe.gov/nmsb/default.htm>
 - HS: <http://www.scied.science.doe.gov/nsb/samplqs.htm>
 - Instructions on how to use the online system for online registration
 - Regional Forms (as required by your regional competition)
 - Medical forms (coach and student)
 - Parental Consent Form
- Notice of coach orientation meeting (optional) - the orientation meeting should be held approximately 3 months prior to event.
- Meet with your public affairs office to discuss your regional event and plan a media strategy (see page on media strategy).

3 MONTHS PRIOR TO EVENT

- Hold coach orientation meeting (optional).
- Secure lock-out systems and official clocks and race track materials.
- Determine whether or not to have a luncheon in conjunction with the competition and/or awards ceremony.
- Select and order trophies.
- Confirm sponsors.

2 MONTHS PRIOR TO EVENT

- Recruit officials/volunteers [moderators, scientific judges, rules judges, timekeepers, and scorekeepers] and race judges for the car race (optional – middle school only). Suggestions: post flyers and place a notice in the company newsletter requesting volunteers to assist with the Science Bowl, be sure to include contact names and phone numbers.
- Notify all officials/volunteers of **MANDATORY** training and practice sessions.
- This is the suggested deadline for student registration forms from competing schools. If some schools have dropped out, call those on the waiting list to see if they are still interested and if they are, direct to online registration form.
- Deliver fuel cell kits to teams (middle school only).
- Arrange for event publicity—work with the public affairs office to contact local newspapers, TV, and radio stations.
- Confirm donated gifts, awards, etc. from sponsors.
- Create gift bags for all participants (optional), prizes for winners—suggestions for winners include: trophies, calculators, gift certificates, savings bonds, etc.
- Design program (optional).
- Design tournament flowchart for academic competition and car race, if appropriate.
- Determine speaker for luncheon/awards ceremony (optional).

1 MONTH PRIOR TO EVENT

- Obtain trophies.
- Reproduce information packets for Science Bowl officials—be sure to include the rules and official roles for academic and car race (middle school only).
- Mandatory training session for all officials/volunteers with “mock” competition and car race (middle school only).
- Receive competition questions.
- Reproduce and send out question packets for moderators and scientific judges.
- Finalize and produce program.
- Finalize and produce competition schedule, scoreboards and car race heat cards (middle school only).

DAY OF EVENT

- Conduct Regional Science Bowl competition.
- Collect comment forms (optional) from officials and participants.
- Photograph winning team.

AFTER EVENT

- **Immediately press selection button online**, notifying DOE Headquarters of your winning team.
- Complete all National forms (see Forms section). DOE has automated the forms for both the regional and National event. Some will be completed and submitted directly online; forms requiring signatures will be completed online, downloaded, signed and sent via mail (see forms checklist).
- Send thank you notes to all officials, competing schools, and sponsors.
- Collect and mail all local media clips to DOE Headquarters.
- Make travel arrangements for the Regional Science Bowl Coordinator to travel to the National event.
- Assist with the competitions at the National event.



Teams at the 2007 NSB for High School Students

PUBLICITY

The Department of Energy Science Bowl and the regional competitions are excellent opportunities for positive stories about your organization's activities. With a little bit of planning and coordination through your public affairs office, you can receive press coverage of your regional event and your winning teams' participation in the finals. You may want to have all of your teams sign privacy release forms so you will have their parents' permission to take photos/video of them. At the national event, photos will be taken by a professional photographer and e-mailed to your local area newspapers for stories.

SUGGESTIONS TO INCREASE YOUR MEDIA VISIBILITY

- Schedule a meeting with your public affairs office to discuss your regional event and plan a media strategy. Schedule this meeting early and meet more than once.
- Remember that media will want to focus on the "local interest."
- Know your competitors. Prepare biographies of team members and their coaches including hobbies, club memberships and honors, and background sheets on the participating schools.
- Know your sponsors. Prepare a background sheet that includes a quote from your sponsors on why they agreed to sponsor the competition.
- You may want to arrange for a backdrop behind the photos at the awards ceremony. Choose non-reflective material that will look good in the photos.
- Media outlets should include:
 - * Public service announcements/calendar of events on radio and TV.
 - * Calendar of events in newspapers (dailies, weeklies, advertisers, shoppers, high school) and magazines (State or Sunday supplement).
 - * Feature stories in radio, TV, newspapers, and magazines.
- Encourage the competitors to contact their local media.
- Send out a press advisory to your list of media outlets before the competition and then a press release after the competition. E-mail reporters with event results and photographs.
- Have an event Web site and post photographs promptly after the event for reporters. Please link to the NSB Web site on your site.
- Videotape the event and provide footage to local television stations.
- Clip or tape all stories about the event, and send copies to DOE HQ.

SAMPLE PRESS RELEASE

NEWS MEDIA CONTACT:
Jeff Sherwood, 202/586-4826

FOR IMMEDIATE RELEASE
Saturday, February 28, 2004

Sidwell Friends and Montgomery Blair High School Teams Win Regional Science Bowl Competitions

WASHINGTON, DC -- Students from the Sidwell Friends School in the District of Columbia and the Montgomery Blair High School of Silver Spring, Maryland triumphed in a battle of scientific and mathematical wits Saturday capturing their respective regional Science Bowl championships.

“Twenty-two regional teams had the fun, exciting challenge of exploring the sciences together this weekend,” Secretary of Energy Spencer Abraham said. “I look forward to meeting the regional champion teams when they return this spring for the National Science Bowl finals.”

First-place winners of this weekend’s qualifying rounds will face 62 other student teams from across the country at the Department of Energy’s 14th Annual National Science Bowl competition April 29 - May 3 at the National 4-H Center in Chevy Chase, Md.

The Department of Energy created the National Science Bowl in 1991 to encourage American high school students to excel in math and science and to pursue careers in these fields.

By recognizing and rewarding successful math and science students, the National Science Bowl generates enthusiasm for science and engineering. The Department of Energy supports math and science education to help provide a technically trained and diverse workforce for the agency and the Nation. More than 12,000 high school students are participating in the Science Bowl competition nationwide this year.

For the regional qualifying rounds held at the Department of Energy headquarters, student teams from 14 schools in Maryland and eight District of Columbia schools faced rounds of increasingly difficult questions in biology, chemistry, physics, astronomy, earth science and mathematics. The teams are comprised of five students and a teacher who serves as an advisor and coach. The competitions consisted of round robins followed by double-elimination finals.

The winner for the Virginia Regional Science Bowl was the Thomas Jefferson High School for Science and Technology in Alexandria. That competition took place in Newport News, Va., on Feb. 7.

(MORE)

The winning teams are:

District of Columbia Regional Science Bowl

First Place: Sidwell Friends School

Second Place: Georgetown Day School

Third Place: Washington International School

Fourth Place: Benjamin Banneker Academic High School

Maryland Regional Science Bowl

First Place: Montgomery Blair High School, Silver Spring

Second Place: Thomas Wootton High School, Rockville

Third Place: The Landon School, Bethesda

Fourth Place: Stone Ridge School of the Sacred Heart, Bethesda

The department's Office of Science administers the National Science Bowl. More information about the Science Bowl is available at: **www.scied.science.doe.gov**

RULES DIFFERENCES BETWEEN HIGH SCHOOL AND MIDDLE SCHOOL EVENT

To simplify volunteer training and planning for both a middle school and high school event, the rules for the academic science bowl competition have been kept almost the same, with the following few differences:

1. Both have different national dates and deadlines (see table on manual page 8).
2. Both have different ages for eligibility.
3. MSSB winning teams are selected based on outcome of one or two competitions (see rule #4).
4. MSSB has 4 question categories; NSB has 7 categories. The question difficulty is different based on level (see rule #8).
5. After round robin at the national events, the selection of teams advancing to double elimination tournament is different. MSSB team tiebreaks are decided by process in rule #35. NSB team tiebreaks are decided by outcome of the Division Team Challenge.

RULES CHANGES IN 2008

Eligibility Requirements

- We have deleted the term “alternate.” The rules now use “4 or 5 students.”

The Questions

- Rule 10 – Clarification on the answer to a multiple choice question is the “best of the four choices indicated in the question.”
- Rule 14 – Specified that on the answer to a completely read toss-up question, “the second team is allowed a full 5 seconds to buzz in after the moderator indicates the answer is wrong...”

Verbal Recognition and Consulting

- Rule 17 – Prior to the buzz: consultation or blurt, the answer doesn’t count and no penalty points awarded to the opposing team.
- Rule 17 – After a buzz: consulting is considered a blurt and 4 penalty points are awarded to the opposing team.

Scoring

- Rule 27 – Moderator inadvertently gives team correct answer prior to allowing opposing team to respond, opposing team has the next question to themselves. If this occurs on question 25 (last question), the officials will obtain a replacement toss-up question.
- Rule 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. The moderator will announce the correct player.
- Rule 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.

Challenges

- Rule 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.

2008 COMPETITION RULES FOR THE NATIONAL SCIENCE BOWL[®] FOR HIGH SCHOOL STUDENTS

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 student must be enrolled for the current school year in grades nine, ten, eleven or twelve at the team's school, and be less than 20 years of age or receive a special waiver from the Department of Energy. 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 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 high school or student group may compete in a regional event.
3. To be eligible for the National Science Bowl[®] finals, a student must have competed on the team that won the Regional Science Bowl or on the second place team if the first place team declines to attend.
4. The winning team from each regional tournament is **eligible** to be invited to participate at the National finals May 1 – 6, 2008. By **March 9, 2008**, 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[®] (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[®] 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 9, 2008**. All teams must arrive and depart on the designated dates and be in attendance throughout the duration of the National Science Bowl[®] weekend. If the winning regional team (***at least 4 students***) is unable to participate at all activities, the second 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. During elimination rounds only, 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 question categories are: astronomy, biology, chemistry, earth science, general science, mathematics, and physics.
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. ***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 question, the first answer given 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.
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 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 3 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***.

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. The moderator will announce the correct player.*
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) - <i>Consultation among players</i>	+4 points to opposing team
<i>Before a team member buzzes in:</i> - <i>Answering a toss-up</i> - <i>Consultation among players</i>	+0 points but team will be disqualified from toss-up

Challenges

30. Challenges must be made before the moderator begins the next question. 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 signal 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, 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.

Rules for the End of Round Robin or Elimination Tournaments

35. **At the regional events at the end of Round Robin:** A tie-break procedure in the following order will be used:
 - (i) Head to head won/loss record
 - (ii) Fewest losses
 - (iii) If two (2) teams are still tied, there will be a five toss-up question run-off (interrupt penalty 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.
 - (iv) 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 (iii) or (iv), as appropriate, will be used until the advancing teams are determined.

36. **At the National finals:** 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.

Miscellaneous Rules

37. 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.*
38. No one in the audience may communicate with participants during the match; communication will result in ejection from the competition room.
39. 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.
40. **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.**
41. 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.
42. Calculators are not permitted.
43. Members of the audience, including the 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.

**2008 COMPETITION RULES FOR THE
NATIONAL SCIENCE BOWL[®] FOR MIDDLE SCHOOL STUDENTS**
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 student must be enrolled for the current school year in grades six, seven, or eight at the team's school, and be more than 10 years of age and less than 15 years of age, or receive a special waiver from the Department of Energy. ***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 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 school or student group may compete in a regional event.***
3. To be eligible for the National Science Bowl[®] finals, a student must have competed on the team that won the Regional Science Bowl or on the second place team if the first place team declines to attend.
4. The winning team from each regional tournament is **eligible** to be invited to participate at the National finals June 19-22, 2008. The winning team's coach is required to inform the National event coordinator of its availability to participate at the Nationals within one week of the regional event or by **May 9, 2008**, whichever comes earlier. 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[®] (including, but not limited to graduation ceremonies). In the interest of safety, continuity, and educational value, the National Science Bowl[®] 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. All teams must arrive and depart on the designated dates and be in attendance throughout the duration of the National Science Bowl[®] weekend. If the winning regional team (***at least 4 students***) is unable to participate at all activities, the second place team will be invited to replace them. There will be no exceptions to this rule other than unanticipated medical emergencies. Any waiver must be approved by the DOE National Coordinator.

Rules for Selecting a Winning Team

- Regional competitions must include an academic competition. A hydrogen car event is an optional activity at the regional events. If you are hosting an academic event only, then the winning team will represent your region at the national event.

- For sites that conduct combined competitions, all teams must compete in both competitions in order to qualify for the national competition. Those sites conducting a combined competition must structure a point system that gives equal weight to both types of competition and then determine the overall winner. The overall winner will be the team with the highest number of points combined from both events. In the event of a tie, the team with the higher academic competition score is the overall winner.

Competition Structure

5. Regional competitions have the option of choosing the 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 and the number of divisions 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 2-4 teams from each round robin division (depending on number of divisions) will move on to the *seeded* double elimination tournament (a total of 16 teams will continue on in double elimination). Ties for positions will be broken in accordance with Rule #35 under Rules of the Game.
7. During elimination rounds only, 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 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. ***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 question, the first answer given 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.
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. 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 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 3 seconds), but if the moderator determines that stalling occurred, it will be treated as a wrong answer.
23. 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. The team captain must answer the question (see rule 15).
24. 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***.

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. The moderator will announce the correct player.*
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) - <i>Consultation among players</i>	+4 points to opposing team
<i>Before a team member buzzes in:</i> - <i>Answering a toss-up</i> - <i>Consultation among players</i>	+0 points but team will be disqualified from toss-up

Challenges

30. Challenges must be made before the moderator begins the next question. 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 signal 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, 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.

Rules for the End of Round Robin or Double Elimination Tournaments

35. At the end of Round Robin:

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 all teams involved in the tie will qualify for the double-elimination tournament, coin flips will be used to break ties. If three or more teams are involved, coins will be flipped until an "odd man" wins, with the remaining teams flipping again until all ties are broken.

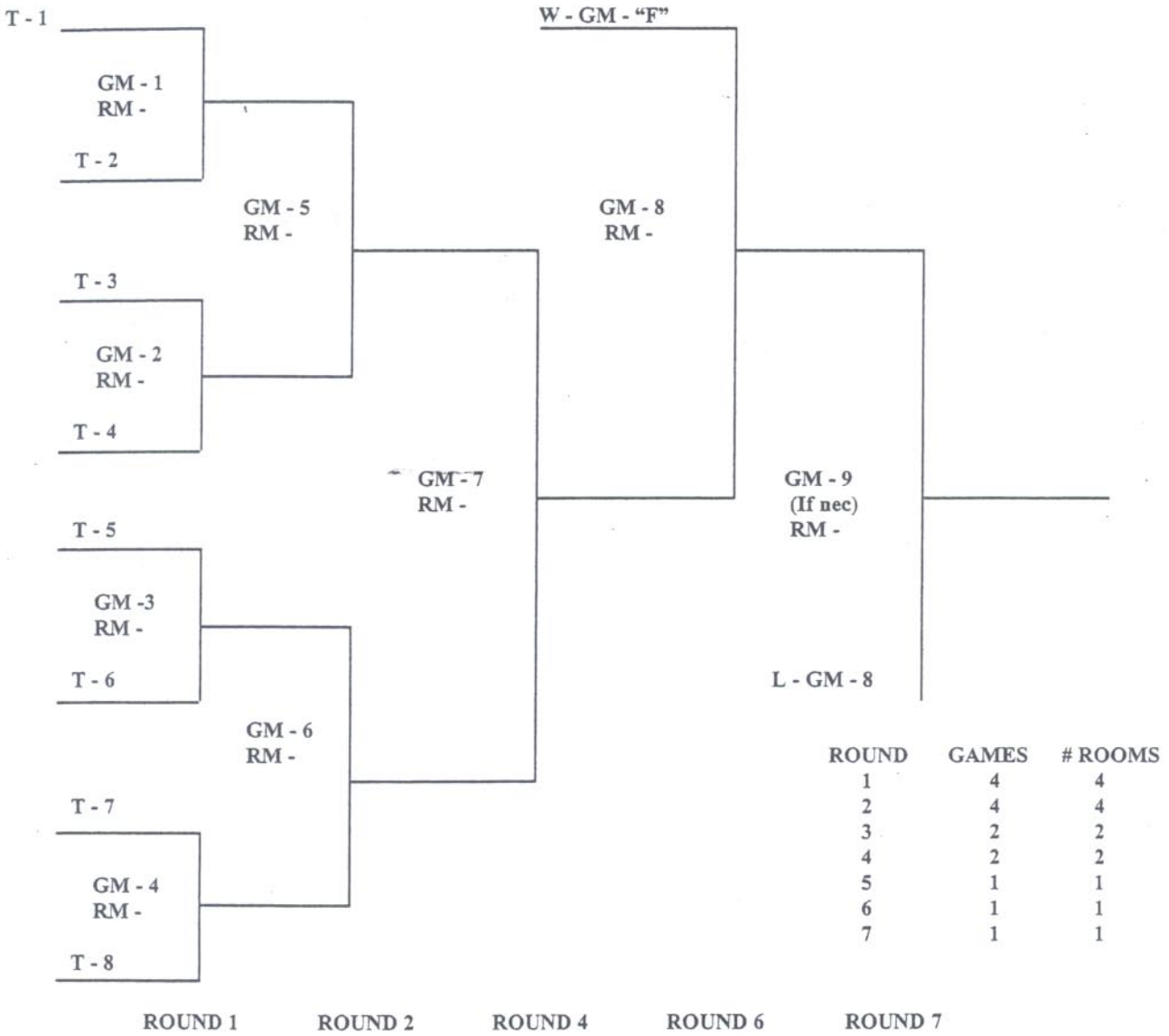
(3) If more teams are involved in the tie than will qualify for the double-elimination tournament, a set of tie-breaker questions will be used, consisting of toss-up questions only. If two teams are tied, the teams will play against each other with a set of five questions, with the usual timing and scoring 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.

Miscellaneous Rules

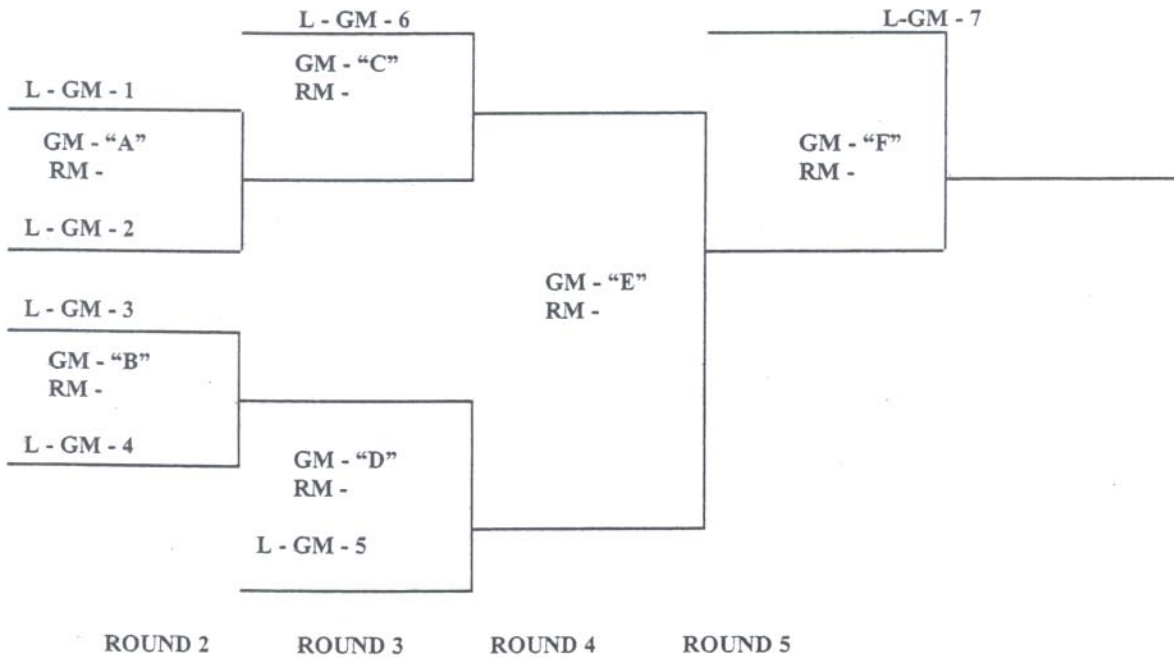
36. Substitutions may be made only at the half. *If a team has five players, the player who did not play in the first half may substitute for any of the four starters. Teams may switch captains, but only at the half.*
37. No one in the audience may communicate with participants during the match; communication will result in ejection from the competition room.
38. 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.
39. **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.**
40. 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.
41. Calculators are not permitted.
42. Members of the audience, including the coaches, will not write down the questions/answers the moderator reads or use any electronic recording or transmitting device, including digital cameras, cell phones/blackberries, 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.

EIGHT (8) TEAM DOUBLE ELIMINATION

NO-LOSS BRACKET

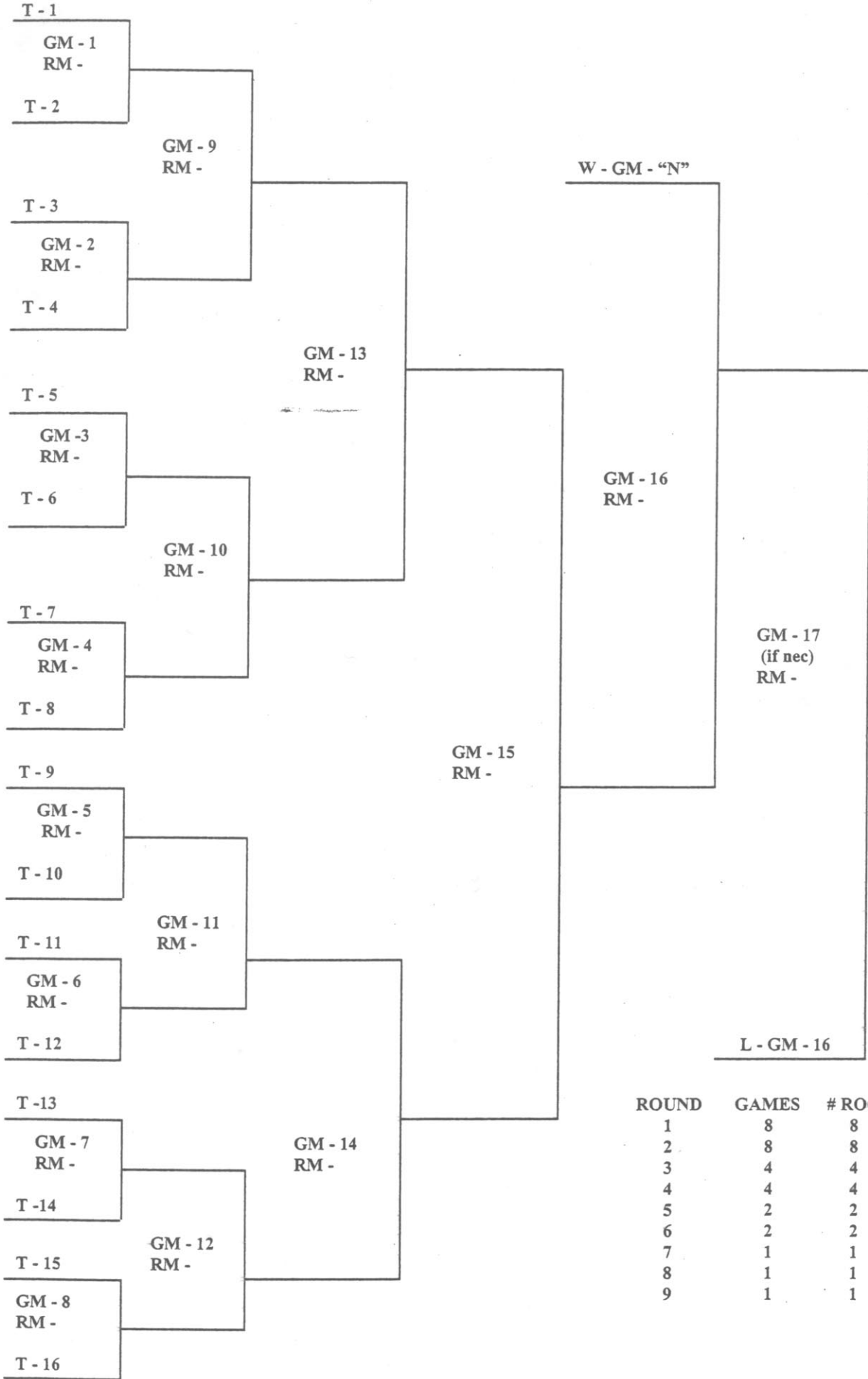


ONE LOSS BRACKET



SIXTEEN (16) TEAM DOUBLE ELIMINATION

NO-LOSS BRACKET

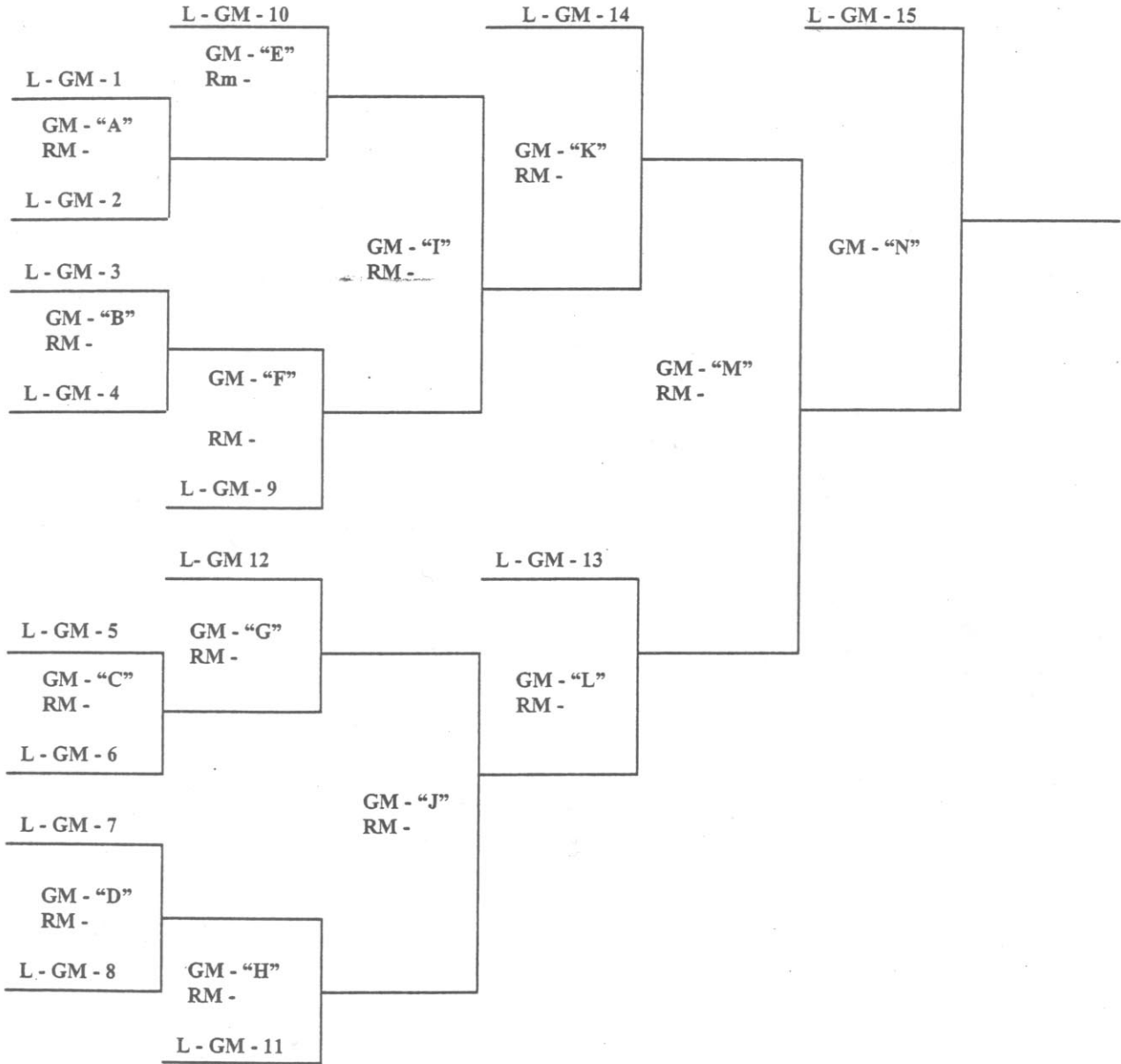


ROUND	GAMES	# ROOMS
1	8	8
2	8	8
3	4	4
4	4	4
5	2	2
6	2	2
7	1	1
8	1	1
9	1	1

ROUND 1 ROUND 2 ROUND 4 ROUND 6 ROUND 8 ROUND 9

SIXTEEN (16) TEAM DOUBLE ELIMINATION

CHALLENGERS BRACKET



ROUND 2 ROUND 3 ROUND 4 ROUND 5 ROUND 6 ROUND 7

DIVISION WITH FIVE (5) TEAMS

TEAM	1	2	3	4	5	TOTAL POINTS
1						
2						
3						
4						
5						

ROUND	TEAMS ROOM A	TEAMS ROOM B	BYE TEAM
1	1 vs 2	3 vs 4	5
2	1 vs 3	2 vs 5	4
3	1 vs 4	3 vs 5	2
4	1 vs 5	2 vs 4	3
5	4 vs 5	2 vs 3	1

DIVISION WITH SIX (6) TEAMS

TEAM	1	2	3	4	5	6	TOTAL POINTS
1							
2							
3							
4							
5							
6							

ROUND	TEAMS ROOM C	TEAMS ROOM D	TEAMS ROOM E
1	1 vs 2	3 vs 4	5 vs 6
2	1 vs 3	2 vs 5	4 vs 6
3	1 vs 4	3 vs 5	2 vs 6
4	1 vs 5	2 vs 4	3 vs 6
5	4 vs 5	2 vs 3	1 vs 6

VOLUNTEER OVERVIEW

Many types of volunteers are needed to run each science bowl event. It is recommended that you recruit and train volunteers in advance, so that the event runs smoothly. At training, you can photocopy the handouts in this section and share with the volunteers.

In addition to the volunteers helping at registration, Science Bowl Central, and to do various other activities, there are “teams” of 5 volunteers in each competition room during the tournament. Regional coordinators can decide to have less than 5 volunteers if there are not enough people. If you have four volunteers, the scientific judge can sometimes serve as a rules judge. There are other options, as long as the rules are followed and the teams can participate fairly.

The typical competition room has 5 volunteers:

- Moderator
- Scientific Judge
- Scorekeeper
- Rules Judge
- Timekeeper

There are also volunteers to run scores to Science Bowl Central, to serve food, to clean up and set up, etc. Since training is not necessary for these roles, it can be a good fit for a middle school student or younger student who might need to earn service hours.

The science bowl appeals room will need either dedicated science experts or rotating Moderators and Scientific Judges.



MODERATOR

The Moderator is **THE** person responsible for controlling each match. It is important that you are familiar with how the game is played and all of the contest rules. It is, therefore, extremely important that you review the rules well in advance of the actual event.

The Science Bowl is an oral competition in which two student teams attempt to answer toss-up and bonus questions. Each regional competition round is divided into two eight-minute halves with a two-minute break.

1. The first half begins as soon as the Moderator begins the first toss-up question. Before reading the question, the Moderator identifies: 1) whether it is a toss-up or bonus question, 2) the subject area, and 3) whether it is multiple choice or short answer. If a contestant elects to answer the toss-up question, he/she activates the lock-out system (an electronic device which “locks out” all other contestants and identifies the student who wishes to answer the toss-up question). You or the scientific judge will then **verbally** recognize the student. Should the student answer the toss-up question correctly, the student’s team receives 4 points and is awarded a bonus question. A correct answer to the bonus question results in the team’s receiving an additional 10 points. Play then continues by reading the next toss-up question to the two teams.
2. As a toss-up question is read, a student may interrupt the reading of the question. If you **verbally** recognize the student and he/she answers correctly, that team is awarded 4 points, and the team wins the right to answer a bonus question. If the student interrupts the question, is **verbally** recognized, but answers the toss-up question incorrectly, 4 points are awarded to the opposing team and the question is read in its entirety to the opposing team. That team may answer the toss-up question for a chance at the bonus.
3. A student **MUST** wait to be **verbally** recognized by the Moderator before beginning to answer the toss-up questions. If a student answers a toss-up before being verbally recognized, the response is ignored (i.e., you should not reveal whether the answer was correct or incorrect), then the opposing team is given 4 points and is offered the toss-up question. This rule is necessary to avoid situations where two team members think they have activated the lock-out system and blurt out simultaneous answers. If the student answers without buzzing, ignore the student and there is no penalty.
4. The game is over when the second half ends or when 25 toss-up questions have been read. The winning team is the one with the greater point total.

You will be provided with the questions for your games well in advance of the actual event. It is important that you read all the questions before the competition to help ensure that you are able to read them smoothly and to allow you to make certain of all pronunciations of scientific terms.

The Moderator reads the “important rules” before early matches in the tournament and completes the official score sheet for every match.



MODERATOR

What DO I Do ?

Keep in Mind

1. Introductions

- Introduce officials.
- Ask students to introduce themselves.
- Ask coaches to shake hands, introduce themselves, and to sit together in back of room.

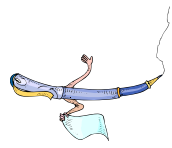


2. Rules

- Read "Important Rules" sheet at the start of each game (located in your packet).

3. Reading the Questions

- Announce whether it's a toss up or bonus question.
- Announce question category.
- Announce whether multiple choice or short answer.
- Read that question.



4. Who Won?

- Fill out official score sheet and get signatures.

Note: At the end of each match, the official score sheet should be signed and put in the corresponding round-numbered envelope. The packet should then, immediately, be taken to SBC by the Runner or official who will be going to SBC first.

Toss-Up ?

No consultation among team members. (Shhhhhhh)

Bonus ?

Consultation is allowed, but the captain must answer.



Radium, -- No wait, I mean Radon!

Sorry, Charlie. The FIRST answer Counts (The FIRST answer always counts.)

Challenge?
 • Ask timekeeper to stop the clock

Minimum Requirements:

- Be able to articulate clearly and maintain a good pace
- Know and be able to apply all of the rules
- A science, engineering, math, or teaching background
- Read and review the questions prior to the event
- Be at least a junior in college

“SCIENCE BOWL IMPORTANT RULES”

Before we get started, I would like the coaches of both teams to come forward. Please introduce yourselves, shake hands, and sit together in the back row. Now I will introduce the officials. Students, please introduce yourself and test your buzzer.

REMINDER: Tell the teams who will be verbally recognizing them – the Moderator OR Scientific Judge.

Please let me remind you of several important rules we will be carefully observing during this match.

1. On toss-up questions, you **MUST** buzz in and be **verbally** recognized by either the Moderator *or Scientific Judge* before answering. If you buzz in and respond before being **verbally** recognized, your team is automatically disqualified from answering the question and 4 points will be awarded to the opposing team. The question will then be offered as a toss-up question to the opposing team.

In this match, I will identify you by saying either Team “A One,” “A Captain,” or “B One,” “B Three,” etc.

2. On toss-up questions, there can be no conferring among team members **ON EITHER TEAM** at **ANY** time. If conferring occurs on the team that was initially recognized to answer the question, that team is disqualified from answering the question and the question is offered to the opposing team. If conferring occurs or has occurred on the opposing team, it too is disqualified from answering the question.
3. The only acceptable answer to a multiple-choice question will be one of those read by the moderator. If you give the scientific answer rather than the letter (W, X, Y, or Z), your answer must be **exact**.
4. **Challenges must be made before the moderator begins the next question.** If the challenge is on a toss-up question, the challenge must be made before the bonus question is read; or, if the toss-up question was not answered correctly, the challenge must happen before the next toss-up. All challenges must come from the team members who are actively competing. The alternate may not object.
5. On bonus questions, you have 20 seconds **AFTER** the Moderator finishes reading the question to begin your answer. If you fail to begin your answer before the Timekeeper says, “TIME,” you have missed your bonus question. You will hear the Timekeeper say, “5 SECONDS,” when you have only 5 seconds left to begin your answer.
6. On the bonus question, only the team captain’s answer will be accepted.
7. At the conclusion of each match, the two captains will initial the official scoresheet.

2008 Science Bowl

OFFICIAL SCORESHEET

MODERATOR _____

1. Record the names of the schools that will be participating in this match at the bottom of this sheet. Complete the other information as well.
2. Introduce yourself and the other officials.

SCIENTIFIC JUDGE _____

RULES JUDGE _____

TIMEKEEPER _____

SCOREKEEPER _____

3. Check the lock-out system by having each student introduce him/herself.
4. READ THE “IMPORTANT RULES” SHEET ALOUD.
5. Record final scores in the space provided below.
6. See that the Rules Judge PICKS UP ALL PAPER at the half and at the end of the round! The students are NOT to take their scratch work out of the competition room.
7. Please have an official take the Official Scoresheet to the Scorers Room.

SCHOOL _____ FINAL SCORE _____

SCHOOL _____ FINAL SCORE _____

COMPETITION ROOM _____ ROUND _____ DIVISION _____

WINNING SCHOOL _____

By signing this form, you are accepting the final score of this match AS WRITTEN above on this sheet.

Captain, Team A _____

Captain, Team B _____

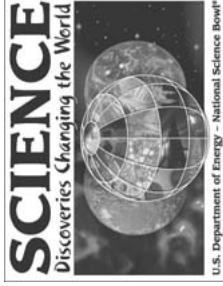
SCIENTIFIC JUDGE

The questions in each subject area have been reviewed by at least two individuals with subject expertise to eliminate erroneous or ambiguous questions. In addition, we have selected a multiple-choice format for many of our questions. This ensures against there being more than one correct answer (**it's either one of our answers or the response is wrong**).

1. Your primary duty as a Science Bowl SCIENTIFIC JUDGE is to **resolve question challenges**.

Should a question be challenged, there are a number of steps that should be followed:

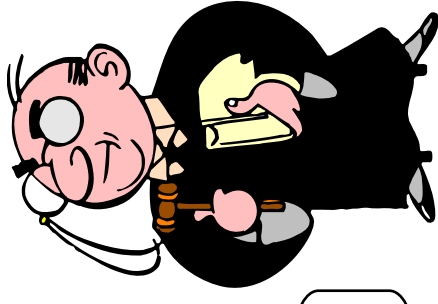
- First, see that the competition clock is stopped.
 - Then, please bring the challenge to “Science Bowl Central.” The organizing committee will either have someone on call or in the building in each of the math or science areas who can resolve the issue. **Once you report a decision, that decision is final.**
 - Should you feel that time was lost as a result of the interruption (5, 10, or 15 seconds, for example), check with the Moderator who may add that time back onto the clock before resuming the competition. Be certain to announce that you are “correcting” the time because time was lost due to the interruption so that all participants understand what is happening.
2. The Scientific Judge controls the buzzer lock-out system.
 3. The Scientific Judge may also verbally recognize the student in place of the Moderator. This duty should be determined by the Moderator and Scientific Judge before the match and should be consistent for the whole match.
 4. **Ensuring that the Moderator has read each question correctly:** You will be given a packet of questions identical to those of the Moderator. As the Moderator reads a question, please follow along to make sure the question is read correctly and that all words are pronounced correctly.



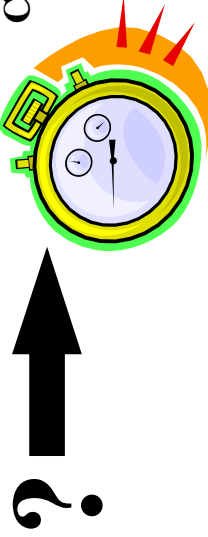
SCIENTIFIC JUDGE

What DO ? I Do ?

1. Follow questions read by moderator (ensure correct pronunciation).
2. Control buzzer system.
 - Wait to turn the flashing light off after the student has been recognized.
3. Getting the Answer
 - Verbally recognize the individual before she/he responds.
 - Identify student by...
 - 1) announcing Team A or Team B and
 - 2) announcing participant ID (captain, 1, 2, 3)
3. Challenges
 - Along with Moderator, request that clock be stopped during challenges.
 - All challenges go to the Appeals Room.



Team A,
Competitor 2



Challenge?

- Ask timekeeper to stop the clock.

Minimum Requirements:

- Be able to follow the competition flow
- Know and be able to apply all of the rules
- A science, engineering, math, or teaching background
- Read and review the questions prior to the event
- Be at least a junior in college

SCOREKEEPER

Your duty as a Science Bowl SCOREKEEPER is to:

1. **Accurately award points and record the competition score.** Scores will be recorded on a blackboard or easel that should be visible to all contestants and Science Bowl officials. The point awards are: 4 points for each correctly answered toss-up question and 10 points for a correctly answered bonus question.

The only variations to the above are: (1) when a contestant buzzes in and INTERRUPTS a toss-up question while it is still being read, is recognized, and gives the wrong answer; or (2) when a contestant buzzes in and gives an answer before being recognized (“blurt”). **4 points** are awarded to the opposing team. The opposing team then has the opportunity to answer the interrupted question after it is read in its entirety and, if it answers the toss-up correctly, receives another 4 points for the toss-up question and is then asked the bonus question.

As you keep track of the score on the scoresheet or blackboard, two columns should be recorded for each team. In the first column, **record the points a team receives on each individual question**, with toss-up, interruption, and bonus points being recorded separately. The second column should contain a **running total** of the team’s points. If recorded in this fashion, the point total can be checked at the end of the round.

2. **Post-game.** Announce the scores and help the Moderator complete the official scoresheet.

U.S. DEPARTMENT OF ENERGY
SCIENCE BOWL SCORE SHEET

Round #: RR2
Room #: ILLINOIS

A EAST RANKIN
Team A — Captain's Name

B RENAISSANCE
Team B — Captain's Name

Team A			Running Score
Points			
PENALTY	TOSSUP	BONUS	
1			
2			
3			
4			
5			
6			

Team B			Running Score
Points			
PENALTY	TOSSUP	BONUS	
1			
2			
3			
4			
5			
6			



SCOREKEEPER

What DO ? I Do !

1. Set up
 - Set up score sheet on flipchart
2. Understand where to place points
 - Use a cumulative tally
3. Toss up questions = 4 points
4. Bonus questions = 10 points
5. If a competitor interrupts the Moderator while a question is being read, and if the competitor answers incorrectly, the opposing team:
 - Is awarded 4 points
 - Has a chance to answer the toss up question (for an additional 4 points)
 - Has a chance to answer the bonus question (for an additional 10 points)
(This is also true for unrecognized answers or “blurts.”)
6. At halftime
 - Draw a double line with a total.
 - Announce scores for teams A and B.
7. At end of game
 - Announce the final scores. Do NOT call.
 - Sign the Official Score Sheet. Leave the flipchart score sheet in the comp room.

Team A		Team B	
4	10	4	4
4	14	4	12
4	18		

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 standing as needed during competitions
- Be at least in eighth grade (depending on maturity)

RULES JUDGE

Your duties as a Science Bowl RULES JUDGE include:

1. **Ensuring all competition rules are followed.** To serve in this capacity, it is imperative that you fully understand all competition rules. Please review the competition rules before coming to the Science Bowl training session.

During the competition, if you should have to discuss a rule with the Moderator during a round, please be certain that the clock has been stopped. If you feel that time has been lost, ask the timekeeper to make a time correction.

2. **Watching for Scorekeeper errors.** If, for example, Team A is supposed to get four points, the Rules Judge needs to make sure the Scorekeeper doesn't inadvertently credit the wrong team with those points.
3. **Ensure that quiet is maintained.** During competition play, the Rules Judge is responsible for ensuring that quiet is maintained in the room and that no signals are given to the team members from the audience.
4. At the beginning of each half, check that all students have **blank scratch pads** and pencils. Collect any used scratch paper at the end of the half and discard.



RULES JUDGE

What DO ? I Do !

1. Stand in front of the room facing the audience.

2. Your role concerning rules:

- You are responsible for ensuring that the rules are followed.
 - This includes ensuring that no one signals/communicates with the competitors during a match. If communication does occur, you have the authority to ask the person to leave the room (without causing undue duress -- please).
 - Ensure quiet.

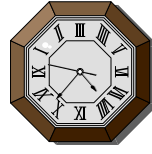
3. Warnings

- If a rule is broken you may, at your discretion, give one warning.

4. Collect all used scratch papers from teams at the beginning of the match, at the half, and at the conclusion.

5. Time

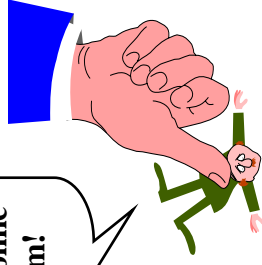
- Ensure that the clock is stopped during discussions between officials, and between officials and students.



Challenge?

- Ask timekeeper to stop the clock.

That's the last time you'll signal the atomic number of Cesium!



Minimum Requirements:

- Know and understand all of the competition rules
- Be able to enforce the rules in a competition setting
- Be comfortable standing as needed during competitions
- Be at least a junior in high school (depending on maturity)

TIMEKEEPER

Your duties as a Science Bowl TIMEKEEPER include:

1. **Operating the official competition time clock.** You will be provided with a clock that shows both minutes and seconds. At the beginning of each of the competition's halves, set the clock at 8 minutes (or 10 at the Nationals). If your site does not have separate competition clocks, you may use the clock in the competition room and make sure that both teams agree on when time will start. Both teams need to be able to see the clock. The clock should be started as soon as the Moderator begins to read the first question. The clock should be allowed to run uninterrupted until time expires UNLESS there is a question or a rules challenge. At half-time, call, "HALF" and at the end of the game call, "GAME."

If there is an interruption, stop the clock until the issue is resolved. Restart the timer when the Moderator begins reading the next question. Add time back onto the clock if the interruption has unduly used competition time. Again, be certain to explain to the participants that a time correction is being made.

2. **Keeping track of the time for bonus questions.** Each time a team correctly answers a toss-up question, the team will be awarded a bonus question. The students have 20 seconds to begin to answer the bonus question AFTER the Moderator has finished reading the bonus question. After 15 seconds in the bonus period have elapsed, please say, "5 SECONDS." This is to alert the students that only 5 seconds remain in their bonus period. At the end of the 20-second time period you will simply say, "TIME." Please say this loudly enough for all participants to hear. Generally, it will be sufficient for you to time the 20-second interval by reading the clock provided for the match. However, a stopwatch may also be used for this purpose.
3. **On toss-up questions,** one of the teams must answer within 5 seconds of the Moderator's completing the question. Keep track of the 5 seconds allowed, calling "TIME" so that the Moderator will know to proceed to the next toss-up question.
4. **At the conclusion of each half,** reset the clock.



U.S. Department of Energy - National Science Bowl®

TIMEKEEPER

What DO I Do ?

1. The basics ...

- It's very important to keep focused on the time -- NOT the game.
- One match is composed of two 8 minute halves at the Regionals.

2. To begin ...

- Timer begins the clock when the moderator starts reading the first question.

3. Students have 5 SECONDS to answer a toss up question.

- After 5 SECONDS, announce "TIME!"

4. Students have 20 SECONDS to answer a bonus question.

- After 15 seconds, announce "5 SECONDS!"
- After the total 20 seconds are complete, announce "TIME!"

5. If there's a challenge, stop the clock.

6. Adding time

- The clock cannot move backwards.
- Track additional time on your watch, then start the game clock after that time has lapsed.

7. Break and final time

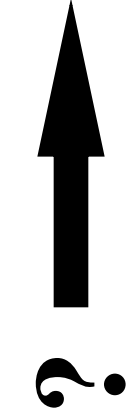
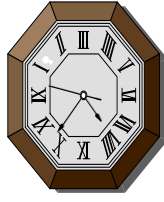
- After the first half has lapsed, announce "HALF!"
- Time the 2 minute break between halves.
- After the second half has lapsed, announce "GAME!"

8. Know the rules.

Toss-up Question
5 Seconds = "TIME"



Bonus Question
15 seconds - "5 SECONDS"
20 seconds - "TIME"



Challenge?

- Stop the clock.

Minimum Requirements:

- Know and understand the timing rules
- Be able to focus on timing in a competition setting
- Be at least a junior in high school (depending on maturity)

REGIONAL FORMS

Team Registration Form - Required

The registration form is on a secure Web site.

Coaches can visit the website and create an account in order to register a team(s) for the regional event. Repeating coaches will need to create a new account each year. Coordinators should help the coaches in their region with any computer glitches; however, the DOE HQ staff are available as a backup resource. The online system allows regional coordinators to download a spreadsheet of their teams and keep track of dates when forms were submitted.

Immediately following the regional event, coordinators select the winning team's name to indicate to DOE-HQ that this is the winning regional team. Specific Instructions on how to select the winning team can be found on page 79. This will allow the winning team and the Coordinator to access a National view online and retrieve all necessary forms.

Forms *(Optional at regional level)*

Coordinators decide what forms they will need on a regional level. Included in this manual are some samples that you may adapt for your own use. Electronic MS Word versions of these are on the CD that came with the manual.

The team that will be traveling to the National event will need to submit several forms. If you use forms identical to the sample forms, simply keep a copy of the forms for your winning team, and send the originals to the address provided on the Forms Checklist page. **Note: It saves time if your event forms are identical to the national forms.**

The following forms are included in this manual as well as on the website:

- Student Medical Form
- Parental Consent Form
- Adult Medical Form
- Team Profiles

*These are forms you may want to use at your regional and are **also Required at Nationals***

National Only Forms: Do not use these for your regional event.

- **Team Commitment Form**
- **Coach Code of Conduct (Middle School Only)**
- **Travel Form (HTML)**

FAQ ABOUT ONLINE SYSTEM

Where do I access the online system?

High School: <http://www.scied.science.doe.gov/nsb/coordin.htm>

Middle School: <http://www.scied.science.doe.gov/nmsb/coordinators.htm>

What is my username and password?

Look at the label on the inside cover of your manual for your username and password. If you forget your password, there is a password notification with a security question on the log-in page; if you still cannot retrieve your password, contact the DOE Program Manager.

What does “agent done” mean?

You need to close your browser completely, then open it and visit the site again.

I came back and it logged me out?

After 20 minutes, the computer will time you out in order to keep the information more secure. Just return to the login screen and login again. If there are problems, just close your browser and open it again.

How can I make a spreadsheet or database with the information from my regional teams?

At the top of the regional team information page, there is a link for “Download Contact Info.” You can click this and save the data in an Excel spreadsheet file that can be used to do mail merges, make nametags, send letters, etc.

Can a coach have the same account every year?

No. They need to change their account information slightly because their previous information is still saved in the system. Suggest that they add the year to their username.

How can a student be changed on the registration form?

A coach can edit/save information, but once they click “submit,” they need to ask the regional coordinator to change the information.

Instructions: 1. Regional coordinator logs into the coordinator view with username and password. 2. Click on “regional teams.” 3. Click on the team’s name. 4. Click on the student’s name to be replaced/edited. 5. You will see three columns – enter the updated information in column three. 6. Scroll to bottom of page and click “update information.” 7. The team’s registration form is now updated.

I’m confused – who can I ask for help?

Sue Ellen Walbridge 202-586-7231 sue-ellen.walbridge@science.doe.gov OR

Cindy Musick 202-586-0987 cindy.musick@science.doe.gov

INSTRUCTIONS FOR TEAM COACHES HOW TO REGISTER A TEAM ELECTRONICALLY

If you need assistance at any time, contact the regional coordinator for your area with questions. The following are the minimum system requirements to run the online application: Netscape 4.5 or higher or Internet Explorer 5.5 or higher; cookies enabled; JavaScript enabled; and SSL enabled.

1. Visit the appropriate web site:
 - a. High School Coaches: <http://www.scied.science.doe.gov/nsb/coaches.htm>
 - b. Middle School Coaches: <http://www.scied.science.doe.gov/nmsb/coaches.htm>
2. Click on “Regional Events”
3. Click on your state.
4. Check to see which site covers your area.
5. Click on “regional registration form.”
6. Click on “create a user ID and password.” *Note: Coaches from last year will need to create a new account each year.*
7. Follow the instructions and submit to log in.
8. After logging in, an instruction page will pop up. Click on “Start your registration.”
9. Type the information into the fields. *The information will be on a secure site, so personal information will be protected. If the student is a foreign national, they need to provide their passport number and expiration date. NOTE: The system will time out after 20 minutes unless you are inserting information.*
10. Click “save for future editing” if you need to come back to the registration.
11. Click “submit registration” when the information is complete.
Note: Once the data is sent, you can make changes only up until the decided registration deadline. The deadline is selected by each coordinator based upon when their regional event will be held.
12. *After submission, the regional coordinator will confirm your participation and you can make any team changes through them.*
13. Save your user ID and password for return visits. When you return to the site and log in, you will be given other information. *If you forget your password, there is a password notification with a security question on the log-in page; if you still cannot retrieve your password, contact the regional coordinator for your area.*
14. *All other forms (medical release, parent consent, etc.) are on the Web site in PDF Form Filler.*

INSTRUCTIONS FOR COORDINATORS HOW TO APPROVE A TEAM FOR REGIONALS

APPROVING TEAMS FOR REGIONALS

(All teams must be approved for Regionals in order to be selected as the winning regional team)

1. Visit the appropriate Web site:
 - a. High School Coordinator: www.scied.science.doe.gov/nsb/coordin.htm
 - b. Middle School Coordinators: www.scied.science.doe.gov/nmsb/coordinators.htm
2. Log in using your user ID and password
3. After logging in, you will see a Welcome page. This page shows whether the Site Registration Form was received and has two highlighted links. The two links read: “Regional Team Information –All” and “Regional Team Information – Approved for Regionals”
4. Click on the first link: “Regional Team Information – All”
5. This page will allow you to do one of two things:
 - a. You can *create a new account* for a Coach. This allows the Coordinator to create a user ID and password for a coach. The Coordinator would want to set up a coach account if the Coach was having trouble setting up the account, or if the regional event did not use the online system. *This is NOT the team registration. This only sets up an account for the Coach.*
 - b. You can approve a team for Regionals.
6. So long as a team has **begun and saved** their team registration, no matter how far into it they are, the team’s information will appear on the “Regional Team Information – All” page.
7. To the far right of the “Regional Team Information – All” page, there is a column that says “Approve for Regionals.”
8. If a team has begun their registration, there will be a box under this column. Click on the box and press “Save Updates.”
9. Go back to the Welcome page and choose the second link, “Regional Team Information – Approved for Regionals.”
10. The team that you just approved should now be listed on this page.

INSTRUCTIONS FOR COORDINATORS HOW TO SELECT THE WINNING REGIONAL TEAM

SELECTING WINNING REGIONAL TEAM

(Once your regional event is completed and you have a winning team)

1. In order to select the winning regional team, the team must have already been approved (See previous page for instructions.).
2. Log in to the appropriate Web site using your user ID and password.
3. After logging in, select the second link, “Regional Team Information-Approved for Regionals.”
4. There is a column entitled “Teams” where the name of the schools and team numbers should be listed.
5. Click on the winning team name under this column.
6. A page should open that lists the name of the students and the coach on that team.
7. At the bottom left of the page there is a box that reads, “Select this team as the regional winner.” *NOTE: If the team has not submitted their Team Registration Form or if the team was not approved for regionals,, the system will not allow you to select them as the winning team.*
8. Click on the box and press Update.
9. Go back to the Welcome page.
10. A third link entitled, “Coordinator Status – Nationals” should now be highlighted.
11. The Coach of the winning team will now be able to see a National view when they log in and will be able to access the online travel form as well as all of the other National forms.
12. The “Coordinator Status – Nationals” page will have all of the Coordinator forms and information.

**U.S. DEPARTMENT OF ENERGY
2008 National Science Bowl®**

**Student Confidential Medical Information and Emergency Notification Form
(Please fill out the entire 3-page form)**

This is a PDF Form filler document. Click on the space and type in the information requested. Once the form is complete: (1) click "File," then "Save As" and give it a name and save it on your computer; (2) print the completed form; (3) parent/guardian or student (if 18) must sign it in blue ink (preferred); (4) give this form to the coach; (5) coach to give all completed forms to the regional coordinator.

School _____

Name _____ Birth Date _____ Sex: M _____ F _____

Street Address _____

City _____ State _____ Zip Code _____

Home Telephone (____) _____ SSN _____
(only necessary for National event)

IN CASE OF EMERGENCY, CONTACT:

<u>Primary</u>	<u>Contact</u>	<u>Secondary</u>
_____	Name _____	_____
() _____	Phone _____	() _____
() _____	Cell Phone _____	() _____
_____	Relationship _____	_____

Allergies

Yes	No	If Yes, specify
___	___	Medication: _____
___	___	Food _____
___	___	Environmental _____

Medical History (To include surgeries)

Date of Last Tetanus Shot: _____

(A) Current/Recent Medical History/surgery (within the past 12 months)

(B) Previous Medical History/surgery (please include ALL medical history beyond 12 months)

Medication Information (Prescribed and Over-the-Counter Medications and Purpose)

Follow the format listed below.

Prescribed Medications

Medication/Dosage	Purpose/Used For
(Example: Albuterol/10mg per day)	(Example: Asthma)

Over the Counter

Medication	Purpose/Used For
(Example: Advil/as needed)	(Example: Headaches)

Physical Limitations/Needs (Please include any Assistive Devices that need to be provided):

Mobility Limitations _____

Visual Limitations _____

Communications Limitations _____

Vegetarian/Kosher Diet Preferences: _____

Religious or Cultural concerns that may affect care: (e.g. No Blood Transfusions) _____

HEALTH INSURANCE

YES _____

NO _____

If, Yes, complete the following:

<u>Physician</u>	<u>Contact</u>	<u>Insurance</u>
_____	Name _____	_____
() _____	Phone _____	() _____
	Policy # _____	_____

CONSENT TO MEDICAL CARE AND TREATMENT

(Parental consent is required before a hospital's emergency department can give medical treatment to a minor. Every effort will be made to contact parents, but a completed consent form will expedite treatment.)

I hereby authorize and consent to the administration of all medical and/or surgical treatment(s) to my child by a licensed physician, nurse or hospital in the event I am not available to consult with the attending physician(s), attempts to contact me have been unsuccessful, and the attending physician(s) deem it advisable to proceed with such treatment(s).

(Print Name of Parent or Legal Guardian)

(Print Name of Student)

Signature of Parent/Legal Guardian (or Student if 18) in Blue Ink

Date _____

NO FAX COPIES

**U.S. DEPARTMENT OF ENERGY
2008 NATIONAL SCIENCE BOWL®**

PARENTAL CONSENT / MEDIA RELEASE FOR STUDENT PARTICIPATION

School _____

I, (Mr., Mrs., Ms.) _____, the parent or legal guardian, as appropriate, of _____, give my consent for him/her to participate in all activities associated with the Department of Energy 2008 Regional and/or National Science Bowl® competitions.

I understand that this will include participation in special events and activities related to the Department of Energy 2008 Regional and/or National Science Bowl® competitions, and will include travel under the supervision of the team coach.

To promote, evaluate, or otherwise describe the Department of Energy's training and educational programs and activities, I give permission to the Department, and its agents, to use in connection with any publication (including but not limited to brochures, booklets, videotapes, reports, press releases, Web sites, and exhibits) any image or recording in which my child, a minor, appears, to use and cite any comment(s), verbal or written, made by said minor about the program, and to use said minor's name in connection with any publication and in such manner as determined by the Department.

I hereby release and discharge the Department of Energy and the United States Government, their officers, agents, servants, and employees, and persons, firms, or corporations contracting with, or acting on behalf of, the Department of Energy or the United States Government with respect to all activities associated with the Department of Energy 2008 Regional and/or National Science Bowl® competitions, as well as their heirs, executors, administrators, successors, or assigns, from any cause of action of any nature whatsoever arising from my child's participation in any and all activities associated with the Department of Energy 2008 Regional and/or National Science Bowl® competitions.

(Print Name of Parent or Legal Guardian)

_____ Date _____
(Signature of Parent or Legal Guardian in Blue Ink)

Witness: _____ Date _____
(this form must be witnessed)

NOTE: Team members 18 or older may sign this form.

NO FAX COPIES

U.S. DEPARTMENT OF ENERGY
2008 National Science Bowl[®]
Adult Confidential Medical Information and Emergency Notification Form
(Please fill out the entire 3-page form)

This is a PDF Form filler document. Click on the space and type in the information requested. Once the form is complete: (1) click "File," then "Save As" and give it a name and save it on your computer; (2) print the completed form; (3) must sign it in blue ink (preferred).

School _____

Name _____ Birth Date _____ Sex: M _____ F _____

Street Address _____

City _____ State _____ Zip Code _____

Home Telephone (____) _____ SSN _____
(only necessary for National event)

IN CASE OF EMERGENCY, CONTACT:

<u>Primary</u>	<u>Contact</u>	<u>Secondary</u>
_____	Name	_____
(____) _____	Phone	(____) _____
(____) _____	Cell Phone	(____) _____
_____	Relationship	_____

Allergies

Yes	No		If Yes, specify
___	___	Medication:	_____
___	___	Food	_____
___	___	Environmental	_____

Medical History (To include surgeries)

Date of Last Tetanus Shot: _____

(A) Current/Recent Medical History/surgery (within the past 12 months)

(B) Previous Medical History/surgery (please include ALL medical history beyond 12 months)

Medication Information (Prescribed and Over-the-Counter Medications and Purpose)

Follow the format listed below.

Prescribed Medications

Medication/Dosage	Purpose/Used For
(Example: Albuterol/10mg per day)	(Example: Asthma)

Over the Counter

Medication	Purpose/Used For
(Example: Advil/as needed)	(Example: Headaches)

Physical Limitations/Needs (Please include any Assistive Devices that need to be provided):

Mobility Limitations _____

Visual Limitations _____
Communications Limitations _____

Vegetarian/Kosher Diet Preferences: _____
Religious or Cultural concerns that may affect care: (e.g. No Blood Transfusions) _____

HEALTH INSURANCE

YES _____ NO _____ If, Yes, complete the following:

<u>Physician</u>	<u>Contact</u>	<u>Insurance</u>
_____	Name _____	_____
() _____	Phone () _____	_____
	Policy # _____	_____

CONSENT TO MEDICAL CARE AND TREATMENT

I hereby authorize and consent to the administration of all medical and/or surgical treatment(s) by a licensed physician, nurse or hospital in the event I am not available to consult with the attending physician(s) and the attending physician(s) deem it advisable to proceed with such treatment(s).

(Print Name)

Signature in Blue Ink Date _____

NO FAX COPIES

U.S. Department of Energy
NATIONAL SCIENCE BOWL
PREPARING TEAM BIOGRAPHIES
Information to be submitted on-line

Have students write a biographical paragraph, written in third person, which will be included in the National program booklet. In addition, the coach should also prepare a biography.

The following is a list of interesting details that can be included in the biographies.

Students:

- Grade and School attended
- Interests and hobbies
- Activities and clubs
- Favorite subjects in school
- Future plans for college and career
- Interesting facts about yourself
- The three most important science discoveries to you

Coaches:

- Subjects and school where taught
- School clubs
- Hobbies and Interests
- Length of time as a teacher
- Colleges attended and areas of study
- Interesting facts about yourself

Example:

Jane Doe is in the eighth grade. Her interests and hobbies include reading, chess, violin, computers, science, math, knitting, writing, and soccer. She is involved in Varsity Orchestra, MathCounts, UIL, Chess Club, National Junior Honor Society, and Girl Scouts. Her favorite subjects are science, algebra, and Spanish. She plans to attend ABC University and double major in computer science and computer engineering. She would then like to work as a computer programmer. Jane plays the violin, attended the state Math Counts competition, and earned the Girl Scouts Bronze award. John Doe is an eighth grader whose hobbies include reading, playing chess, and solving Rubik's cube. He is involved in MathCounts, UIL, Chess Club, and National Junior Honor Society. His favorite subject is algebra. He plans to attend MIT and obtain a Ph.D. in engineering. Some interesting facts about him are that he can solve a Rubik's cube in under a minute, plays the cello, and likes spinach.

This information will be submitted ON-LINE – the coordinator will have to approve each participant's biography before it can be printed.

PRINTING LIST

This list is helpful when estimating costs and planning tasks. Regional Science Bowls may use some or all of the following in preparation and during their event:

- Invitation letters to teams, volunteers, sponsors (and postage)
- Registration materials for teams
- Question binders for moderators to read from
- Scoresheets to use during the competition* (artwork provided on CD)
- Program book*
- Scoreboards to display
- Numbers for teams to draw for competition placement
- Team name tents
- Table signs for students “competition tents” (Team A Student One...)*
- Signs inside and outside rooms and buildings
- Scoresheets for coaches to use*
- Volunteer schedules, instructions, and thank you letters
- Name badges, lanyards
- Meal tickets
- Materials for enhancement activities
- Certificates, checks, prizes*
- T-shirts for teams and/or volunteers
- Pens, bags, other give away printed items

Each year, the National event uses a different theme, such as “science to the core,” or “zoom into science.” Regional events are encouraged to adapt the theme to fit the local flavor or to go with a separate theme. The National artwork will not be provided to the regional events to co-opt.

You are welcome to use the black and white images on the logo sheet provided on the CD and to edit and use the student certificate on the CD.

Please highlight on your materials that this event is part of the U.S. Department of Energy’s National Science Bowl. Use the official NSB logo and include the Dept. of Energy in every press release. The public awareness of your event helps the awareness of the national event and to get positive media attention for the students and corporate support for the NSB.

* See attached samples.



U.S. Department of Energy
NATIONAL SCIENCE BOWL®

Regional Science Bowl
Certificate of Participation

presented to

In recognition of outstanding achievement in mathematics and science, superior student performance, and dedication to educational excellence

Insert Name Here
Insert title here

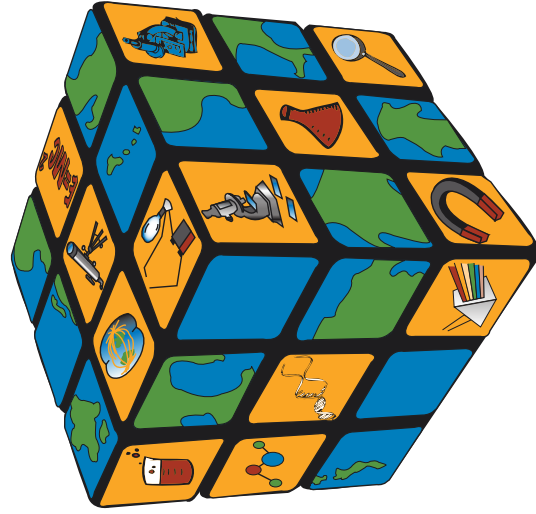
Insert Logo Here

Insert Date Here



**Thomas Jefferson National Accelerator Facility
Virginia Regional Science Bowl
February 11, 2006**

**Jefferson Lab
Virginia Regional Science Bowl
February 11, 2006**



Jefferson Lab <http://education.jlab.org>
CHANGE THE WITH SCIENCE

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Thank You!.....	35



On behalf of the nation's scientific community, I applaud your participation in the Virginia Regional Science Bowl and welcome you to Jefferson Lab. You and your team members are tomorrow's leaders. We encourage you to keep striving for your goals and dreams. We eagerly anticipate your achievements!

As a Department of Energy physics research facility, Jefferson Lab takes seriously its partnership with the local, regional, and national education community. Jefferson Lab contributes to the quality and strength of university physics programs through shared faculty appointments with the Lab. We also provide opportunities for the nation's most promising undergraduate science students to immerse themselves in the science of Jefferson Lab for 10 weeks in the summer through the Science Undergraduate Laboratory Internship (SULI) program. Funded by the DOE Office of Science, the SULI program offers undergraduate students the chance to interact with Jefferson Lab staff and scientists in a world-class research environment. More information about SULI is on the Internet at <http://education.jlab.org/>.

In addition, we work with many dedicated teachers to enhance the quality of science, math and technology education. Our unique research environment and science, math, and technology expertise creates extraordinary educational partnerships with local school districts. More than a third of the Jefferson Lab scientists and staff interact regularly as mentors and career role models with students and teachers.

I hope each of you continue pursuing your interests in mathematics, science, engineering, and technology. Good luck in the competition and enjoy your day at Jefferson Lab.

Christoph W. Leemann
Director, Jefferson Lab

What is Jefferson Lab?

The Department of Energy's Thomas Jefferson National Accelerator Facility, or Jefferson Lab (JLab), is a national laboratory for nuclear physics research. The lab is managed by a consortium of 61 universities called the Southeastern Universities Research Association, or SURA, under contract of the DOE. Approximately 700 people are employed at Jefferson Lab.

As a user facility for physicists worldwide (more than 1,800 scientists from around the world conduct experiments at Jefferson Lab), JLab's primary mission is to conduct basic research that builds a comprehensive understanding of the atom's nucleus. With industry and university partners, it has a derivative mission as well: applied research for using Free-Electron Lasers based on technology the laboratory developed to conduct its physics experiments. As a center for both basic and applied research, Jefferson Lab also reaches out to help educate the next generation in science and technology.

Superconducting electron-accelerating technology makes the laboratory unique. University researchers use Jefferson Lab's Continuous Electron Beam Accelerator Facility (CEBAF)—the technology's first large-scale application anywhere to conduct experiments. With high-energy electron beams from the accelerator, these experimenters probe the subnuclear realm, revealing for the first time how quarks make up protons, neutrons, and the nucleus itself. Using this same superconducting electron-accelerating technology, Jefferson Lab has constructed a laser of unprecedented power and versatility called a Free-Electron Laser. This laser offers unique capabilities for basic research and manufacturing processes.

Jefferson Lab represents a \$600 million investment by the federal government, the Commonwealth of Virginia, the city of Newport News, foreign contributors, and the U. S. nuclear physics research community. The operating budget from the Department of Energy is approximately \$80 million per year.



Agenda

- 7:30 a.m. Team Registration, CEBAF Center Atrium
- 8:15 Welcome, CEBAF Center Auditorium
- 8:20 Orientation / Rules Review
- 9:00 Round Robin - Round #1
- 9:30 Round Robin - Round #2
- 10:00 Round Robin - Round #3
- 10:30 Break
- 10:40 Round Robin - Round #4
- 11:10 Round Robin - Round #5
- 11:40 Round Robin - Round #6
- 12:10 p.m. Round Robin - Round #7
- 12:40 Lunch (Tiebreakers if necessary)
- 1:30 Double Elimination - Round #1
- 2:00 Double Elimination - Round #2
- 2:30 Double Elimination - Round #3
- 3:00 Break
- 3:10 Double Elimination - Round #4
- 3:40 Double Elimination - Round #5
- 4:10 Finals #1 – CEBAF Center Auditorium
- 4:40 Finals #2 - if needed - CEBAF Center Auditorium
- 5:15 Presentation of Awards and Certificates

Each round is 20 minutes with 10 minutes to get to the destination room of the next match.

As part of the Ferguson Enterprises Stay All Day program, afternoon activities are available for teams that do not advance to the finals. Stay All Day activities will be ongoing from 1:30 - 3:30 in VARC 72.

Division and Team Number Assignments

Democritus Division

Team 1
Team 2
Team 3
Team 4
Team 5
Team 6

Democritus

Thomson Division

Team 1
Team 2
Team 3
Team 4
Team 5
Team 6

Thomson

Rutherford Division

Team 1
Team 2
Team 3
Team 4
Team 5
Team 6

Rutherford

Bohr Division

Team 1
Team 2
Team 3
Team 4
Team 5

Bohr

Round Robin Competition Room Assignments

Democritus Division

	CC F326	CC F113	CC F226
Round 1	1 vs. 2	3 vs. 4	
Round 2	4 vs. 6	3 vs. 5	
Round 3	2 vs. 5	1 vs. 6	
Round 4	1 vs. 3	4 vs. 5	
Round 5	1 vs. 4	2 vs. 6	
Round 6	5 vs. 6	2 vs. 3	
Round 7	2 vs. 4	1 vs. 5	3 vs. 6

Thomson Division

	CC F325	CC F224	CC F226
Round 1	1 vs. 2	3 vs. 4	
Round 2	4 vs. 6	3 vs. 5	
Round 3	2 vs. 5	1 vs. 6	
Round 4	1 vs. 3	4 vs. 5	
Round 5	1 vs. 4	2 vs. 6	
Round 6	2 vs. 4	1 vs. 5	3 vs. 6
Round 7	5 vs. 6	2 vs. 3	

Rutherford Division

	CC F324	CC Aud	CC L104
Round 1	1 vs. 2	3 vs. 4	
Round 2	4 vs. 6	3 vs. 5	
Round 3	2 vs. 5	1 vs. 6	
Round 4	1 vs. 3	4 vs. 5	
Round 5	1 vs. 4	2 vs. 6	
Round 6	2 vs. 4	1 vs. 5	3 vs. 6
Round 7	5 vs. 6	2 vs. 3	

Bohr Division

	CC F226	CC L104
Round 1	1 vs. 2	3 vs. 5
Round 2	4 vs. 5	1 vs. 3
Round 3	3 vs. 4	2 vs. 5
Round 4	2 vs. 3	1 vs. 4
Round 5	1 vs. 5	2 vs. 4

Round 6 - F226: 3 vs. 6 (Thomson)
 L104: 3 vs. 6 (Rutherford)
 Round 7 - F226: 3 vs. 6 (Democritus)

Round Robin Scoring Charts

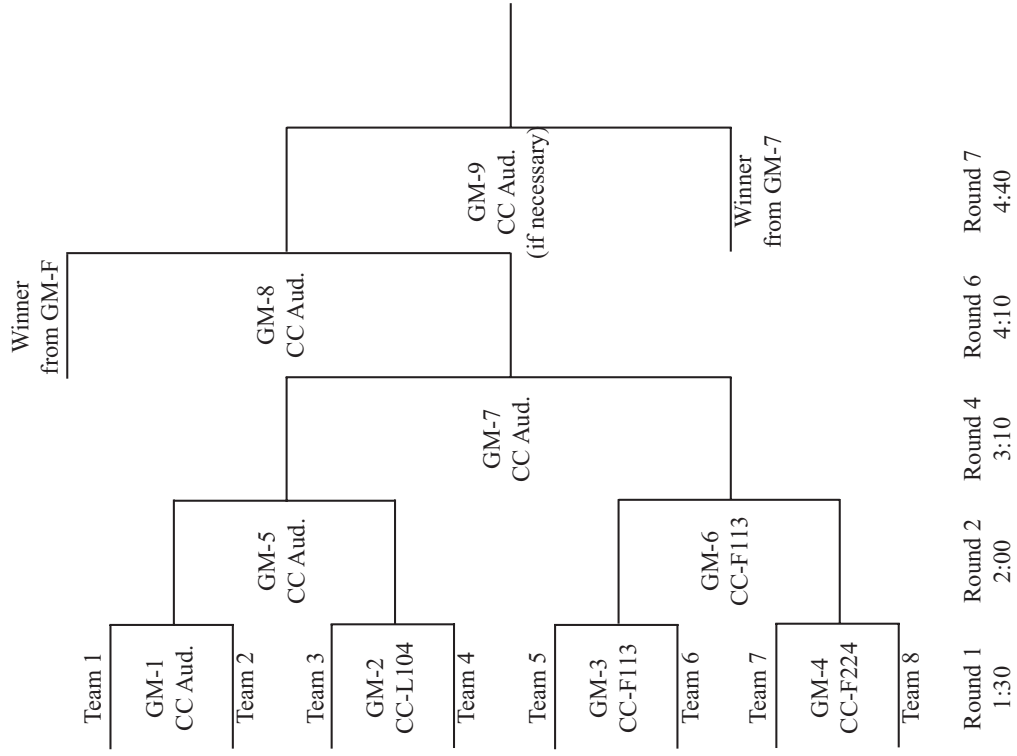
Democritus Division

	Team 1	Team 2	Team 3	Team 4	Team 5	Team 6	TOTAL
Team 1							
Team 2							
Team 3							
Team 4							
Team 5							
Team 6							

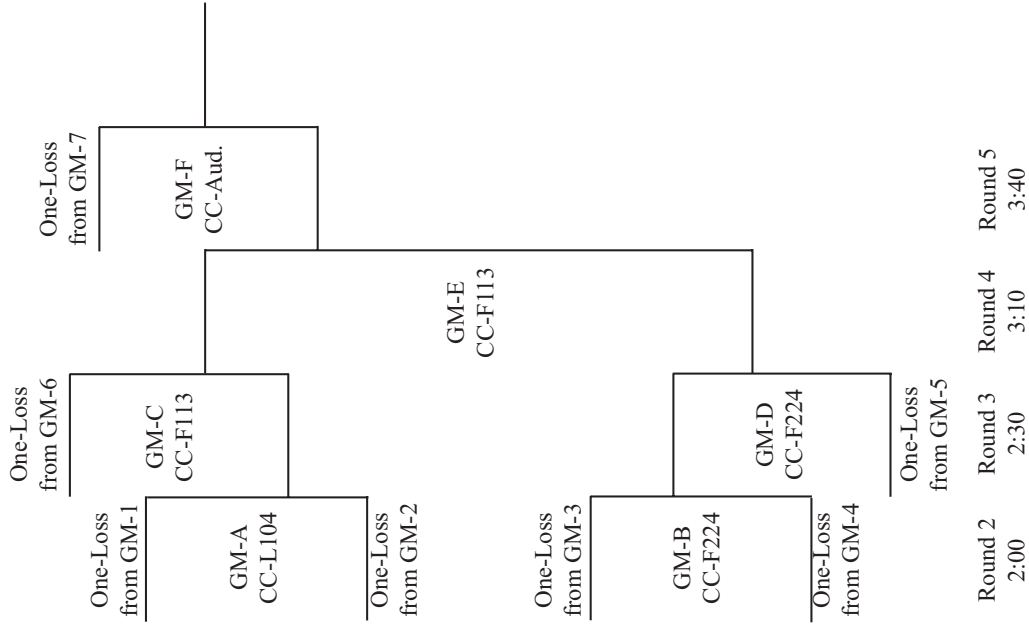
Thomson Division

	Team 1	Team 2	Team 3	Team 4	Team 5	Team 6	TOTAL
Team 1							
Team 2							
Team 3							
Team 4							
Team 5							
Team 6							

Double Elimination No-Loss Bracket



Double Elimination One-Loss Bracket



Stay-All-Day Activities

Sponsored by Ferguson Enterprises

1:30 - 3:30

VARC 72

In the event your team does not make it to the finals, we have additional opportunities for you and your teammates to show off! Your team can compete in the activities listed below between 1:30 p.m. and 3:30 p.m.

Why Stay-All-Day? Well, the team with the best composite score from the three activities will win a check for \$250 for their school's science department, and participating in the Ferguson Enterprises Stay-All-Day Activities will be fun! The "official" rules will be available this afternoon in the VARC building, room 72.

A Simple Balancing Act – Determine the mass of an object using balance and a little math.

Hitting the Target – Calculate where to place a target so that it will be hit by a ball that rolls down an inclined plane and falls off a table.

Scale Model of the Solar System – Determine the distance between the sun and each planet in a scale model of the solar system.

Team members may work together or separately. Each team may only submit one official entry per activity. The winner of the Ferguson Enterprises Stay-All-Day Activities will be announced after the Final Round in the CEBAF Center Auditorium.

Bassett High School

Bassett, Virginia

Alex Randall, Principal

Teresa Setliff, Coach

Coach Setliff graduated from Tennessee Wesleyan College with a B.S. in Biology and a minor in Chemistry. She has graduate credit from VA Tech, UVA, and Wake Forest in chemistry, biochemistry, and technology. She currently teaches Chemistry, AP/DE Chemistry, and Environmental Science at Bassett High School. She is coach for the SCAEL Science Team. Before coming to Bassett High School, she was a chemist in a paint manufacturing facility. Coach Setliff feels that the discovery of the DNA molecule was one of the most important scientific discoveries because it leads to improved health and the fight against disease.

Megan Adkins, Senior

Megan is a member of the National Honor Society, the International Club, and treasurer of the Drama Club. She participates in the Social Studies team for the SCAEL and the Forensics Team. She was an actress in the One Act play, which made it to the regional competition. She is also a new member of the Robotics Team.

Kameron Carter, Junior

Kameron lives in Bassett, Virginia, with her mother, Helen, father, Terry, and two younger siblings, Blake and Haley. Kameron is a member of BETA, SAVE, FOCUS, and the robotics team of Piedmont Governor's School. She has been a member of the golf team for three seasons and captain of the golf team for one. This past year was her first year as a member of Bassett High School's Science SCAEL team and this is her first trip to the Science Bowl. After high school, Kameron plans on attending a four-year university where she can play golf at the college level while majoring in a scientific field.

Benjamin Dawson

Benjamin has an affinity for science and computers. He is IC₃ and Microsoft PowerPoint certified. He loves solving visual problems, as well as reading. His favorite author is Terry Brooks. He plays a lot of video games, most of which are online role-playing games, such as World of Warcraft. He enjoys talking to people and is interested in business management as a career choice at the moment.

Carter Fetting, Junior

Carter is co-captain of the Social Studies SCAEL team and is active in various clubs and activities around school. His hobbies include different sports and hanging out with his friends. Carter also attends the Piedmont Governor's School and lives with his mother and four-year-old sister, Tayhlyan.

George Sink, Junior

George has been on the Social Studies SCAEL team for three years and is a co-captain. He is in the SCA and the Beta Club. As a member of the Oak Level Ruritan Club, he works to improve his community. Also, George has been on many trips and missions with his youth group. He is hoping to study engineering in college and obtain a job in the technical field.

2006 Virginia Regional Science Bowl Competition Officials

Phil Adderley	Gary Graham	Greg Nowicki
Ravi Anumagalla	Joe Grames	Dena Polytronakis
Jacqueline Bacon	Michael Haddox-Schatz	Julie Roche
Myung Bang	Doug Higinbotham	Mark Smith
Susan Brown	Hanna Jacobsen	Marcy Stutzman
Kandice Carter	JT Kelley	Kristen Turk
Todd Clark	John Kelly	Pam Turk
Jennifer Coughlin	Carol Kinsey-O'Neal	Skip Tyler
Dennis Dobbins	Brian Kross	Valerie Varnier
Bridget Dowd	Paul Letta	Lyn Wells
Deborah Dowd	Allison Lung	Christine Wheeler
Molly Dowd	Debbie Mayer	Bethany Wissmann
Rolf Ent	Lia Merminga	Hannah Wissmann
Mary Erwin	Jade Miller	Mark Wissmann
Theresa Foremaster	Jim Murphy	Jane Worley
Al Gavalya	Susan Murphy	Ray Yoh

Thanks to the following organizations for their generous contributions of food and prizes for the students and teachers participating in the 2006 Virginia Regional Science Bowl.



Virginia Regional Science Bowl Planning Committee

Jan Tyler: Coordinator
Steve Gagnon: Assistant Coordinator
Dave Abbott: Assistant Coordinator
Stacy DeVeau: Assistant Coordinator
LaChelle Dozier: Assistant Coordinator
Joyce Miller: Assistant Coordinator
Lisa Surlles-Law: Assistant Coordinator
Joanna Korolyshyn: Logo & T-shirt Design
Debbie Magaldi: Publicity and Media Coverage
Cynthia Lockwood: Awesome Logistics - Room Set-up and Food
Noel Vermeire: Awesome Logistics - Room Set-up and Food
Vera Collins - Registration

Question Review Committee

Greg Nowicki, Jefferson Lab
Joe Grames, Jefferson Lab
Michael Haddox-Schatz, Jefferson Lab
Keith Welch, Jefferson Lab
Dr. James Forbes, Hampton University
Steve Gagnon, Jefferson Lab Science Education Group
Jan Tyler, Jefferson Lab Science Education Group
Lisa Surlles-Law, Jefferson Lab Science Education Group
Dave Abbott, Jefferson Lab Science Education Group

Stay-All-Day Coordinators

Stacy DeVeau
LaChelle Dozier

Jefferson Lab is managed and operated for the
U.S. Department of Energy by the Southeastern
Universities Research Association.
Work is funded by the U.S. Department of Energy
under contract DE-ACO5-84ER40150.

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B THREE

B THREE

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PREPARING FOR NATIONALS – HIGH SCHOOL

Once the regional coordinator has selected the winning team on-line, the process starts for planning their trip to the National event (see instructions below). Students and coaches will have many questions, so please refer them to the National Science Bowl[®] web site for the latest information on schedules, locations, what to bring, etc. **It is the responsibility of the Regional Coordinator to ensure all of the forms are completed and submitted/mailed.** The ideal situation is for the regional coordinator to gather, sort, and review all forms before sending them to ORISE in one complete package. Forms are to be legible and every field completed.

Once the Coordinator has selected their winning team, the team gets access to a new National Web page where all of the National forms are located. The coach needs to then follow the instructions below.

Coaches should login to: <http://www.scied.science.doe.gov/nsb/coaches.htm> to get to the team status page.

1. Coaches **MUST** complete and submit the **ORISE Travel Form** (one form per team). (A letter providing detailed information on this form will be sent to the coaches by ORISE.)
2. If the team has not previously completed **parental consent and medical forms** (from the 2008 regional event), please complete and mail to ORISE.

The following forms are at:

<http://www.scied.science.doe.gov/nsb/pdf/Adult%20Medical%20Form.pdf> (one per coach)

http://www.scied.science.doe.gov/nsb/pdf/Parental_Consent.pdf (one per student)

<http://www.scied.science.doe.gov/nsb/pdf/Student%20Medical.pdf> (one per student)

3. Complete the following National forms:
Team Commitment Form (requires original signatures in blue ink only)

http://www.scied.science.doe.gov/nsb/pdf/Team_Compmitment.pdf

- Student/parent to complete using pdf form filler on Web site, then print and have student and parent sign hard copy
- Coach sign and mail
- Must be received by ORISE or no tickets will be purchased

Team Profiles (see instructions on Web)

- Coach submits online and coordinator approves.

Team Photo

- Coordinator uploads to web with caption identifying people in the photo.

Check your status page to view which forms have been received. The check box next to each team member's name will be marked when a complete form is received. If you have technical questions, please contact the National Coordinator.

ORISE will work with the team to make travel arrangements. Problems with team travel arrangements will be directed to the regional coordinator, and if still needed, will be then addressed by the National Science Bowl coordinator.

NSB SCIENCE BOWL FORMS CHECKLIST

To Sue Ellen Walbridge – Immediately

- Press selection of winning team button immediately following your regional competition.
- Send email or letter to headquarters explaining how regional rules differed from Nationals
(Only if regional rules were different)

To ORISE – Due ASAP (no later than March 9, 2008)

- Original Student Medical Release Forms – PDF Form Filler – Blue Ink Only for Signatures
- Original Parental Consent/Media Release Forms – PDF Form Filler – Blue Ink Only for Signatures
- Original Coach Adult Medical Release Form – PDF Form Filler – Blue Ink Only for Signatures
- ORISE Travel Form (1 form per team) – Electronic HTML (available online to coaches after regionals)
- ORISE Adult Release Form (1 form per adult) – Electronic HTML (online to coaches after regionals)
- ORISE Participant Data Form (1 form per student) – Electronic HTML (online to coaches after regionals)
- Team Commitment Forms (1 for each student) – PDF Form Filler – Blue Ink Only for Signatures (see next page) (available online to coaches after regionals)
- Team Profiles (complete and submit from National Science Bowl® Web site) – Electronic HTML

[Ms. Norma Ward](#)

[Oak Ridge Institute for Science & Education \(ORISE\)](#)

[P.O. Box 117, MS-36](#)

[Oak Ridge, TN 37831-0117](#)

[FedEx to 1299 Bethel Valley Road, Building SC-200, Oak Ridge, TN 37831 \(865\) 241-2890](#)

FORMS FOR COORDINATOR

Forms can be found on NSB online system. It is a good idea to photocopy all forms before mailing them. Also, while traveling, the coach may want to carry a copy of the forms with them. If a student completed a form in January and there are updates to be made because of recent injury, etc., please contact the National coordinator.

- Committee & Sponsor Form (to complete on Web site) – Electronic HTML
- Coordinator Attend Nationals Form (Please complete even if NOT attending.)
- 4-H Registration Form
- Coordinator Adult Medical Form
- Team Photo and Caption – Upload Online
- Team Profiles (approve Coach submission) – Electronic HTML

ORISE ADULT RELEASE FORM
(for information purposes only)

RELEASE FORM - ADULTS
NATIONAL SCIENCE BOWL®

School Name: _____

Oak Ridge Associated Universities (ORAU) is a consortium of doctoral-granting colleges and universities. ORAU serves the government, academia, and the private sector in important areas of science and technology. A private, not-for-profit corporation, ORAU manages the Oak Ridge Institute for Science and Education (ORISE) for the U.S. Department of Energy. ORISE undertakes national and international programs in education, training, health, and the environment, and participates in activities such as the National Science Bowl®.

In carrying out these programs, participants are often photographed, filmed, videotaped or otherwise recorded to illustrate the kind of activities being administered at ORISE. You, _____, may be photographed, filmed, videotaped, or otherwise recorded during participation at the National Science Bowl® and we desire your permission to use any images or recording taken at this time to promote our training and educational programs and other activities. Any such image or recording may be included in such promotional materials as brochures, booklets, videotapes, reports, press releases, websites, and exhibits. If you agree to the use of any such image or recording, please execute the RELEASE FORM below and return it to:

Oak Ridge Institute for Science and Education
Science Education Programs
P.O. Box 117, MS 36
Oak Ridge, TN 37831-0117
Attention: Tom Richmond

RELEASE FORM - ADULTS

To promote, evaluate, or otherwise describe ORISE training and educational programs and activities, I give permission to ORISE, and its agents, to use in connection with any publication (including but not limited to brochures, booklets, videotapes, reports, press releases, websites, and exhibits) any image or recording in which I, _____ appear, to use and cite any comment(s), verbal or written, made by me about any ORISE program, and to use my name in connection with any publication and in such manner as determined by ORISE.

Signed: _____
Date: _____
Witness: _____
(this form must be witnessed)
Date: _____



ORISE PARTICIPANT DATA FORM
(for information purposes only)

NATIONAL SCIENCE BOWL®

NAME: _____

SCHOOL NAME: _____

PARTICIPANT DATA

Participant data are important in assessing the effectiveness of our efforts to reach a diverse population. Your completion and submission of this form will assist us in this regard, however, it is optional and you are not required to submit it. We appreciate your cooperation.

Ethnicity: *(check one response)*

- Not Spanish/Hispanic/Latino
- Mexican, Mexican American, Chicano
- Puerto Rican
- Cuban
- Other Spanish/Hispanic/Latino

Race: *(check one or more)*

- American Indian or Alaska Native
- Asian Indian
- Black or African American
- Chinese
- Filipino
- Guamanian or Chamorro
- Japanese
- Korean
- Native Hawaiian
- Other Asian
- Other Pacific Islander
- Samoan
- Vietnamese
- White
- Some other race

Gender:

- Female
- Male

Date of Birth: **Month:** _____ **Day:** _____ **Year:** _____

ALUMNI

There is a great resource in tapping Science Bowl alumni to assist with your competition – both alumni of your specific regional event, and alumni of other events who have relocated to your area because of colleges or careers.

It is helpful to save data on past student participants, and to keep in contact with college graduates to maintain this alumni resource.

Possibilities for alumni:

- Act as regional volunteers
- Serve on Science Bowl committee
- Attract media coverage if alumni are in community leadership or celebrity positions
- Coach a regional team
- Give a speech or demonstration of science research
- Mentor students
- Provide information about colleges, internships, careers
- Write sample questions
- Many more

Note: The National Science Bowl® event invites alumni to Washington, D.C. to act as competition officials and to present seminars, so please encourage your alumni to register on the NSB Web site: <http://www.scied.science.doe.gov/nsb/alumni.htm>



Alumni at the 2007 NSB for High School Students

**U.S. Department of Energy
National Science Bowl
Thursday, May 1 - Tuesday, May 6, 2008
Washington, D.C.**

DRAFT SCHEDULE OF EVENTS

**Thursday, May 1, 2008
Welcome & Night Tour of the Monuments**

Location:	National 4-H Conference Center 7100 Connecticut Avenue Chevy Chase, MD 20815 (301) 961-2801
Dress:	Casual Attire
1:00 – 6:00 p.m.	Registration – J.C. Penney Lobby & Missouri
Every 30 minutes	Tours of the National 4-H Conference Center
5:00 – 6:30 p.m.	Dinner – Clover Cafe
7:00 – 7:20 p.m.	Welcome Assembly – Aiton Auditorium
7:30 – 7:45 p.m.	Buses depart for Night Tour of Monuments Bus Route: Drop teams at FDR Memorial walk along Tidal Basin path Pick up at Jefferson Memorial; Drop at Lincoln Memorial & Pick up at WWII Memorial & Einstein Statue
8:00 p.m.	Return all 4-H sports equipment to the front desk
10:00 – 10:30 p.m.	Buses return to National 4-H Conference Center
10:30 – 11:30 p.m.	Hospitality – Recreation Center Refreshments Board Games are available to be picked up in J.C. Penney Lobby
11:00 p.m.	All participants must be inside the 4-H buildings – Chevy Chase Noise Ordinance
11:00 p.m.	Curfew – all participants must be in their rooms (students, coaches & coordinators) – Campus policy

Friday, May 2, 2008

Meet the Nobel Laureates, Museums, AP Review

Dress:	Casual Attire - National Science Bowl T-Shirt
7:00 – 8:00 a.m.	Breakfast – Clover Cafe
8:00 – 8:15 a.m.	Teams board buses & depart for Air & Space Museum Pick up bottled water; poncho (if raining), sunscreen (if sunny), and camera for Museum Scavenger Hunt
9:00 a.m.	Buses drop at 4th & Independence Ave., SW (by Air & Space)
12:00 Noon – 1:00	Lunch for those staying at 4-H – Clover Cafe
4:15 p.m.	Meet & load buses at 4th Street & Jefferson Drive, S.W. (Near Air & Space Museum)
5:15 p.m.	Buses return to National 4-H Conference Center
5:30 – 6:30 p.m.	Dinner – Clover Cafe (Bar-B-Q)
7:00 – 7:30 p.m.	Assembly – Aiton Auditorium
7:30 – 9:00 p.m.	Advanced Placement Test Review Sessions (see room schedule in J.C. Penney Lobby)
8:30 – 10:30 p.m.	Science Bowl Coordinators Social – Clover Meeting Room
8:30 – 10:30 p.m.	Refreshments – Recreation Center Board Games are available to be picked up in J.C. Penney Lobby
12:00 Midnight	Curfew – all participants must be in their rooms (students, coaches & coordinators) – Campus policy

Saturday, May 3, 2008

Science Day

Dress:	Casual Attire Alumni: White NSB Polo
7:00 – 8:00 a.m.	Breakfast – Clover Cafe
8:15 – 9:00 a.m.	Assembly for all participants – Aiton Auditorium
9:00 – 10:15 a.m.	Saturday Science Bowl Seminars I – Plenary Session – Aiton Auditorium Speaker:
9:00 a.m. – Noon	Science Bowl Alumni Review Session – John Deere
10:30 – 11:45 a.m.	Saturday Science Bowl Seminars II
12:00 – 1:15 p.m.	Lunch – Clover Cafe
1:15 – 2:30 p.m.	Saturday Science Bowl Seminars III
2:30 – 2:45 p.m.	Break – Recreation Room
2:45 – 3:30 p.m.	Interactive Science Discovery Competition – Divisions A-D
3:45 – 4:30 p.m.	Interactive Science Discovery Competition – Divisions E-H
5:00 – 6:30 p.m.	Dinner – Clover Cafe
6:30 – 6:45 p.m.	Assemble in Aiton Auditorium
6:45 – 8:30 p.m.	Announcements & Rules Review – Aiton Auditorium
8:30 – 11:00 p.m.	Refreshments for Students – Recreation Room Board Games are available to be picked up in J.C. Lobby
9:00 – 11:00 p.m.	Coaches & Alumni Social – Ohio
12:00 Midnight	Curfew – all participants must be in their room (students, coaches, & coordinators) – Campus policy

Sunday, May 4, 2008

Let the Games Begin

Dress:	Casual Attire – Regional Science Bowl T-Shirt
7:00 – 8:00 a.m.	Breakfast – Clover Cafe
8:00 – 10:00 a.m.	Free Time for Teams on Campus
7:30 – 9:00 a.m.	Officials begin arriving
9:00 – 9:30 a.m.	Interfaith Worship Service – Ohio
9:45 a.m.	Photograph of all participants – front of J.C. Penney Hall Team Captains pick up name tents from Sue Ellen
9:50 a.m.	Photograph of Western Area Power Administration Teams Photograph of Society of Hispanic Professional Engineers Teams
	Round Robin Matches
10:00 – 10:45 a.m.	Round One
10:45 – 11:45 a.m.	Brunch for Group 1 (Divisions ??)
10:45 - 11:15 a.m.	Round Two
11:15 – 11:45 a.m.	Round Three
11:45 – 12:45 pm.	Brunch for Group 2 (Divisions ??)
11:45 – 12:30	Round Four
12:30 p.m.	Round Five
1:00 p.m.	Round Six
1:30 p.m.	Round Seven
2:00 p.m.	Round Eight
2:30 p.m.	Round Nine - Break
3:00 p.m.	Round Ten

3:30 p.m.	Break & Announcements in Recreation Center
4:30 – 5:30 p.m.	Dinner – Clover Cafe Team Captains Receive Double Elimination Team Tents – Clover Café Double Elimination Matches
6:00 p.m.	Round One
6:30 p.m.	Round Two
7:00 p.m.	Round Three
7:30 p.m.	Round Four (4 Rooms)
8:00 p.m.	Round Five (2 Rooms) Return all 4-H sports equipment to Front Desk
8:30 – 11:00 p.m.	Refreshments – Clover Cafe – Make your own sundae Board Games are available to be picked up in J.C. Penney Lobby
11:00 p.m.	All participants must be inside the 4-H buildings – Chevy Chase Noise Ordinance
11:00 p.m.	Curfew – all participants must be in their rooms (students, coaches, coordinators) – Campus policy Reminder: If your team is NOT competing on Monday, please be good neighbors.

Monday, May 5, 2008

The Thrill of Victory; Capitol Hill Reception

Dress:	Teams: NSB Green Polo Shirts, dress slacks/skirt, dress shoes Regional Coordinators & NSB Staff: Business Attire
6:30 – 8:00 a.m.	Breakfast – Clover Cafe
8:00 a.m.	Round Six (2 Rooms)
8:30 a.m.	Competing Teams Board Buses & Depart (Group 1)
9:00 a.m.	All other Teams Board Buses & Depart (Group 2)
	Double Elimination Matches
10:20 – 10:30 a.m.	All participants and guests assemble in audience chairs
10:30 a.m.	Introduction of special guests
10:45 a.m.	Round Seven – Semi-Final Match
11:25 a.m.	Round Eight – Final Match
12:05 a.m.	Round Nine – if, necessary Match
12:35 a.m.	Competition Ends
12:45 p.m.	Keynote Address: Presentation of Awards
1:40 – 2:40 p.m.	Luncheon –
3:00 p.m.	Teams board buses & depart for IMAX Movie(?? Or whatever)
4:30 p.m.	Teams board buses & depart for Capitol Hill
5:00 – 7:00 p.m.	Congressional Reception
7:15 p.m.	Teams board buses & depart for National 4-H Conference Center

7:45 p.m.	Teams arrive at National 4-H Conference Center
8:15 – 9:30 p.m.	Pizza & Ice Cream Social – Clover Cafe
8:30 – 10:30 p.m.	Board Games are available to be picked up in J.C. Penney Lobby Teams may check out with the registration desk by paying for any phone calls made from their rooms, etc. On Tuesday, you will just need to drop your key at the front desk & put your luggage in either Missouri or Kathleen’s Corner (please match luggage tag’s bus number with the sign posted on the wall in these rooms).
11:00 p.m.	All participants must be inside the 4-H buildings – Chevy Chase Noise Ordinance
11:00 p.m.	Curfew – all participants must be in their rooms (students, coaches, coordinators) – Campus policy

Tuesday, May 6, 2008

Goodbye Until Next Year

Dress:	Casual Attire – traveling clothes
7:00 – 8:30 a.m.	Breakfast – Clover Café
9:30 – 10:00 a.m.	Teams Board Buses and depart for airports

PREPARING FOR NATIONALS – MIDDLE SCHOOL

Once the Regional Coordinator has selected the winning regional team on-line, the process begins for planning their trip to the National event (see instructions below). Students and coaches will have many questions, so please refer them to the National Science Bowl for Middle School Students Web site for the latest information on schedules, locations, what to bring, etc. **It is the responsibility of the Regional Coordinator to ensure all of the forms are completed and submitted/mailed.**

Team Registration for the National Science Bowl for Middle School Students

Once the Coordinator has selected their winning team, the team gets access to a new National Web page where all of the National forms are located. The coach needs to then follow the instructions below.

Coaches should login to: <http://www.scied.science.doe.gov/nmsb/coaches.htm> to get to the team status page.

1. Coaches MUST complete and submit the **Online Travel Form** (one form per team).
2. If the team has not previously completed **parental consent and medical forms** (from the 2008 regional event), please complete and mail them to Cindy Musick. The following forms are found at:
<http://www.scied.science.doe.gov/nmsb/pdfs/Adult%20Medical%20Form.pdf> (one per coach)
<http://www.scied.science.doe.gov/nmsb/pdfs/Student%20Medical.pdf> (one per student)
http://www.scied.science.doe.gov/nmsb/pdfs/Parental_Consent.pdf (one per student)

3. Complete the following National forms:

Code of Conduct Form (online, one per coach)

Team Commitment Form (online, requires original signatures in blue ink only)

- Student/parent to complete using pdf form filler on Web site, then print and have student and parent sign hard copy

- Coach sign and mail

- Must be received before tickets will be purchased

Team Profiles (see instructions on Web)

- Coach submits online and coordinator approves.

Team Photo

- Coordinator uploads to web with caption identifying people in the photo.

Check your status page to view which forms have been received. The check box next to each team member's name will be marked when a complete form is received. If you have technical questions, please contact the National Coordinator.

MIDDLE SCHOOL SCIENCE BOWL FORMS CHECKLIST

To Cindy Musick – Immediately

- [] Press selection of winning team button **immediately following your regional competition.**
- [] Online Travel Form (1 form per team) – Electronic HTML

To Cindy Musick – Due ASAP (no later than May 13, 2008)

- [] Original Student Medical Release Forms – PDF Form Filler – Blue Ink Only for Signatures
 - [] Original Parental Consent Forms – PDF Form Filler – Blue Ink Only for Signatures
 - [] Original Adult Medical Release Form – PDF Form Filler – Blue Ink Only for Signatures
 - [] Original Adult Code of Conduct Form – PDF Form Filler – Blue Ink Only for Signatures
 - [] Team Commitment Forms (1 for each student) – PDF Form Filler – Blue Ink Only for Signatures (see next page)
 - [] Team profiles (complete and submit from National Science Bowl® Web site) – Electronic HTML
- NOTE: Travel arrangements will NOT be made until all signed original forms are received.*

[Ms. Cindy Musick](#)

U.S. Department of Energy

1000 Independence

SC-27/ 3F-043

Washington, DC 20585

FORMS FOR COORDINATOR

Forms can be found on MSSB Web site: <http://www.scied.science.doe.gov/nmsb/default.htm>. It is a good idea to photocopy all forms before mailing them. Also, while traveling, the coach may want to carry a copy of the forms with them. If a student completed a form in January and there are updates to be made because of recent injury, etc., please contact the National coordinator.

- [] Committee & Sponsor Form (to complete on Web site) – Electronic HTML
- [] Media Form (to complete on Web site) – Electronic HTML
- [] Coordinator Attend Nationals Form
- [] Coordinator Adult Medical Form
- [] Team photo and caption – Upload Online
- [] Team profiles (approve Coach submission) – Electronic HTML

National Science Bowl for Middle School Students
DRAFT SCHEDULE OF EVENTS

Thursday, June 19, 2008
Arrival and Orientation

DRESS: Casual Attire – for arrival
School T-Shirts if Available for group photo

Location: *Colorado School of Mines*
1600 Maple Street
Golden, Colorado

- 11:00-5:00 p.m. Students, Coaches and Coordinators Registration –
Vanderwerker Lounge
- 5:30 p.m. Dinner – *Student Center, Slate Café*
- 7:00 p.m. Welcome Assembly and Expectations—
Student Center, Ballrooms A, B, C
- 7:45 p.m. Group Team and Coordinator Photos-
- 8:00 p.m. Ice Cream Social
- 9:15 p.m. Students in dorm rooms
- 9:30 p.m. Coordinator Meeting – *Vanderwerker Lounge*
- 9:45 p.m. Lights Out – all participants must be in their rooms
(students, coaches and coordinators)

Friday, June 20, 2008
Hydrogen Fuel Cell Activities

DRESS: Casual Attire – National T-Shirts

- 7:00 – 8:00 a.m. Breakfast: *Slate Caf *
- 7:30 a.m. Teams begin fine tuning model fuel cell cars
Lockridge Arena
- 9:15 am. Begin running time trial heats – *Lockridge Arena*
- 9:15-noon Teacher Workshop
- 11:15 a.m. Teams leave cars in Lockridge for Design Judging
Groups A/B – Lunch (*Slate Caf *)
- Groups C/D Knowledge Presentations – *Student Center, Ballrooms D & E*
- 12:30 p.m. Groups C/D – Lunch (*Slate Caf *)
- Groups A/B Knowledge Presentations – *Student Center, Ballrooms D & E*
- 2:00 p.m. Final Knowledge Presentations – *Student Center, Ballrooms A, B, & C*
- 3:40 p.m. Announce Top 16 Racing Teams – *Student Center, Ballrooms D & E*
- 3:45 p.m. Break
- 4:15 p.m. Inspections – *Lockridge Arena*
- 4:30 p.m. Let the Races Begin! -- *Lockridge Arena*
- 5:45 p.m. Dinner
- 7:00 p.m. Academic Rules Review
Student Center, Ballrooms D & E
- 8:00 p.m. Snack
- 9:15 p.m. Students in dorm rooms
- 9:45 p.m. Lights out

Saturday, June 21, 2008
Academic Competition

Dress: Casual Attire (Regional T-Shirt)

7:00-8:00 a.m. Breakfast – *Slate Café*
7:00-9:00 a.m. Moderators & Judges: Rules/Question Review
Student Center, Ballroom E

Round Robin Matches

9:00-9:30 a.m. Round Robin #1
9:30-10:00 a.m. Round Robin #2
10:00-10:15 a.m. Break
10:15-10:45 a.m. Round Robin #3
10:45-11:15 a.m. Round Robin #4
11:15-11:45 a.m. Round Robin #5A
12:00-1:00 p.m. Lunch, *Slate Café*
12:45-1:15 p.m. Round Robin #5B
1:15-1:45 p.m. Round Robin #6
1:45-2:15 p.m. Round Robin #7
2:15 p.m. Break
2:30 p.m. Tie Breaks (5 competition rooms)
3:00 p.m. Double Elimination #1
3:30 p.m. Double Elimination #2
4:00 p.m. Double Elimination #3
4:30 p.m. Double Elimination #4
5:00 p.m. Dinner begins – *Slate Café*

6:30 p.m.	Double Elimination #5
6:45 – 9:00 p.m.	Recreation Activities – <i>Student Recreation Center</i>
7:00 p.m.	Double Elimination #6
9:00 p.m.	Snack – <i>Vanderwerker Lounge</i>
9:15 p.m.	In rooms
9:30 p.m.	Lights out

**Sunday, June 22, 2008
Finals and Awards Ceremony**

**Dress: Business Attire – no jeans, collared shirt with ties for young men;
nice pants or dresses for young women; no midriff tops or flip flops.**

7:00-8:00	Teams Check out
7:00-8:30	Breakfast – <i>Slate Café</i>
8:45 a.m.	Double Elimination #7, <i>Friedhof Center</i>
9:15 a.m.	Double Elimination #8
9:45 a.m.	Double Elimination #9 (if necessary)
10:15 a.m.	Break
10:30 a.m.	Awards Ceremony and Evaluations
11:45 p.m.	Teams Depart

WHO TO CONTACT

National Science Bowl Web Site: <http://nationalsciencebowl.energy.gov>

High School Coordinator

Sue Ellen Walbridge

NSB Coordinator

sue-ellen.walbridge@science.doe.gov

U.S. Department of Energy, SC-27

Office of Science-WDTS

1000 Independence Avenue, SW

Washington, DC 20585

Phone: (202) 586-7231

Fax: (202) 586-0019

Middle School Coordinator

Cindy Musick

MSSB Coordinator

cindy.musick@science.doe.gov

U.S. Department of Energy, SC-27

Office of Science-WDTS

1000 Independence Avenue, SW

Washington, DC 20585

Phone: (202) 586-0987

Fax: (202) 586-0019