



**Program**

**THE "SCOPE" OF YOUR DREAMS**

**2009 GREATER CINCINNATI SCIENCE BOWL**

**Sponsored by:**

**U.S. Department of Energy Environmental Management Consolidated Business Center  
Cincinnati, Ohio**

**January 31, 2009 Cincinnati State Technical and Community College**



## **Welcome to the Eighteenth Annual Greater Cincinnati Regional Science Bowl!**

The Environmental Management Consolidated Business Center (EMCBC) is pleased and excited again this year to host the Eighteenth Annual Greater Cincinnati Regional Science Bowl. Since 1981, high school students in the Greater Cincinnati area have tested their knowledge answering various science and math questions. The Greater Cincinnati Regional Science Bowl competition embraces science and technology by acknowledging the best science and math students in the region, promoting enthusiasm and interest in science education and sets higher standards for our schools and students.

The EMCBC serves as a central clearinghouse for a wide range of activities supporting the Department of Energy's (DOE) national environmental cleanup mission. Many organizations acknowledge a desire to promote and enhance science education; however the EMCBC remains a premier organization in promoting science education within the Greater Cincinnati area. As Director of the EMCBC, I am committed to the Department's national outreach programs, and cultivating those educational outreach programs within the Greater Cincinnati area.

I applaud your participation in this exciting and rewarding competition and encourage each of you to continue pursuing your education in science, mathematics, engineering, and technical fields.

Thank you for participating, good luck in the competition, and enjoy your day.

A handwritten signature in black ink, appearing to read 'Jack R. Craig'.

Jack R. Craig, Director

# 2009 Science Bowl Team Participants

## Amelia

Joan Lewis  
Katherine Hart  
Jill Fronk  
Shelby Cummings  
Samuel Ivers  
Michelle Andrews

## Team B

Bill Sartain  
Kristen Mauch  
Jill Durham  
Elizabeth Dallman  
Matthew Bradley  
Christopher Andrews

## Beavercreek

Kristine McDaniel  
Michael Ausserer  
Colin Hu  
Shiyuan Zhou  
Deepak Chona  
Ian Suzuki

## Centerville

Penny Valentini

## Team A

Neel Patel  
Amy Kramer  
Walter Chen  
Paul Hoehn  
Tiffany Wang

## Team B

Sean Behm  
Danny Briskin  
Erik Ding  
Akshai Rajendran  
Jack Hoehn

## Cincinnati

### Country Day

Kevin Koller  
Howard Kim  
Kevin Breneman  
Shrenuj Bansal  
Max Victor  
Kevin McSwiggen

## Team B

Francisco Borrero  
Sebastian Koochaki  
Kevin Baxter  
Nick Bender  
Rebecca Miller

## Clermont

### Northeastern

Darik Wells  
Kelsey Baum  
Katherine Wilson  
Christopher Leonard  
Tyler Smithers  
Bradley Mummert

## Fairborn High School

Carrie Corder  
Joselito Buendia  
Ariana Stark  
Craig Graves  
James Cline  
Jessica Partin

## Loveland High School

Sue Evans  
Spencer Leamy  
Adam Kavka  
Amanda Lacombe  
Matt Haunert  
Ian Patten

## McAuley High School

Cindy Werner  
Julie DePauw  
Julie Krechting  
Laura Krueger  
Kelly Roden  
Elizabeth Hiller

## The Miami Valley School

Mark Ash  
Sophia Hu  
Tyler Benedict  
Daniel Jacobs  
Danny Yanes  
Akash Goyal

## Milford

James Craven  
Brad Theilman  
Sam Lyon  
Cameron Hodge  
Holly Retherford  
Joe Brune

## Oak Hills

Jennifer Stallo  
Garrett Sprague  
Benjamin Schmidt  
Angela Memory  
Meghan Pollock  
Hirut Akalu

## Reading

Jay Thomas  
Eddie Hubble  
Sarah Gehring  
Dana Daley  
Heather Harris  
Tyler Smith

## Reynoldsburg High School

Harry Gee  
Shravas Rao  
Michael Giscom  
Andrew Dugan  
Franklin Hatcher

## Saint Ursula Academy

Nathalie  
Mukolobwicz  
Margot Swank  
Jennifer Head  
Kelsey Bowman  
Tara Porter  
Emma Schroder

## Sycamore

Cindy Parrott  
Team A  
Nathaniel Eckman  
Eric Schwartz  
Paolo Gabriel  
Ashvin Srivatsa  
Benjamin Lee

## Team B

Jason Orabella  
Vibhor Kumar  
Vincent Chiang  
Aaron Kaufman  
Gracia Ng

## Walnut Hills

Scott Grunder  
Team A  
Sam Stuard  
Zach Chandhok  
Dominic Wong  
Nathan Miller  
Jon Moller

## Team B

Rachel Horn  
Sifat Rahman  
Ben Burns  
Mike Brower  
Boyang Zhang

## Westside

### Montessori High School

Jason Banks  
Chris Meyer  
Alexis Janes-Maye  
Jeremy Plott  
Indyasia Johnson  
Brennan Robb

## Wm. Henry Harrison High School

Steve Brickner  
Steph Abt  
Jessica Callaway  
Sarah Focht  
Greg Harnist  
Sonika Patel

## Wyoming

Andrew Felczan  
Ryan Spore  
Chris Raptis  
Dai Zhang  
Joe Michalowski  
Jamie Stratton

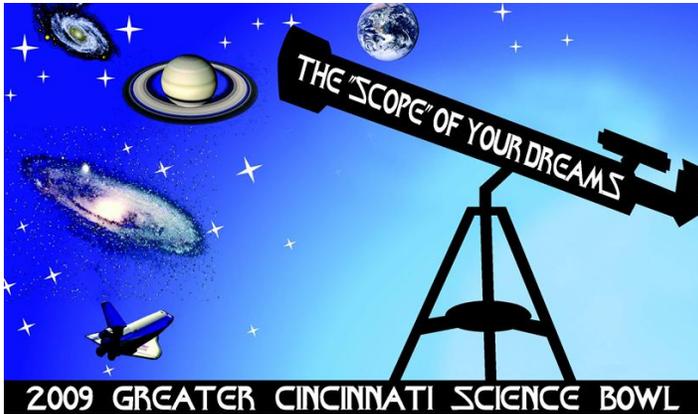


# AGENDA

## 2009 18<sup>th</sup> Annual Greater Cincinnati Regional Science Bowl

8:00 - 8:30	Registration - Room 341
8:30	Welcome - Conference Center
9:00	Round Robin- Round #1
9:35	Round Robin- Round #2
10:10	Round Robin- Round #3
10:45	Round Robin- Round #4
11:15	Round Robin- Round #5
11:45	Round Robin- Round #6
12:15	Round Robin- Round #7
12:45	Tie Breaks - If Necessary
11:15 to 12:30	<b>Lunch</b> - Conference Center
12:15 to 12:45	<b>Speaker</b> - Cincinnati Observatory Center- "The International Year of Astronomy" - Conference Center
12:45	Bonus Questions Winner announced
1:00	Double Elimination- Round #8
1:30	Double Elimination- Round #9
2:00	Double Elimination- Round #10
2:30	Double Elimination- Round #11
3:00	Double Elimination- Round #12
3:30	Double Elimination- Round #13
4:00	Double Elimination- Round #14
4:30	Presentation of Awards





## Eligibility

The Greater Cincinnati Regional Science Bowl competition is open to teams of high school students in the Greater Cincinnati regional area, throughout Ohio, Indiana, and Kentucky.

The competition will consist of oral question and answer rounds in which one four-person high school team will attempt to outscore another high school team. The winning team will proceed to the next level in the competition until only one team remains. Questions will be presented in toss-up - bonus format. Questions will be taken from the fields of:

- Astronomy
- Biology
- Chemistry
- Earth Science
- Physics
- Mathematics
- General/Applied Science

### **SPONSORED BY**

Environmental Management Consolidated Business Center, DOE

## 2009 Greater Cincinnati Regional Science Bowl Prizes

**The First Place Team**, alternate, and coach will receive an all expense-paid trip (travel, hotel, accommodations and arranged activities) to compete in the National Science Bowl in Washington D.C., a Greater Cincinnati Regional Science Bowl Championship trophy to display at their school for a year, a 8 X 10 blue jade and etched glass team plaque, and 5 X 7 blue jade and etched glass plaques for each team member. Each team member and coach will also receive a gift certificate valued at \$30.00.

**The Second Place Team**, alternate, and coach will receive a team 7 X 10 etched jade glass plaque and 4 X 6 etched jade glass plaques for each team member. Each team member and coach will also receive a gift certificate valued at \$25.00.

**The Third Place Team**, alternate, and coach will each receive a team 6 X 8 etched jade glass plaque and 4 X 6 etched jade glass plaques for each team member. Each team member and coach will also receive a gift certificate valued at \$20.00.

**The Fourth Place Team** members, alternate and coach will each receive a gift certificate valued at \$15.00.

### All participants will receive:

- Regional Science Bowl T-shirt
- Regional Science Bowl Nylon Bag
- Regional Certificate of Participation
- Regional Etch-A-Sketch Keychain
- National Science Bowl Posters, Calendars, Magnets, and Brochures

## 2009 DOE NATIONAL SCIENCE BOWL GRAND PRIZES

The team that receives the DOE Science Bowl Ambassador Award will attend a one-week research trip.

Each team that reaches the double elimination phase of the competition will receive \$1,000 for their school's science department.

All top 5 team members and their coach will each receive a TI-89 calculator and a trophy.

The top three teams will win prizes including scientific research trip to the International Science School in Sydney, Australia, a nuclear science research trip to France and the U.S. Department of Energy Thomas Jefferson National Accelerator Facility.

# 2009 Greater Cincinnati Regional Science Bowl

## Uranium Division

ROUND	TEAMS	ROOM	TEAMS	ROOM	TEAMS	ROOM
1 9:00 a.m.	1 vs. 2	A - 376	3 vs. 4	B - 374	5 vs. 6	C - 372
2 9:35 a.m.	NO	GAMES	NO	GAMES	NO	GAMES
3 10:10 a.m.	1 vs. 4	D - 370	3 vs. 5	E - 365	2 vs. 6	F - 367
4 10:45 a.m.	1 vs. 5	A - 376	2 vs. 4	B - 374	3 vs. 6	C - 372
5 11:15 a.m.	4 vs. 5	A - 376	2 vs. 3	B - 374	1 vs. 6	C - 372
6 11:45 a.m.	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
7 12:15 p.m.	1 vs. 3	A - 376	2 vs. 5	B - 374	4 vs. 6	C - 372
12:45 p.m.	TIEBREAKS	IF	NECESSARY	TIEBREAKS	IF	NECESSARY

# 2009 Greater Cincinnati Regional Science Bowl

## Uranium Division Score Sheet

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

# 2009 Greater Cincinnati Regional Science Bowl

## Protactinium Division

ROUND	TEAMS	ROOM	TEAMS	ROOM	TEAMS	ROOM
<sup>1</sup> 9:00 a.m.	1 vs. 2	D - 370	3 vs. 4	E - 365	5 vs. 6	F - 367
<sup>2</sup> 9:35 a.m.	1 vs. 3	A - 376	2 vs. 5	B - 374	4 vs. 6	C - 372
<sup>3</sup> 10:10 a.m.	NO	GAMES	NO	GAMES	NO	GAMES
<sup>4</sup> 10:45 a.m.	1 vs. 5	D - 370	2 vs. 4	E - 365	3 vs. 6	F - 367
<sup>5</sup> 11:15 a.m.	4 vs. 5	D - 370	2 vs. 3	E - 365	1 vs. 6	F 367
<sup>6</sup> 11:45 a.m.	1 vs. 4	A - 376	3 vs. 5	B - 374	2 vs. 6	C - 372
<sup>7</sup> 12:15 p.m.	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
12:45 p.m.	TIEBREAKS	IF	NECESSARY	TIEBREAKS	IF	NECESSARY

# 2009 Greater Cincinnati Regional Science Bowl

## Protactinium Division Score Sheet

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

# 2009 Greater Cincinnati Regional Science Bowl

## Thorium Division

ROUND	TEAMS	ROOM	TEAMS	ROOM	TEAMS	ROOM
1 9:00 a.m.	NO	GAMES	NO	GAMES	NO	GAMES
2 9:35 a.m.	1 VS 3	D - 370	2 VS 5	E - 365	4 VS 6	F - 367
3 10:10 a.m.	1 VS 4	A - 376	3 VS 5	B - 374	2 VS 6	C - 372
4 10:45 a.m.	1 VS 5	G - 366	2 VS 4	H - 364	3 VS 6	I - 362
5 11:15 a.m.	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
6 11:45 a.m.	1 VS 2	D - 370	3 VS 4	E - 365	5 VS 6	F - 367
7 12:15 p.m.	4 VS 5	D - 370	2 VS 3	E - 365	1 VS 6	F - 367
12:45 p.m.	TIEBREAKS	IF	NECESSARY	TIEBREAKS	IF	NECESSARY

# 2009 Greater Cincinnati Regional Science Bowl

## Thorium Division Score Sheet

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

# 2009 Greater Cincinnati Regional Science Bowl

## Radium Division

ROUND	TEAMS	ROOM	TEAMS	ROOM	TEAMS	ROOM
<sup>1</sup> 9:00 a.m.	1 vs. 2	G - 366	3 vs. 4	H - 364	5 vs. 6	I - 362
<sup>2</sup> 9:35 a.m.	1 vs. 3	H - 364	2 vs. 5	G - 366	4 vs. 6	I - 362
<sup>3</sup> 10:10 a.m.	1 vs. 4	G - 366	3 vs. 5	H - 364	2 vs. 6	I - 362
<sup>4</sup> 10:45 a.m.	NO	GAMES	NO	GAMES	NO	GAMES
<sup>5</sup> 11:15 a.m.	4 vs. 5	G - 366	2 vs. 3	H - 364	1 vs. 6	I - 362
<sup>6</sup> 11:45 a.m.	1 vs. 5	I - 362	2 vs. 4	H - 364	3 vs. 6	G - 366
<sup>7</sup> 12:15 p.m.	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
12:45 p.m.	TIEBREAKS	IF	NECESSARY	TIEBREAKS	IF	NECESSARY

# 2009 Greater Cincinnati Regional Science Bowl

## Radium Division Score Sheet

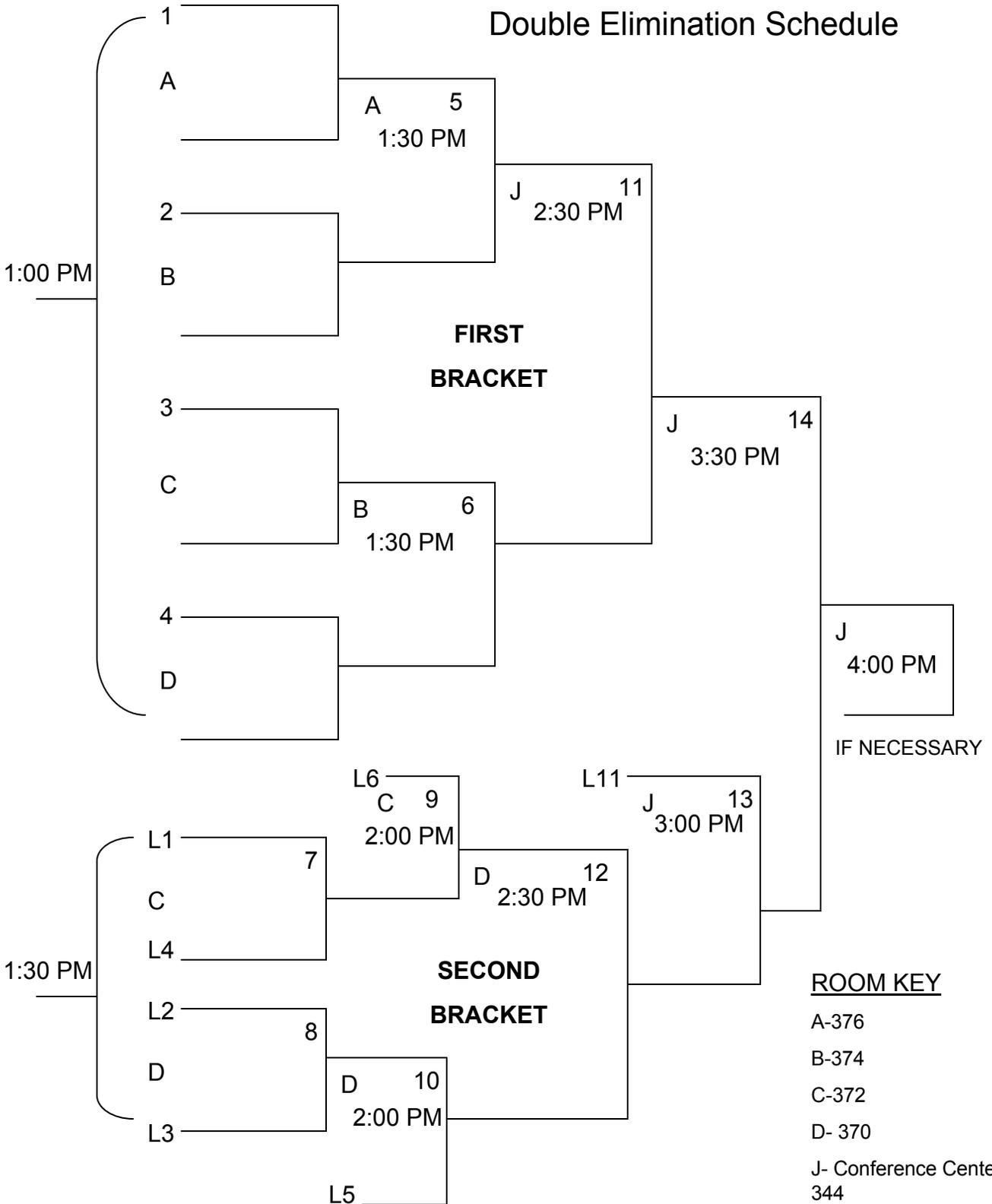
TEAM	1	2	3	4	5	6	TOTAL POINTS
1							
2							
3							
4							
5							
6							

# Eighteenth Annual Greater Cincinnati Regional Science Bowl

Jan. 31, 2009

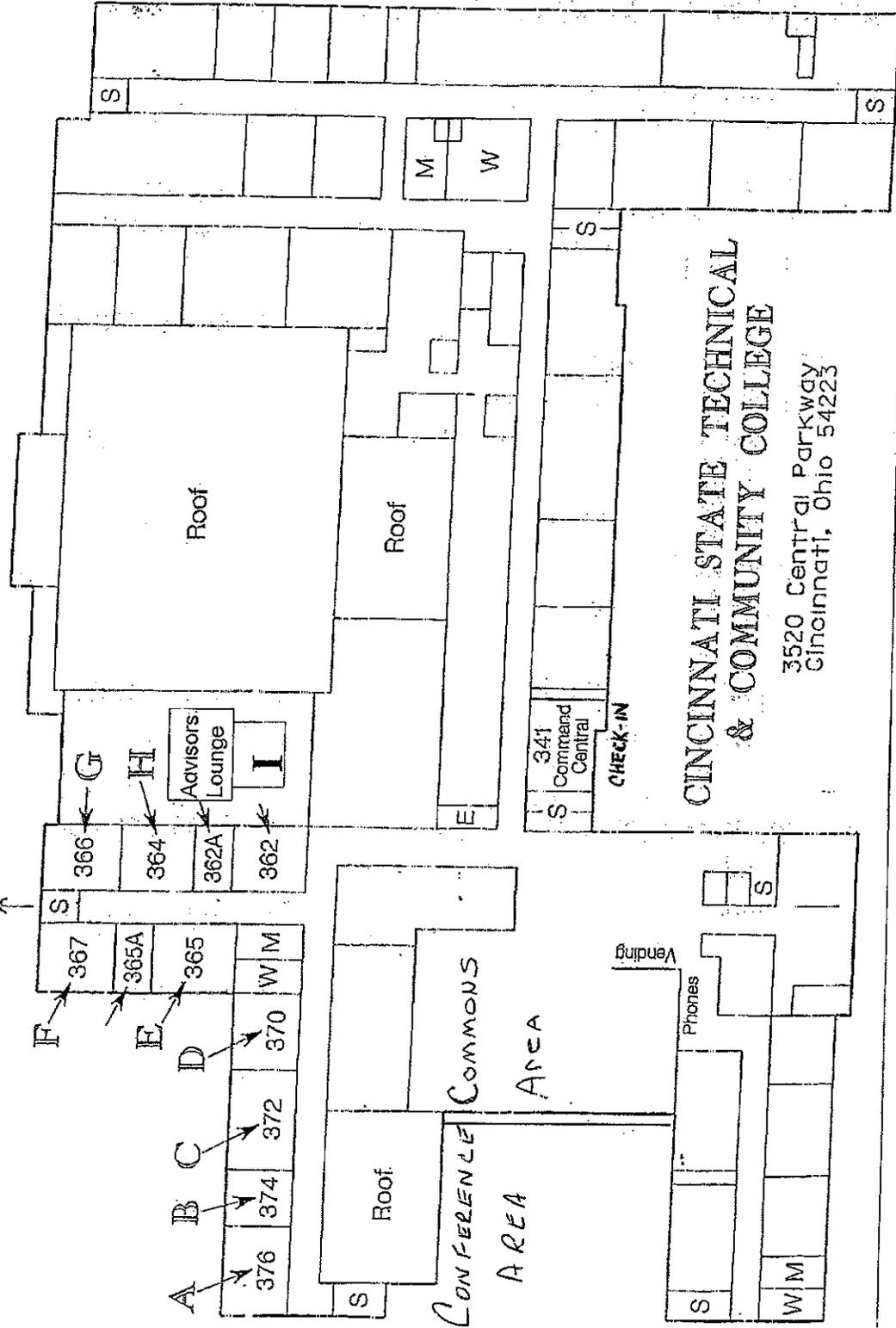
Room  
&  
Match No.

## Double Elimination Schedule



THIRD FLOOR LAYOUT

To 5/3 Auditorium in Health Professions Building



CINCINNATI STATE TECHNICAL & COMMUNITY COLLEGE

3520 Central Parkway  
Cincinnati, Ohio 54223

# Science Bowl 2009 Volunteers

Rich Abitz  
Ken Armstrong  
Karen Bahan  
**Teresa Bayer**  
Tiffiney Benton  
Kevin Barry  
Carin Boyd  
Melvin Boyd  
Greg Campbell  
Robin Campbell  
Christina Campbell  
Erin Clark  
Amanda Delgado  
Wilmari Delgado  
Kimberly Dellinger  
Brian Devir  
Julie Dock  
Doug Draper  
Terry Endres  
Jim Erjavec  
Michelle Farris  
Dave Hess  
Adam Hess  
Lynnann Hitchens  
Ralph Holland  
Renee Holland  
Holly Jackson  
TJ Jackson  
Jay Jalovec  
Kim Johnson  
Larry Kelly  
Dave Lojek  
Tamara Ludwig  
Susan Marsh  
Deborah McKean

Sean Meadows  
Genna Meisner  
Thomas Meyer  
Allen Moe  
John Muskoff  
Regina Neal  
Phylicia Neal  
Steve Olszewski  
Barry Page  
Karen Pieroway  
Andrew Peplow  
Dawn Platt  
Harriet Richardson  
Kathy Reid  
Carolyn Roehrig  
Elizabeth Rose  
Mel Roy  
John Sellards  
Gayle Shockey  
Jackie Shultheis  
Michael Sedgebeer  
Ed Skintik  
Jane Stropes  
Helene Taylor  
William Taylor  
Kaniah Konkoly-Thege  
Linda Underwood  
Pat Vent  
Kira Vincent  
Oba Vincent  
Betsy Volk  
Sue Walpole  
Chuck Wiedenheft  
Cynthia Yund  
Trisha Zamarron  
Justus Zamarron

## Astronomy Crossword Puzzle

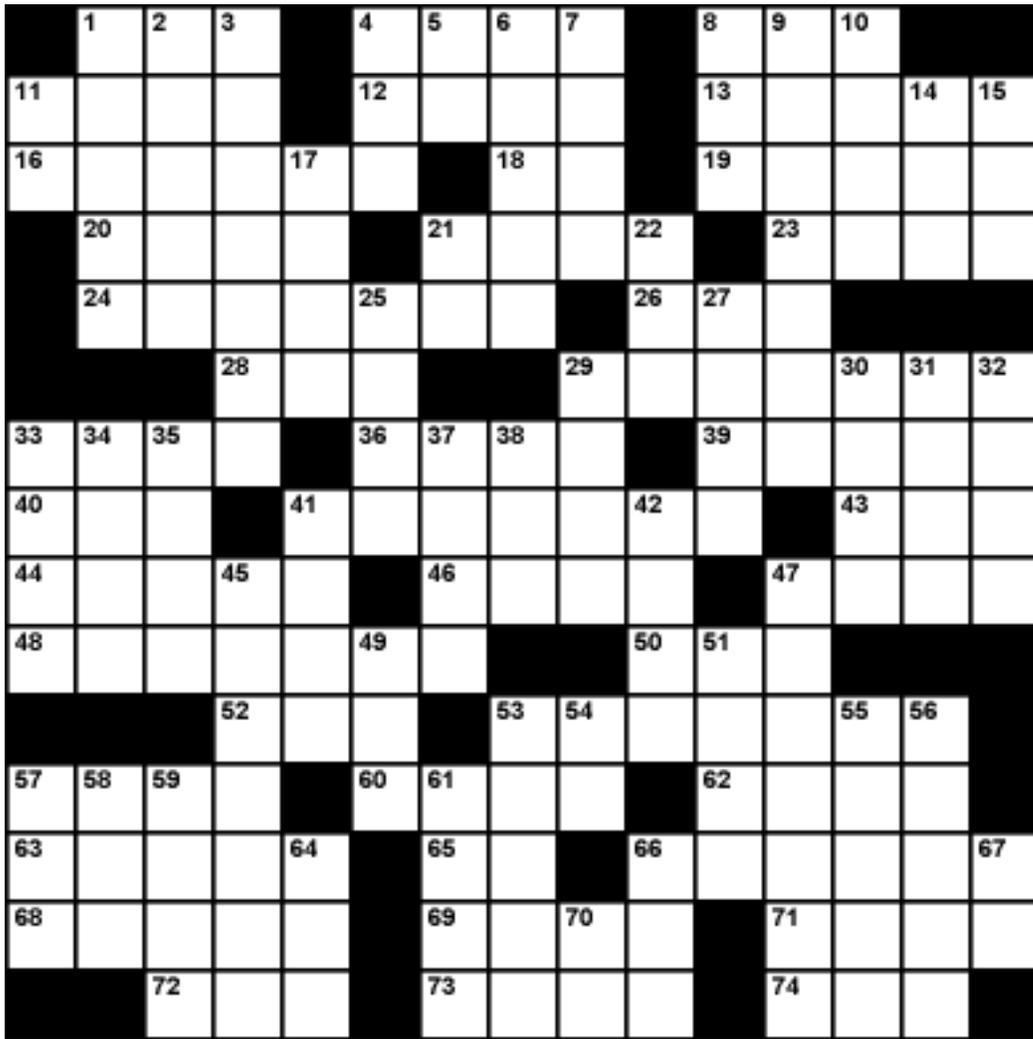
### Across

1. Shiner of the Solar System
4. Isinglass
8. "This is the dawning of the \_\_\_ of Aquarius..."
11. Capital of Italy
12. Charge Card, commonly
13. Greek astronomer who proposed a heliocentric theory of the Universe: Aristarchus of \_\_\_ (fl. c.310 B.C - c.230 B.C.)
16. American astronomer who discovered that the Universe is expanding
18. Newport's locale, on an env.
19. American astronomer Clyde Tombaugh's discovery in 1930
20. Genuine
21. Bird's or Hornet's
23. The Rolling Stones hit: "Time \_\_\_ My Side"
24. It's seen with "Comet" ...but only every 70 years, or so!
26. Computer in #53D
28. Williams' Works: PI\_\_\_
29. Astronomical fireballs
33. Romantic comedy of 1999: "\_\_\_ All That"
36. Turkish Title (var. sp.)
39. Astronomical occurrence of JANUARY 21ST, 2000 (With #45D and #55D)
40. It's a cheerleader's prop, when doubled
41. Australis and Borealis
43. Bolo or Bow
44. UFO occupant
46. Affiliation, for short
47. Model
48. The Caloris Basin is located here
50. Compass direction
52. Little records
53. Challenger or Columbia or Discovery, partially
57. Desert in Asia
60. Gala Gentry, for short
62. Skipper and Gilligan lived in \_\_\_ on "Gilligan's Island"
63. Giraffe-like mammal
65. Partner for Pa
66. Sir William Herschel first detected it on March 13th, 1781
68. Hard to penetrate
69. Shakespeare's Sections
71. Carmen Laforet novel of 1944
72. Hamburg's locale, briefly
73. Actress Campbell
74. Before, before

## Astronomy Crossword Puzzle

### Down

1. Planet Earth Point: The \_\_\_ Pole
2. Shadow of the Earth during #39A
3. Diffuse masses of interstellar gas and dust
4. Ms. West
5. "\_\_\_ a Man": Chicago hit
6. Largest and first ever discovered asteroid
7. The Earth spins on it
8. Cleopatra's Cobra
9. He constructed the first astronomical telescope, in 1609
10. They're flightless in Australia
11. Blood related acronym
14. "Logy" prefix
15. Elvis to Gladys
17. Dutch portrait painter
21. U.S. state
22. "Close Encounters of \_\_\_ Third Kind" (1977)
25. Bible Study!: His brother was Jacob
27. Lawyers, for short
29. Red Planet
30. Director Preminger
31. Train track part
32. Rosebud, for one
33. Junk e-mail
34. Black \_\_\_: Not even light can escape from this intense gravitational field
35. Middle East chieftain
37. Dull
38. Hebrew prophet of 8th cent. B.C.
41. "And since the Universe must have an extremity and a center, it must clearly have \_\_\_ and down." - Aristotle, "On the Heavens"
42. Korean apricot
45. See #39A
47. The atmosphere of Saturn consists of ammonia, helium, hydrogen and \_\_\_
49. Bible type acronym
51. Celestial body
53. "2001: A \_\_\_ Odyssey" (1968)
54. Learning locale, for short
55. See #39A
56. "Study" in Strasbourg
57. Jupiter or Neptune, in Roman Mythology
58. Feed fuel to the fire by adding this ending to "st"
59. Big \_\_\_ Theory: Theory that holds that the Universe was formed by a massive cosmic explosion billions of years ago
61. David Bowie's supermodel wife
64. "Funn" finale
66. Apply
67. Initials of the husband of Jayne Meadows
70. Telly



Astronomy Crossword Puzzle  
 Find the answer key in Rules packet  
 Good Luck!



## 2008 Regional Champions Sycamore High School



## 2007 Regional Champions Beavercreek High School



**2006 Regional Champions  
Beavercreek High School**



**2005 Regional Champions  
Sycamore High School**



# Notes:

# Greater Cincinnati Regional Science Bowl Champions

1994	Turpin
1995	Dixie Heights
1996	Milford
1997	Turpin
1998	Sycamore
1999	Sycamore
2000	Sycamore
2001	Sycamore
2002	Sycamore
2003	Cincinnati Country Day
2004	Cincinnati Country Day
2005	Sycamore
2006	Beavercreek
2007	Beavercreek
2008	Sycamore