Science Teachers and Administrators in the Central Alabama Regional Science and Engineering Fair Area,

The University of Alabama at Birmingham and the UAB Center for Community OutReach Development are excited to host the **Central Alabama Regional Science and Engineering Fair scheduled for March 3, 2018.** The fair will be a single-day event held at the UAB Campus Recreation Center located at 1501 University Blvd., Birmingham, AL 35294. Middle and high school students will set up their projects beginning at 7:30 am. Judging of projects will occur from 9:00 am – 12:00 pm.

The following counties will be eligible to participate in the 2018 UAB-CORD Central Alabama Regional Science and Engineering Fair: Bibb, Blount, Calhoun, Cherokee, Chilton, Clay, Cleburne, Coosa, Dekalb, Etowah, Jefferson, Randolph, Saint Clair, Shelby, Talladega, Walker and Winston County.

We will conduct the traditional fair, thus selecting students to compete at the Alabama State Science and Engineering Fair (ASEF) and the Intel International Science and Engineering Fair (ISEF). We recognize that in past years many students did not meet the timing requirements set out by ISEF and were unable to compete. Therefore, students who are unable to meet the ISEF timetable requirement will be allowed to present at the 2018 CARSEF for non-ISEF-related awards and prizes. We expect to have at least 40 such awards. To enable teachers and students to submit the required application paperwork in an efficient and timely manner, enclosed is a flyer which invites you and your students to join us for “Project/Application Paperwork Training Sessions.”

Please visit our website at [www.uab.edu/carsef](http://www.uab.edu/carsef) for additional information. Please also note that the **Deadline for all Applications to the UAB Central Alabama Regional Science and Engineering Fair (CARSEF) is January 26, 2018.** All entries will be reviewed by the CARSEF Scientific Review Committee. All presenters will be required to meet the fair’s sponsorship, safety, animal and human use requirements, prior to being allowed to present. If the application deadlines pose an issue with the date of your fair please call the CARSEF office or email kjarrett@uab.edu for other arrangements.

Thank you for promoting excellence in science, math and engineering education in Alabama. We look forward to seeing you and your students at the 2018 Central Alabama Regional Science and Engineering Fair (CARSEF) and to awarding prizes to your students!

Please feel free to contact us at (205) 934-5125 (CARSEF Office) or (205) 934-5171 (CORD main office) or you can reach us by email at kjarrett@uab.edu.
Enclosures: 2018 CARSEF: Forms List, Applications, Training Session Flyer and Brochure

For information regarding the 2018 Intel International Science and Engineering Fair in Pittsburg, Pennsylvania visit www.societyforscience.org
UAB-CORD
Central Alabama Regional Science & Engineering Fair (CARSEF)

~ FORMS REQUIRED FOR ALL PROJECTS ~

UAB CARSEF Individual or Team Entry Form
*Form 1 - Checklist for Adult Sponsor
   Form 1A - Student Checklist
   Research Plan/Project Summary
*Form 1B - Approval Form
   Abstract and Certification Form

ADDITIONAL FORMS
Only required if the student is....

Conducting research in an institutional/industrial setting or any setting outside of school or home

Form 1C - Regulated Research Institutional/Industrial Setting Form

Conducting research involving human subjects, vertebrate animals, potentially hazardous biological agents, cell cultures and controlled substances

*Form 2 - Qualified Scientist Form
*Form 3 - Risk Assessment Form
*Form 4 - Human Subjects Form
*Forms 5A & 5B - Vertebrate Animal Form
*Form 6A - Potentially Hazardous Biological Agents Form
*Form 6B - Human and Vertebrate Animal Tissue Form

Conducting research that is a continuation from a previous year’s project

Form 7 - Continuation Projects Form

ALL FORMS CAN BE FOUND ON OUR WEBSITE
www.uab.edu/carsef

Please note that all forms marked with (*) must be signed and dated prior to experimentation!!
Name of Student: ________________________________ Age ____________________
Gender ____________________
Mailing Address (street, city, zip) ____________________________________________
Telephone (home, cell) ________________________________ E-Mail ____________________
School Name ___________________________ Grade ____________________
Sponsoring Teacher ___________________________ Email ____________________
Project Title-----------------------------------------------------------------------------------------------

Which major category letter best describes your project? (Place letter in box)
Category descriptions are on the back of this entry form.

This is the category you will compete in at CARSEF
A. Biology (including microbiology) F. Medicine and Health Sciences
B. Chemistry (including biochemistry) G. Physical Sciences (including space science)
C. Engineering H. Behavioral and Social Sciences
D. Environmental and Earth Sciences I. Energy and Transportation
E. Mathematics and Computer Sciences

All applicants to the Regional Fair must complete this entry form along with the following five forms:
1. Form 1 - Checklist for Adult Sponsor
2. Form 1A - Student Checklist
3. Research Plan/Project Summary
4. Form 1B – Approval Form
5. Abstract and Certification Form

My project meets all requirements for entry into the INTEL International Science and Engineering Fair, and I wish to compete for a position at the State or International Fair. 

I am a middle school student and I understand that as such I will be competing for local prizes and for entry into the State (but not International) Fair. 

We certify that we will abide by the regulations of the Central Alabama Regional Science and Engineering Fair (CARSEF). Please call if your school fair will be held between January 26 and March 3 for entry into the March 3, 2018 CARSEF.

Signature of Student: ___________________________________________ Signature of Parent: ___________________________________________

Signature of Sponsoring Teacher: ___________________________________________

*Note: You will be contacted via email with important CARSEF information. Please provide an accurate email address as requested above.

Send completed applications to CARSEF, c/o UAB-CORD, 5th Floor CHSB19, 933 19th Street South, Birmingham, AL 35294-2041. For additional information, Call (205)934-5125 (CARSEF office) or (205)934-5171 (Cord main office) or e-mail us at kjarrett@uab.edu.
CARSEF Category Descriptions

A. Biology (including microbiology)
   - Cell Biology
   - Cell and Molecular Genetics
   - Immunology
   - Molecular Biology
   - Antibiotics, Antimicrobials
   - Bacteriology
   - Microbial Genetics
   - Virology
   - Animal Development
   - Animal Ecology
   - Animal Husbandry
   - Animal Pathology
   - Animal Physiology
   - Animal Population Genetics
   - Animal Systematics

B. Chemistry (including biochemistry)
   - General Biochemistry
   - Metabolism
   - Structural Biochemistry
   - Analytical Chemistry
   - Inorganic Chemistry
   - Organic Chemistry
   - Physical Chemistry
   - General Chemistry

C. Engineering
   - Bioengineering
   - Civil, Construction, Chemical, Industrial, Electrical, Computer, and Mechanical Engineering
   - Processing
   - Material Science
   - Thermodynamics, Solar
   - Robotics

D. Environmental and Earth Science
   - Climatology, Weather
   - Geochemistry, Mineralogy
   - Paleontology
   - Geophysics
   - Planetary Science
   - Tectonics
   - Air Pollution and Air Quality
   - Soil Contamination and Soil Quality
   - Water Pollution and Water Quality
   - Bioremediation
   - Ecosystems Management
   - Environmental Engineering
   - Land Resource Management, Forestry
   - Recycling, Waste Management
   - Plant Development
   - Plant Ecology
   - Plant Physiology
   - Plant Systematics
   - Plant Agriculture/Agronomy
   - Plant Genetics
   - Photosynthesis
   - Plant Evolution

E. Mathematics and Computer Sciences
   - Algebra
   - Analysis
   - Applied Mathematics
   - Geometry
   - Probability and Statistics
   - Algorithms, Databases
   - Artificial Intelligence
   - Networking and Communications
   - Computational Science, Computer Graphics
   - Software Engineering, Programming Languages
   - Computer System, Operating System

F. Medicine and Health Sciences
   - Disease Diagnosis and Treatment
   - Epidemiology
   - Genetics
   - Molecular Biology of Diseases
   - Physiology and Pathophysiology

G. Physical Sciences (including space science)
   - Astronomy
   - Atoms, Molecules, Solids
   - Biological Physics
   - Instrumentation and Electronics
   - Magnetics and Electromagnetics
   - Nuclear and Particle Physics
   - Optics, Lasers, Masers
   - Theoretical Physics
   - Theoretical or Computational Astronomy

H. Behavioral and Social Sciences
   - Clinical and Developmental Psychology
   - Cognitive Psychology
   - Physiological Psychology
   - Sociology

I. Energy and Transportation
   - Aerospace and Aeronautical Engineering
   - Aerodynamics
   - Alternative Fuels
   - Fossil Fuel Energy
   - Vehicle Development
   - Renewable Energies

UAB CORD
empowering rising stars
Center for Community OutReach Development
The University of Alabama at Birmingham
Team Participants (up to 3 members):

Student 1 "Team Leader"

Name of Student________________________________________  Age________ Gender________ Grade________

Address (street, city, zip)________________________________________________________________________

Telephone________________________________________ E-mail_______________________________________

Student 2

Name of Student________________________________________  Age________ Gender________ Grade________

Address (street, city, zip)________________________________________________________________________

Telephone________________________________________ E-mail_______________________________________

Student 3

Name of Student________________________________________  Age________ Gender________ Grade________

Address (street, city, zip)________________________________________________________________________

Telephone________________________________________ E-mail_______________________________________

*Note: You will be contacted via email with important CARSEF information. Please provide an accurate email address as requested above.

School Name________________________________________ Telephone____________________________________

Sponsoring Teacher____________________________   Email________________________________________

Project Title____________________________________________________________________________________

Which major category letter best describes your project? (Place letter in box)

Category descriptions are on the back of this entry form.

This is the category you will compete in at CARSEF

A. Biology (including microbiology) F. Medicine and Health Sciences
B. Chemistry (including biochemistry) G. Physical Sciences (including space science)
C. Engineering H. Behavioral and Social Sciences
D. Environmental and Earth Science I. Energy and Transportation
E. Mathematics and Computer Sciences

All applicants to the Regional Fair must complete this entry form along with the following five forms:

1. Form 1 - Checklist for Adult Sponsor
2. Form 1A - Student Checklist
3. Research Plan/Project Summary
4. Form 1B - Approval Form
5. Abstract and Certification Form

Our project meets all requirements for entry into the INTEL International Science and Engineering Fair, and we wish to compete for a position at the State or International Fair.

We are middle school students and we understand that as such we will be competing for local prizes and entry into the State Fair, but not for entry into International Fairs.

We certify that we will abide by the regulations of the Central Alabama Regional Science and Engineering Fair (CARSEF). Please call if your school fair will be held between January 26 and March 3 for entry into the March 3, 2018 CARSEF.
Send completed applications to CARSEF, c/o UAB-CORD, 5th Floor CHSB 19, 933 19th Street South, Birmingham, AL 35294-2041. For additional information, Call (205)934-5125 (CARSEF office) or (205)934-5171 (CORD main office) or e-mail us at kjarrett@uab.edu.

**CARSEF Category Descriptions**

**A. Biology (including microbiology)**
- Cell Biology
- Cell and Molecular Genetics
- Immunology
- Molecular Biology
- Antibiotics, Antimicrobials
- Bacteriology
- Microbial Genetics
- Virology
- Animal Development
- Animal Ecology
- Animal Husbandry
- Animal Pathology
- Animal Physiology
- Animal Population Genetics
- Animal Systematics

**B. Chemistry (including biochemistry)**
- General Biochemistry
- Metabolism
- Structural Biochemistry
- Analytical Chemistry
- Inorganic Chemistry
- Organic Chemistry
- Physical Chemistry
- General Chemistry

**C. Engineering**
- Bioengineering
- Civil, Construction, Chemical, Industrial, Electrical, Computer, and Mechanical Engineering
- Processing
- Material Science
- Thermodynamics, Solar
- Robotics

**D. Environmental and Earth Science**
- Climatology, Weather
- Geochemistry, Mineralogy
- Paleontology
- Geophysics
- Planetary Science
- Tectonics
- Air Pollution and Air Quality
- Soil Contamination and Soil Quality
- Water Pollution and Water Quality
- Bioremediation
- Ecosystems Management
- Environmental Engineering
- Land Resource Management, Forestry
- Recycling, Waste Management
- Plant Development
- Plant Ecology, Plant Physiology
- Plant Systematics, Plant Genetics
- Plant Agriculture/Agronomy
- Photosynthesis
- Plant Evolution

**E. Mathematics and Computer Sciences**
- Algebra
- Analysis
- Applied Mathematics

**F. Medicine and Health Sciences**
- Disease Diagnosis and Treatment
- Epidemiology
- Genetics
- Molecular Biology of Diseases
- Physiology and Pathophysiology

**G. Physical Sciences (including space science)**
- Astronomy
- Atoms, Molecules, Solids
- Biological Physics
- Instrumentation and Electronics
- Magnetics and Electromagnetics
- Nuclear and Particle Physics
- Optics, Lasers, Masers
- Theoretical Physics
- Theoretical or Computational Astronomy

**H. Behavioral and Social Sciences**
- Clinical and Developmental Psychology
- Cognitive Psychology
- Physiological Psychology
- Sociology

**I. Energy and Transportation**
- Aerospace and Aeronautical Engineering
- Aerodynamics
- Alternative Fuels
- Fossil Fuel Energy
- Vehicle Development
- Renewable Energies
“PROJECT / APPLICATION PAPERWORK TRAINING SESSIONS”
For the UAB-CORD
2018 Central Alabama Regional Science and Engineering Fair

LOCATION
University of Alabama at Birmingham
Center for Community OutReach Development (CORD)
Community Health Services Bldg. (CHSB19)
Room 501
933 19th Street South, 5th Floor
Birmingham, AL 35294-2041

SESSION DATES
~All Sessions are from 10:00 am - 12:00 noon~

JANUARY 20, 2018
Teacher/Parent/Student Training Session
*This session is for application/paperwork issues before application deadline on January 26, 2018*

FEBRUARY 17, 2018
Teacher/Parent/Student Session
*This session is for poster/project issues before the fair on March 3, 2018*

TO REGISTER FOR ONE OF THE “TRAINING SESSIONS”
~CALL THE REGIONAL FAIR OFFICE AT CORD (205) 934-5125~
Dates to Remember

January 26, 2018
CARSEF Application Packet Deadline

March 3, 2018
UAB Regional Fair (CARSEF) (Birmingham, Alabama)

April 5 - 6, 2018
Alabama State Fair (ASEF) (Huntsville, Alabama)

May 13 - 18, 2018
Intel International Fair (ISEF) (Pittsburg, Pennsylvania)

Sponsored in Part by:

CARSEF At-A-Glance

7:00 - 8:30 am Registration and Setup (Jr. & Sr. Division)
7:30 - 9:00 am Display & Safety Review
8:00 - 9:00 am Judges Briefing
9:00 - 10:00 am Student/Parent Orientation
9:00 am - 12:00 pm Judges Project Review (9-10am without students) (10am-12pm with students)
12:00 - 1:30 pm Lunch
12:00 - 3:00 pm Exhibit Hall Open to Public
1:00 - 4:00 pm Judges Selection Session
1:30 - 3:30 pm Campus Showcase
4:00 pm Students Return to Rec. Center
3:30 - 4:30 pm Awards Ceremony
4:30 - 5:30 pm Project Breakdown (Jr. & Sr. Division)

Tentative Schedule (Subject to change)

UAB-CORD
2018 Central Alabama Regional Science and Engineering Fair
For Middle and High School Students Grades 5-12

March 3, 2018
UAB Campus Recreation Center
1501 University Boulevard
Birmingham, Alabama 35294
CARSEF
The University of Alabama at Birmingham (UAB) Center for Community OutReach Development (CORD) will host the Central Alabama Regional Science and Engineering Fair (CARSEF) at the UAB Campus Recreation Center, March 3, 2018. We will conduct the traditional fair, thus selecting students to compete at the Alabama State Science and Engineering Fair (ASEF) in Huntsville, Alabama, and the INTEL International Science and Engineering Fair (ISEF) in Pittsburg, Pennsylvania. Students who are unable to meet the ISEF timetable and/or requirements will be allowed to present at the regional fair and compete for the non-ISEF-related awards and prizes. Such students will not be eligible to advance to the State Fair and INTEL.

Path to Intel ISEF
To reach the Intel ISEF, students must participate in a high school or local science fair.

Participation at the high school or local level enables students to compete in a regional or state fair (unless otherwise stated by your school rules).

Students are eligible to compete at the Intel ISEF if they win at the Regional or State level. The UAB-CORD Regional Science and Engineering Fair can send up to 4 finalists directly to the International Science and Engineering Fair.

General Science and Engineering Fair Requirements
Students who wish to compete for placement in the State or Intel ISEF must fulfill all timing issues and requirements of the International Fair. These include the following:

1) Any student in grades 9-12 or equivalent is eligible, none of whom has reached age 20 on or before May 1st preceding the Intel ISEF may compete in the Regional Senior Division. Any student in grades 5-8 may compete in the Regional Junior Division.

2) Each student may enter only one project which covers research done over a maximum of 12 continuous months between January 2017 and May 2018.

3) Team projects may have a maximum of three members.

4) Projects which are continuations of previous year’s work and which require IRB/SRC approval must be re-approved prior to experimentation/data collection for the current year.

5) All projects must adhere to the Ethics Statement below.

6) Prior to experimentation, a local or regional Institutional Review Board (IRB) or Scientific review Committee (SRC) associated with the Intel ISEF-affiliated fair must review and approve project involving human participants, vertebrate animals, and potentially hazardous biological agents.

ETHICS STATEMENT
Scientific fraud and misconduct are not condoned at any level of research or competition. Such practices include plagiarism, forgery, use or presentation of other researcher’s work as one’s own and fabrication of data. Fraudulent projects will fail to qualify for competition in affiliated fairs or the Intel ISEF.

Visit our website, www.uab.edu/carsef to find out more about CARSEF guidelines & requirements!

CARSEF Rules and Procedures
All students who wish to compete in the UAB Regional Fair must submit all required application forms by 5:00 pm, January 26, 2018. Forms may be e-mailed as PDFs, faxed or mailed to:
Central Alabama Regional Science and Engineering Fair (CARSEF)
c/o CORD, Room 503, CHSB 19
933 19th Street South
Birmingham, AL 35294-2041
Phone: 205-934-5125
Fax: 205-934-5158
E-Mail: kjarrett@uab.edu

CARSEF Application Forms
Application packets submitted to the CARSEF must include:
• UAB CARSEF Form (Individual or Team)
• Checklist for Adult Sponsor (Form 1)
• Student Checklist (Form 1A)
• Research Plan Form
• Approval Form (Form 1B)
• Abstract and Certification Form