Center for Community OutReach Development (CORD)
CHSB19 5th Floor
933 19th Street South
Birmingham, AL 35294-2041   September 12, 2020

2020 UAB-CORD
CENTRAL ALABAMA REGIONAL SCIENCE & ENGINEERING FAIR

Science Teachers 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 7, 2020**. 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 2020 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). 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 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 31, 2020.** 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 2020 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.

J. Michael Wyss, Ph.D.   Shirley S. Ginwirght   Kevin A. Jarrett

CORD Director
Professor of Cell Biology
and Medicine

CORD Program Director

CORD Program Coordinator

Enclosures: 2020 CARSEF: Forms List, Applications, Training Session Flyer and Brochure

For information regarding the
2019 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!!

2020 Central Alabama Regional Science & Engineering Fair (CARSEF)
Individual Entry Form
Incomplete entry forms will not be processed
PLEASE PRINT CLEARLY OR TYPE

**Deadline
January 31, 2020**

Name of Student: _____Age _____Gender_____

Mailing Address (street, city, zip) _____

Telephone (home or 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)**
B. **Chemistry (including biochemistry)**
C. **Engineering**
D. **Environmental and Earth Sciences**
E. **Mathematics and Computer Sciences**

F. **Medicine and Health Sciences**
G. **Physical Sciences (including space science)**
H. **Behavioral and Social Sciences**
I. **Energy and Transportation**

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 31 and March 7 for entry into the March 7, 2019 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. You can also scan and email completed applications to 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

2020 Central Alabama Regional Science & Engineering Fair (CARSEF)
__Team Entry Form__
Incomplete entry forms will not be processed
PLEASE PRINT CLEARLY OR TYPE

**Deadline
January 31, 2020**

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)**
B. **Chemistry (including biochemistry)**
C. **Engineering**
D. **Environmental and Earth Science**
E. **Mathematics and Computer Sciences**

F. **Medicine and Health Sciences**
G. **Physical Sciences (including space science)**
H. **Behavioral and Social Sciences**
I.   **Energy and Transportation**

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 31 and March 7 for entry into the March 7, 2020 CARSEF.

Signature of Team Leader: _____ **Team Leader's Parents:** _____

Signature of Sponsoring Teacher: _____

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- Animal Systematics

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- 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
- 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

"PROJECT / APPLICATION PAPERWORK TRAINING SESSIONS"

FOR THE UAB-CORD
2020 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 25, 2020
Teacher/Parent/Student Training Session

*This session is for application/paperwork issues before application
deadline on January 31, 2020*

February 15, 2020
Teacher/Parent/Student Session

*This session is for poster/project issues before the fair
on March 7, 2020*

TO REGISTER FOR ONE OF THE "TRAINING SESSIONS"
~CALL THE REGIONAL FAIR OFFICE AT CORD (205) 934-5125~

Dates to Remember

January 31, 2020
CARSEF Application
Packet Deadline

March 7, 2020
UAB Regional Fair (CARSEF)
(Birmingham, Alabama)

April 2 - 3, 2020
Alabama State Fair (ASEF)
(Huntsville, Alabama)

May 10 - 15, 2020
Intel International Fair (ISEF)
(Phoenix, Arizona)

Sponsored in Part by:

AFFILIATED WITH
intel **ISEF**
— a program of —
SOCIETY FOR SCIENCE & THE PUBLIC

CORD *emPowering rising stars*

UAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

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 - 3:00 pm	**Campus Showcase**
3:00 pm	**Students Return to Rec. Center**
3:00 - 4:00 pm	**Awards Ceremony**
4:00 - 4:30 pm	**Project Breakdown** (Jr. & Sr. Division)

Tentative Schedule
(Subject to change)

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UAB-CORD
2020 Central Alabama
Regional Science and
Engineering Fair

For Middle and High School Students Grades 5-12

Bibb	**Elmore**
Blount	**Etowah**
Calhoun	**Jefferson**
Cherokee	**Randolph**
Chilton	**St. Clair**
Clay	**Shelby**
Cleburne	**Talladega**
Coosa	**Walker**
Dekalb	**Winston**

March 7, 2020

UAB Campus Recreation Center
1501 University Boulevard
Birmingham, Alabama 35294

CARSEF

The University of Alabama at Birmingham (UAB) Center for **C**ommunity **O**ut**R**each **D**evelopment (CORD) will host the Central Alabama Regional Science and Engineering Fair (CARSEF) at the UAB Campus Recreation Center, March 7, 2020. 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 Anaheim, California. 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.

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 31, 2020. 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

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

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

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 2018 and May 2019.

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.